

108TH CONGRESS
1ST SESSION

H. R. 1343

To establish an energy program for the United States that unlocks the potential of renewable energy and energy efficiency, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MARCH 18, 2003

Ms. WOOLSEY (for herself, Mr. LAMPSON, Ms. JACKSON-LEE of Texas, Mr. MOORE, Mr. MILLER of North Carolina, Mr. HONDA, and Mr. MATHE-SON) introduced the following bill; which was referred to the Committee on Science

A BILL

To establish an energy program for the United States that unlocks the potential of renewable energy and energy efficiency, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Renewable Energy and Energy Efficiency Act of 2003”.

6 (b) TABLE OF CONTENTS.—

- Sec. 1. Short title; table of contents.
- Sec. 2. Findings.
- Sec. 3. National research and development policy.
- Sec. 4. Definitions.

TITLE I—RESEARCH, DEVELOPMENT, AND DEMONSTRATION

- Sec. 101. Enhanced renewable energy research, development, and demonstration.
- Sec. 102. Enhanced energy efficiency research, development, and demonstration.
- Sec. 103. Enhanced aeronautical system energy efficiency research, development, and demonstration.
- Sec. 104. Assessment of renewable energy resources.
- Sec. 105. Next Generation Lighting Initiative.
- Sec. 106. National Building Performance Initiative.
- Sec. 107. Progress report.

TITLE II—COMMERCIAL APPLICATIONS

- Sec. 201. Study of financing for prototype technologies.
- Sec. 202. Renewable energy in public buildings.
- Sec. 203. Regulatory reviews for new technologies and processes.
- Sec. 204. Small business commercialization assistance.
- Sec. 205. Education and outreach.
- Sec. 206. Industrial energy and water conservation.

1 **SEC. 2. FINDINGS.**

2 The Congress finds that—

3 (1) there is a need for a robust renewable en-
 4 ergy and energy efficiency research and development
 5 program that provides a basis for the development,
 6 demonstration, and deployment of new energy tech-
 7 nologies in partnership with industry;

8 (2) Federal budget authority for renewable en-
 9 ergy and energy efficiency research and development
 10 has declined significantly since 1980; and

11 (3) the President's budget request for fiscal
 12 year 2004 continues to shortchange the core pro-
 13 grams, imperiling promising technologies that have
 14 the potential to reduce energy consumption and
 15 United States dependence on foreign oil, and in-
 16 crease energy efficiency.

1 **SEC. 3. NATIONAL RESEARCH AND DEVELOPMENT POLICY.**

2 It shall be the policy of the United States that its
3 research, development, demonstration, and commercial ap-
4 plications programs be designed to enable 20 percent of
5 the energy generated in the United States from stationary
6 sources to be generated from nonhydropower renewable
7 energy sources by the year 2020.

8 **SEC. 4. DEFINITIONS.**

9 For purposes of this Act—

10 (1) the term “biomass” means any organic
11 matter that is available on a renewable or recurring
12 basis, including agricultural crops and trees, wood
13 and wood wastes and residues, plants (including
14 aquatic plants), grasses, residues, fibers, animal
15 wastes, and municipal wastes; and

16 (2) the term “renewable energy source”
17 means—

18 (A) wind;

19 (B) biomass;

20 (C) a geothermal source;

21 (D) a solar source;

22 (E) a photovoltaic source; or

23 (F) additional hydroelectric generation ca-
24 pacity achieved from increased efficiency at an
25 existing hydroelectric dam.

1 **TITLE I—RESEARCH, DEVELOP-**
2 **MENT, AND DEMONSTRATION**

3 **SEC. 101. ENHANCED RENEWABLE ENERGY RESEARCH, DE-**
4 **VELOPMENT, AND DEMONSTRATION.**

5 (a) GOALS.—In order to achieve the goal stated in
6 section 3, the United States shall have an energy research,
7 development, and demonstration program to enhance re-
8 newable energy with the following goals:

9 (1) For wind power, the program should reduce
10 the cost of wind electricity by 50 percent by 2008,
11 compared to the cost as of the date of the enactment
12 of this Act, so that wind power can be widely com-
13 petitive with fossil-fuel-based electricity in a restruc-
14 tured electric industry, with concentration within the
15 program on a variety of advanced wind turbine con-
16 cepts and manufacturing technologies.

