Calendar No. 259

107TH CONGRESS
1ST SESSION

S. 1766

To provide for the energy security of the Nation, and for other purposes.

IN THE SENATE OF THE UNITED STATES

DECEMBER 5, 2001

Mr. DASCHLE (for himself and Mr. BINGAMAN) introduced the following bill; which was read the first time

DECEMBER 6, 2001

Read the second time and placed on the calendar

A BILL

To provide for the energy security of the Nation, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Energy Policy Act of 2002''.

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DIVISION A—RELIABLE AND DIVERSE POWER GENERATION AND TRANSMISSION

TITLE I—REGIONAL COORDINATION

SEC. 101. POLICY ON REGIONAL COORDINATION.

(a) STATEMENT OF POLICY.—It is the policy of the Federal Government to encourage States to coordinate, on a regional basis, State energy policies to provide reliable and affordable energy services to the public while minimizing the impact of providing energy services on communities and the environment.

(b) DEFINITION OF ENERGY SERVICES.—For purposes of this section, the term ''energy services'' means—

(1) the generation or transmission of electric energy,

(2) the transportation, storage, and distribution of crude oil, residual fuel oil, refined petroleum product, or natural gas, or

(3) the reduction in load through increased efficiency, conservation, or load control measures.

SEC. 102. FEDERAL SUPPORT FOR REGIONAL COORDINATION.

(a) TECHNICAL ASSISTANCE.—The Secretary of Energy shall provide technical assistance to States and re-

gional organizations formed by two or more States to assist them in coordinating their energy policies on a regional basis. Such technical assistance may include assistance in—

(1) assessing future supply availability and demand requirements,

(2) planning and siting additional energy infrastructure, including generating facilities, electric transmission facilities, pipelines, refineries, and distributed generation facilities to meet regional needs,

(3) identifying and resolving problems in distribution networks,

(4) developing plans to respond to surge demand or emergency needs, and

(5) developing energy efficiency, conservation, and load control programs.

(b) ANNUAL CONFERENCE ON REGIONAL ENERGY COORDINATION.—

(1) ANNUAL CONFERENCE.—The Secretary of Energy shall convene an annual conference to promote regional coordination on energy policy and infrastructure issues.

(2) PARTICIPATION.—The Secretary of Energy shall invite appropriate representatives of federal,

state, and regional energy organizations, and other interested parties.

(3) FEDERAL AGENCY COOPERATION.—The Secretary of Energy shall consult and cooperate with the Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of the Treasury, the Chairman of the Federal Energy Regulatory Commission, the Administrator of the Environmental Protection Agency, and the Chairman of the Council on Environmental Quality in the planning and conduct of the conference.

(4) AGENDA.—The Secretary of Energy, in consultation with the officials identified in paragraph (3) and participants identified in paragraph (2), shall establish an agenda for each conference that promotes regional coordination on energy policy and infrastructure issues.

(5) RECOMMENDATIONS.—Not later than 60 days after the conclusion of each annual conference, the Secretary of Energy shall report to the President and the Congress recommendations arising out of the conference that may improve—

(A) regional coordination on energy policy and infrastructure issues, and

(B) federal support for regional coordination.

TITLE II—ELECTRICITY

Subtitle A—Amendments to the Federal Power Act

SEC. 201. DEFINITIONS.

(a) DEFINITION OF ELECTRIC UTILITY.—Section 3(22) of the Federal Power Act (16 U.S.C. 796(22)) is amended to read as follows:

''(22) 'electric utility' means any person or Federal or State agency (including any municipality) that sells electric energy; such term includes the Tennessee Valley Authority and each Federal power marketing agency.

(b) DEFINITION OF TRANSMITTING UTILITY.—Section 3(23) of the Federal Power Act (16 U.S.C. 796(23))is amended to read as follows:

''(23) TRANSMITTING UTILITY.—The term 'transmitting utility' means an entity (including any entity described in section 201(f)) that owns or operates facilities used for the transmission of electric energy in—

''(A) interstate commerce; or

''(B) for the sale of electric energy at wholesale.''.

SEC. 202. ELECTRIC UTILITY MERGERS.

Section 203(a) of the Federal Power Act (16 U.S.C. 824b) is amended to read as follows:

''(a)(1) No public utility shall, without first having secured an order of the Commission authorizing it to do so—

''(A) sell, lease, or otherwise dispose of the whole of its facilities subject to the jurisdiction of the Commission, or any part thereof of a value in excess of $1,000,000,

''(B) merge or consolidate, directly or indirectly, such facilities or any part thereof with the facilities of any other person, by any means whatsoever,

''(C) purchase, acquire, or take any security of any other public utility, or

''(D) purchase, lease, or otherwise acquire existing facilities for the generation of electric energy or for the production or transportation of natural gas.

''(2) No holding company in a holding company system that includes a transmitting utility or an electric utility company shall purchase, acquire, or take any security of, or, by any means whatsoever, directly or indirectly, merge or consolidate with a transmitting utility, an electric utility company, a gas utility company, or a holding company in a holding company system that includes a

transmitting utility, an electric utility company, or a gas