17 (2) For photovoltaics, the programs should pur-
18 sue research, development, and demonstration that
19 would lead to photovoltaic systems prices of \$3,000
20 per kilowatt by January 1, 2005, and \$1,500 per
21 kilowatt by January 1, 2008. Program activities
22 should include assisting industry in developing man-
23 ufacturing technologies, giving greater attention to
24 balance of system issues, and expanding funda-
25 mental research on relevant advanced materials.

1 (3) For solar thermal electric systems the pro-
2 gram should strengthen ongoing research, develop-
3 ment, and demonstration combining high-efficiency
4 and high-temperature receivers with advanced ther-
5 mal storage and power cycles, with the goal of mak-
6 ing solar-only power (including baseload solar power)
7 widely competitive with fossil fuel power by 2017.

8 (4) For geothermal energy, the program should
9 continue work on hydrothermal systems, and reac-
10 tivate research, development, and demonstration on
11 advanced concepts, giving top priority to high-grade
12 hot dry-rock geothermal energy.

13 (5) For hydrogen-based energy systems, the
14 program should support research, development, and
15 demonstration on hydrogen-using and hydrogen-pro-
16 ducing technologies. The program should also co-
17 ordinate hydrogen-using technology development
18 with proton exchange membrane fuel cell vehicle de-
19 velopment activities under the enhanced energy effi-
20 ciency program described in section 102.

21 (6) For biomass energy—

22 (A) the program should enable the United
23 States to triple bioenergy use by 2010;

24 (B) for biomass-based power systems, the
25 program should enable commercialization, with-

1 in five years after the date of the enactment of
2 this Act, of integrated power-generating tech-
3 nologies that employ gas turbines and fuel cells
4 integrated with biomass gasifiers; and

5 (C) for biofuels, the program should accel-
6 erate research, development, and demonstration
7 on advanced cellulosic conversion.

8 (7) For hydropower, the program should pro-
9 vide a new generation of turbine technologies that
10 will increase generating capacity and will be less
11 damaging to fish and aquatic ecosystems.

12 (8) For electric energy and storage, the pro-
13 gram should develop high capacity superconducting
14 transmission lines and generators, and develop dis-
15 tributed generating systems to accommodate mul-
16 tiple types of energy sources under a common inter-
17 connect standard.

18 (b) AUTHORIZATION OF APPROPRIATIONS.—There
19 are authorized to be appropriated to the Secretary of En-
20 ergy for carrying out activities to achieve the goals de-
21 scribed in subsection (a)—

22 (1) \$575,000,000 for fiscal year 2004;

23 (2) \$651,000,000 for fiscal year 2005;

24 (3) \$736,000,000 for fiscal year 2006;

25 (4) \$831,000,000 for fiscal year 2007; and

1 (5) \$942,000,000 for fiscal year 2008.

2 **SEC. 102. ENHANCED ENERGY EFFICIENCY RESEARCH, DE-**
3 **VELOPMENT, AND DEMONSTRATION.**

4 (a) GOALS.—In order to achieve the goal stated in
5 section 3, the United States shall have an energy research,
6 development, and demonstration program to enhance en-
7 ergy efficiency with the following goals:

8 (1) For energy efficiency in housing, the pro-
9 gram should develop technologies, housing compo-
10 nents, designs, and production methods that will, by
11 2010—

12 (A) reduce the time needed to move tech-
13 nologies to market by 50 percent, compared to
14 the time needed as of the date of the enactment
15 of this Act;

16 (B) reduce the monthly cost of new hous-
17 ing by 20 percent, compared to the cost as of
18 the date of the enactment of this Act;

19 (C) cut the environmental impact and en-
20 ergy use of new housing by 50 percent, com-
21 pared to the impact and use as of the date of
22 the enactment of this Act;

23 (D) ensure that at least 15,000,000 homes
24 existing as of the date of the enactment of this
25 Act reduce their energy use by 30 percent, com-

1 pared to the use as of the date of the enact-
2 ment of this Act; and

3 (E) improve durability and reduce mainte-
4 nance costs by 50 percent compared to the du-
5 rability and costs as of the date of the enact-
6 ment of this Act.

7 (2) For industrial energy efficiency, the pro-
8 gram should, in cooperation with the affected indus-
9 tries—

10 (A) develop a microturbine (40 to 300 kilo-
11 watt) that is more than 40 percent efficient by
12 2008, compared to the efficiency as of the date
13 of the enactment of this Act;

14 (B) develop a microturbine that is more
15 than 50 percent efficient by 2012, compared to
16 the efficiency as of the date of the enactment
17 of this Act;

18 (C) develop advanced materials for com-
19 bustion systems that reduce emissions of nitro-
20 gen oxides by 30 to 50 percent while increasing
21 efficiency 5 to 10 percent by 2009, compared to
22 such emissions as of the date of the enactment
23 of this Act; and

24 (D) improve the energy intensity of the
25 major energy-consuming industries by at least

1 25 percent by 2012, compared to the energy in-
2 tensity as of the date of the enactment of this
3 Act.

4 (3) For transportation energy efficiency, the
5 program should, in cooperation with affected indus-
6 tries—

7 (A) develop a production prototype pas-
8 senger automobile that has fuel economy equiv-
9 alent to 80 miles per gallon of gasoline by
10 2006;

11 (B) develop class 7 and 8 heavy duty
12 trucks and buses with ultra low emissions and
13 the ability to use an alternative fuel that has an
14 average fuel economy equivalent to—

15 (i) 10 miles per gallon of gasoline by
16 2009; and

17 (ii) 13 miles per gallon of gasoline by
18 2012;

19 (C) develop a production prototype of a
20 passenger automobile with zero equivalent emis-
21 sions that has an average fuel economy of 100
22 miles per gallon of gasoline by 2012;

23 (D) improve, by 2012, the average fuel
24 economy of trucks—

1 (i) in classes 1 and 2 by 300 percent;

2 and

3 (ii) in classes 3 through 6 by 200 per-

4 cent,

5 compared to the fuel economy as of the date of

6 the enactment of this Act; and

7 (E) minimize the production of hydrogen

8 from fossil fuels.

9 (b) DEFINITIONS.—For purposes of this section—

10 (1) the term “alternative fuel” has the meaning

11 given that term in section 301(2) of the Energy Pol-

12 icy Act of 1992; and

13 (2) the term “major energy-consuming indus-

14 tries” means—

15 (A) the forest product industry;

16 (B) the steel industry;

17 (C) the aluminum industry;

18 (D) the metal casting industry;

19 (E) the chemical industry;

20 (F) the petroleum refining industry; and

21 (G) the glass-making industry.

22 (c) AUTHORIZATION OF APPROPRIATIONS.—There

23 are authorized to be appropriated to the Secretary of En-

24 ergy for carrying out activities to achieve the goals de-

25 scribed in subsection (a)—

- 1 (1) \$900,000,000 for fiscal year 2004;
- 2 (2) \$950,000,000 for fiscal year 2005;
- 3 (3) \$1,025,000,000 for fiscal year 2006;
- 4 (4) \$1,110,000,000 for fiscal year 2007; and
- 5 (5) \$1,200,000,000 for fiscal year 2008.

6 (d) LIMITS ON USE OF FUNDS.—None of the funds
7 authorized to be appropriated under this section may be
8 used for—

9 (1) the promulgation and implementation of en-
10 ergy efficiency regulations;

11 (2) the Weatherization Assistance Program
12 under part A of title IV of the Energy Conservation
13 and Production Act;

14 (3) the State Energy Program under part D of
15 title III of the Energy Policy and Conservation Act;

16 or

17 (4) the Federal Energy Management Program
18 under part 3 of title V of the National Energy Con-
19 servation Policy Act.

20 **SEC. 103. ENHANCED AERONAUTICAL SYSTEM ENERGY EF-**
21 **FICIENCY RESEARCH, DEVELOPMENT, AND**
22 **DEMONSTRATION.**

23 (a) GOALS.—For aeronautical system energy effi-
24 ciency, the National Aeronautics and Space Administra-
25 tion shall seek to—

1 (1) develop technologies that will enable a 10
2 percent increase in aircraft engine energy efficiencies
3 by 2013 as compared to the most energy efficient
4 engine in the United States commercial aircraft fleet
5 as of the date of the enactment of this Act; and

6 (2) develop air transportation management
7 operational concepts and procedures that will enable
8 a 15 percent increase in the energy efficiency of the
9 overall air transport system on a per flight basis by
10 2013 as compared to the efficiency as of the date of
11 the enactment of this Act.

12 (b) AUTHORIZATION OF APPROPRIATIONS.—There
13 are authorized to be appropriated to the Administrator of
14 the National Aeronautics and Space Administration for
15 carrying out activities to achieve the goals described in
16 subsection (a)—

- 17 (1) \$70,000,000 for fiscal year 2004;
18 (2) \$75,000,000 for fiscal year 2005;
19 (3) \$80,000,000 for fiscal year 2006;
20 (4) \$85,000,000 for fiscal year 2007; and
21 (5) \$90,000,000 for fiscal year 2008.

22 **SEC. 104. ASSESSMENT OF RENEWABLE ENERGY RE-**
23 **SOURCES.**

24 (a) IN GENERAL.—Not later than one year after the
25 date of the enactment of this Act, the Secretary of Energy

1 shall submit to the Congress an assessment of all renew-
2 able energy resources available for commercial applica-
3 tions within the United States.

4 (b) **RESOURCE ASSESSMENT.**—Such assessment shall
5 include a detailed inventory describing the available
6 amount and characteristics of renewable energy sources,
7 and an estimate of the research, development, demonstra-
8 tion, and commercial applications efforts necessary to de-
9 velop each resource. The assessment shall also include
10 such other information as the Secretary of Energy believes
11 would be useful in achieving wider commercial applications
12 of emerging and state-of-the-art renewable energy genera-
13 tion facilities or devices.

14 (c) **AVAILABILITY.**—The technology development in-
15 formation and cost estimates in the assessment shall be
16 updated annually and made available to the public, along
17 with the data used to create the assessment.

18 (d) **AUTHORIZATION OF APPROPRIATIONS.**—For the
19 purposes of carrying out this section, there are authorized
20 to be appropriated to the Secretary of Energy
21 \$10,000,000 for fiscal year 2004, and such sums as may
22 be necessary for the fiscal years 2005 through 2022.

23 **SEC. 105. NEXT GENERATION LIGHTING INITIATIVE.**

24 (a) **IN GENERAL.**—The Secretary shall carry out a
25 Next Generation Lighting Initiative in accordance with

1 this section to support research, development, demonstra-
2 tion, and commercial application activities related to ad-
3 vanced solid-state lighting technologies based on white
4 light emitting diodes.

5 (b) OBJECTIVES.—The objectives of the initiative
6 shall be—

7 (1) to develop, by 2012, advanced solid-state
8 lighting technologies based on white light emitting
9 diodes that, compared to incandescent and fluores-
10 cent lighting technologies, are—

11 (A) longer lasting;

12 (B) more energy-efficient; and

13 (C) cost-competitive;

14 (2) to develop an inorganic white light emitting
15 diode that has an efficiency of 160 lumens per watt
16 and a 10-year lifetime; and

17 (3) to develop an organic white light emitting
18 diode with an efficiency of 100 lumens per watt with
19 a 5-year lifetime that—

20 (A) illuminates over a full color spectrum;

21 (B) covers large areas over flexible sur-
22 faces; and

23 (C) does not contain harmful pollutants,
24 such as mercury, typical of fluorescent lamps.

25 (c) FUNDAMENTAL RESEARCH.—

1 (1) CONSORTIUM.—The Secretary shall carry
2 out the fundamental research activities of the Next
3 Generation Lighting Initiative through a private
4 consortium (which may include private firms, trade
5 associations and institutions of higher education),
6 which the Secretary shall select through a competi-
7 tive process. Each proposed consortium shall submit
8 to the Secretary such information as the Secretary
9 may require, including a program plan agreed to by
10 all participants of the consortium.

11 (2) JOINT VENTURE.—The consortium shall be
12 structured as a joint venture among the participants
13 of the consortium. The Secretary shall serve on the
14 governing council of the consortium.

15 (3) ELIGIBILITY.—To be eligible to be selected
16 as the consortium under paragraph (1), an applicant
17 must be broadly representative of United States
18 solid-state lighting research, development, and man-
19 ufacturing expertise as a whole.

20 (4) GRANTS.—(A) The Secretary shall award
21 grants for fundamental research to the consortium,
22 which the consortium may disburse to researchers,
23 including those who are not participants of the con-
24 sortium.

1 (B) To receive a grant, the consortium must
2 provide a description to the Secretary of the pro-
3 posed research and list the parties that will receive
4 funding.

5 (C) At least 20 percent of the cost of a research
6 and development project for which a grant is made
7 under this section shall be matched by the consor-
8 tium, and at least 50 percent of the cost of a dem-
9 onstration or commercial application project for
10 which a grant is made under this section shall be
11 matched by the consortium.

12 (5) NATIONAL LABORATORIES.—National Lab-
13 oratories may participate in the research described
14 in this section, and may receive funds from the con-
15 sortium.

16 (6) INTELLECTUAL PROPERTY.—Participants in
17 the consortium and the Federal Government shall
18 have royalty-free nonexclusive rights to use intellec-
19 tual property derived from research funded pursuant
20 to this subsection.

21 (d) DEVELOPMENT, DEMONSTRATION, AND COM-
22 MERCIAL APPLICATION.—The Secretary shall carry out
23 the development, demonstration, and commercial applica-
24 tion activities of the Next Generation Lighting Initiative
25 through awards to private firms, trade associations, and

1 institutions of higher education. In selecting awardees, the
2 Secretary may give preference to members of the consor-
3 tium selected pursuant to subsection (c).

4 (e) PLANS AND ASSESSMENTS.—(1) The consortium
5 shall formulate an annual operating plan which shall in-
6 clude research priorities, technical milestones, and plans
7 for technology transfer, and which shall be subject to ap-
8 proval by the Secretary.

9 (2) The Secretary shall enter into an arrangement
10 with the National Academy of Sciences to conduct periodic
11 reviews of the Next Generation Lighting Initiative. The
12 Academy shall review the research priorities, technical
13 milestones, and plans for technology transfer established
14 under paragraph (1) and evaluate the progress toward
15 achieving them. The Secretary shall consider the results
16 of such reviews in evaluating the plans submitted under
17 paragraph (1).

18 (f) AUDIT.—The Secretary shall retain an inde-
19 pendent, commercial auditor to perform an audit of the
20 consortium to determine the extent to which the funds au-
21 thorized by this section have been expended in a manner
22 consistent with the purposes of this section. The auditor
23 shall transmit a report annually to the Secretary, who
24 shall transmit the report to the Congress, along with a
25 plan to remedy any deficiencies cited in the report.

1 (g) SUNSET.—The Next Generation Lighting Initia-
2 tive shall terminate no later than September 30, 2013.

3 (h) DEFINITIONS.—As used in this section:

4 (1) ADVANCED SOLID-STATE LIGHTING.—The
5 term “advanced solid-state lighting” means a
6 semiconducting device package and delivery system
7 that produces white light using externally applied
8 voltage.

9 (2) FUNDAMENTAL RESEARCH.—The term
10 “fundamental research” includes basic research on
11 both solid-state materials and manufacturing proc-
12 esses.

13 (3) INORGANIC WHITE LIGHT EMITTING
14 DIODE.—The term “inorganic white light emitting
15 diode” means an inorganic semiconducting package
16 that produces white light using externally applied
17 voltage.

18 (4) ORGANIC WHITE LIGHT EMITTING DIODE.—
19 The term “organic white light emitting diode”
20 means an organic semiconducting compound that
21 produces white light using externally applied voltage.

22 (i) AUTHORIZATION OF APPROPRIATIONS.—There
23 are authorized to be appropriated to the Secretary for car-
24 rying out this section \$10,000,000 for fiscal year 2004

1 and \$50,000,000 for each of the fiscal years 2005 through
2 2008.

3 **SEC. 106. NATIONAL BUILDING PERFORMANCE INITIATIVE.**

4 (a) INTERAGENCY GROUP.—Not later than 3 months
5 after the date of enactment of this Act, the Director of
6 the Office of Science and Technology Policy shall establish
7 an interagency group to develop, in coordination with the
8 advisory committee established under subsection (e), a
9 National Building Performance Initiative (in this section
10 referred to as the “Initiative”). The interagency group
11 shall be cochaired by appropriate officials of the Depart-
12 ment and the Department of Commerce, who shall jointly
13 arrange for the provision of necessary administrative sup-
14 port to the group.

15 (b) INTEGRATION OF EFFORTS.—The Initiative shall
16 integrate Federal, State, and voluntary private sector ef-
17 forts to reduce the costs of construction, operation, main-
18 tenance, and renovation of commercial, industrial, institu-
19 tional, and residential buildings.

20 (c) PLAN.—Not later than 1 year after the date of
21 enactment of this Act, the interagency group shall submit
22 to Congress a plan for carrying out the appropriate Fed-
23 eral role in the Initiative. The plan shall include—

24 (1) research, development, demonstration, and
25 commercial application of systems and materials for

1 new construction and retrofit relating to the building
2 envelope and building system components; and

3 (2) the collection, analysis, and dissemination of
4 research results and other pertinent information on
5 enhancing building performance to industry, govern-
6 ment entities, and the public.

7 (d) DEPARTMENT OF ENERGY ROLE.—Within the
8 Federal portion of the Initiative, the Department shall be
9 the lead agency for all aspects of building performance re-
10 lated to use and conservation of energy.

11 (e) ADVISORY COMMITTEE.—

12 (1) ESTABLISHMENT.—The Director of the Of-
13 fice of Science and Technology Policy shall establish
14 an advisory committee to—

15 (A) analyze and provide recommendations
16 on potential private sector roles and participa-
17 tion in the Initiative; and

18 (B) review and provide recommendations
19 on the plan described in subsection (c).

20 (2) MEMBERSHIP.—Membership of the advisory
21 committee shall include representatives with a broad
22 range of appropriate expertise, including expertise
23 in—

24 (A) building research and technology;

1 (B) architecture, engineering, and building
2 materials and systems; and

3 (C) the residential, commercial, and indus-
4 trial sectors of the construction industry.

5 (f) CONSTRUCTION.—Nothing in this section provides
6 any Federal agency with new authority to regulate build-
7 ing performance.

8 **SEC. 107. PROGRESS REPORT.**

9 The Secretary of Energy shall transmit to the Com-
10 mittee on Science of the House of Representatives and the
11 Committee on Energy and Natural Resources of the Sen-
12 ate an annual report assessing the progress made pursu-
13 ant to this title in achieving the goal set forth in section
14 3. The first such report shall be transmitted along with
15 the first annual budget request from the President occur-
16 ring at least 6 months after the date of the enactment
17 of this Act.

18 **TITLE II—COMMERCIAL**
19 **APPLICATIONS**

20 **SEC. 201. STUDY OF FINANCING FOR PROTOTYPE TECH-**
21 **NOLOGIES.**

22 (a) INDEPENDENT ASSESSMENT.—The Secretary of
23 Energy shall commission an independent assessment of in-
24 novative financing techniques to facilitate construction of

1 new renewable energy and energy efficiency facilities that
2 might not otherwise be built in a competitive market.

3 (b) CONDUCT OF THE ASSESSMENT.—The Secretary
4 of Energy shall retain an independent contractor with
5 proven expertise in financing large capital projects or in
6 financial services consulting to conduct the assessment
7 under this section.

8 (c) CONTENT OF THE ASSESSMENT.—The assess-
9 ment shall include a comprehensive examination of all
10 available techniques to safeguard private investors against
11 risks (including both market-based and government-im-
12 posed risks) that are beyond the control of the investors.
13 Such techniques may include Federal loan guarantees,
14 Federal price guarantees, special tax considerations, and
15 direct Federal investment.

16 (d) REPORT.—The Secretary of Energy shall submit
17 the results of the independent assessment to the Congress
18 not later than 9 months after the date of enactment of
19 this section.

20 **SEC. 202. RENEWABLE ENERGY IN PUBLIC BUILDINGS.**

21 (a) DEMONSTRATION AND TECHNOLOGY TRANSFER
22 PROGRAM.—The Secretary of Energy shall establish a
23 program for the demonstration of innovative technologies
24 for solar and other renewable energy sources in buildings
25 owned or operated by a State or local government, and

1 for the dissemination of information resulting from such
 2 demonstration to interested parties.

3 (b) LIMIT ON FEDERAL FUNDING.—The Secretary of
 4 Energy shall provide under this section no more than 40
 5 percent of the incremental costs of the solar or other re-
 6 newable energy source project funded.

7 (c) PREFERRED PROJECTS.—The Secretary of En-
 8 ergy shall give preference in making awards under this
 9 section to projects by municipalities seeking to achieve sig-
 10 nificant transition to a renewable energy infrastructure.

11 (d) AUTHORIZATION OF APPROPRIATIONS.—There
 12 are authorized to be appropriated to the Secretary of En-
 13 ergy for carrying out this section—

- 14 (1) \$60,000,000 for fiscal year 2004;
- 15 (2) \$70,000,000 for fiscal year 2005;
- 16 (3) \$80,000,000 for fiscal year 2006;
- 17 (4) \$90,000,000 for fiscal year 2007; and
- 18 (5) \$100,000,000 for fiscal year 2008.

19 **SEC. 203. REGULATORY REVIEWS FOR NEW TECHNOLOGIES**
 20 **AND PROCESSES.**

21 (a) REGULATORY REVIEWS.—Not later than one year
 22 after the date of the enactment of this Act, and every five
 23 years thereafter, the Director of the Office of Science and
 24 Technology Policy shall oversee a review of each Federal
 25 agency's regulations and policies to identify—

1 (1) existing regulations and policies that act as
2 barriers to the development and commercialization of
3 emerging renewable energy and energy efficiency
4 technologies and processes (including fuel cells, com-
5 bined heat and power, distributed generation, and
6 small-scale renewable energy); and

7 (2) actions the agency is taking or could take
8 to—

9 (A) remove barriers to market entry for
10 emerging renewable energy and energy effi-
11 ciency technologies;

12 (B) increase energy efficiency; or

13 (C) encourage the use of new processes to
14 meet energy and environmental goals.

15 (b) REPORTS TO CONGRESS.—Not later than 18
16 months after the date of the enactment of this Act, and
17 every five years thereafter, the Director of the Office of
18 Science and Technology Policy shall report to the Con-
19 gress on the results of the agency reviews conducted under
20 subsection (a).

21 (c) CONTENTS OF THE REPORTS.—The reports re-
22 quired under subsection (b) shall—

23 (1) identify all regulatory and policy barriers to
24 the development and commercialization of emerging

1 renewable energy and energy efficiency technologies
2 and processes;

3 (2) actions taken, or proposed to be taken, that
4 are identified under subsection (a)(2); and

5 (3) recommendations for changes in laws or
6 regulations that may be needed to—

7 (A) expedite the siting and development of
8 energy production and distribution facilities;
9 and

10 (B) encourage the adoption of energy effi-
11 ciency and process improvements.

12 **SEC. 204. SMALL BUSINESS COMMERCIALIZATION ASSIST-**
13 **ANCE.**

14 (a) **AUTHORITY.**—The Secretary of Energy shall pro-
15 vide assistance, to small businesses with less than 100 em-
16 ployees and startup companies, for the commercial appli-
17 cation of renewable energy and energy efficiency tech-
18 nologies developed by or with support from the Depart-
19 ment of Energy. Such assistance shall be provided through
20 a competitive review process.

21 (b) **APPLICATIONS.**—The Secretary of Energy shall
22 establish requirements for applications for assistance
23 under this section. Such applications shall contain a com-
24 mercial application plan, including a description of the fi-
25 nancial, business, and technical support (including sup-

1 port from universities and national laboratories) the appli-
2 cant anticipates in its commercial application effort.

3 (c) SELECTION.—The Secretary of Energy shall se-
4 lect applicants to receive assistance under this section on
5 the basis of which applications are the most likely to result
6 in commercial application of renewable energy and energy
7 efficiency technologies.

8 (d) LIMIT ON FEDERAL FUNDING.—The Secretary of
9 Energy shall provide under this section no more than 50
10 percent of the costs of the project funded.

11 (e) AUTHORIZATION OF APPROPRIATIONS.—There
12 are authorized to be appropriated to the Secretary of En-
13 ergy for carrying out this section \$200,000,000 for each
14 of the fiscal years 2004 through 2008, and such sums as
15 may be necessary for each of the fiscal years 2009 through
16 2024.

17 **SEC. 205. EDUCATION AND OUTREACH.**

18 (a) PROGRAM.—The Secretary of Energy shall estab-
19 lish a program education and outreach, including innova-
20 tive education and outreach techniques, on renewable en-
21 ergy and energy efficiency technologies to manufacturers,
22 consumers, engineers, architects, builders, energy service
23 companies, universities, facility planners and managers,
24 State and local governments, and other appropriate enti-
25 ties.

1 (b) AUTHORIZATION OF APPROPRIATIONS.—There
2 are authorized to be appropriated to the Secretary of En-
3 ergy for carrying out this section \$100,000,000 for each
4 of the fiscal years 2004 through 2008, and such sums as
5 may be necessary for each of the fiscal years 2009 through
6 2022.

7 **SEC. 206. INDUSTRIAL ENERGY AND WATER CONSERVA-**
8 **TION.**

9 (a) ESTABLISHMENT.—The Secretary shall establish
10 a competitive matching grant pilot program to support
11 voluntary local government programs that seek to promote
12 innovative energy efficiency technologies and processes to
13 reduce the industrial use of water and the discharge of
14 wastewater from commercial and industrial entities. The
15 grant program shall be administered by the Assistant Sec-
16 retary for Energy Efficiency and Renewable Energy in
17 partnership with municipal entities, including publicly
18 owned treatment works, and nongovernmental organiza-
19 tions and associations, including watershed groups spon-
20 sored by governmental entities, whose mission relates to
21 energy or water conservation and efficiency.

22 (b) ASSISTANCE.—Assistance provided under this
23 section may include—

24 (1) technical and planning assistance, including
25 studies, energy and wastewater audits, modeling,

1 data collection, surveys, preconstruction, engineer-
2 ing, and design assistance;

3 (2) financial assistance (including the provision
4 either of matching grants of up to 50 percent of
5 total costs to municipal entities or loan guarantees)
6 for projects selected; and

7 (3) funding for a period of up to 2 years for
8 personnel to assist in the development and imple-
9 mentation of a program that meets the goals of this
10 section.

11 (c) SELECTION CRITERIA.—

12 (1) IN GENERAL.—The Secretary shall select
13 proposals to be funded under this section on the
14 basis of the following:

15 (A) Ability to maximize energy efficiency
16 technology to reduce the demand for water in
17 commercial or industrial entities.

18 (B) Reductions in the discharge of waste-
19 water from commercial or industrial entities.

20 (C) Technical feasibility and technology
21 transfer plan for distributing the results of the
22 proposal to be funded.

23 (D) Cost-effectiveness.

24 (E) Other environmental and economic
25 benefits, including brownfields cleanup and re-

1 development, job retention, and economic re-
2 talization.

3 (2) GEOGRAPHIC DIVERSITY.—In selecting pro-
4 posals to be funded under this section, the Secretary
5 shall make every effort to ensure geographic diver-
6 sity in those proposals funded.

7 (d) AUTHORIZATION OF APPROPRIATIONS.—There
8 are authorized to be appropriated to the Secretary for car-
9 rying out this section—

- 10 (1) \$60,000,000 for fiscal year 2004;
11 (2) \$70,000,000 for fiscal year 2005;
12 (3) \$80,000,000 for fiscal year 2006;
13 (4) \$90,000,000 for fiscal year 2007; and
14 (5) \$100,000,000 for fiscal year 2008.

15 Such funds shall remain available until expended.

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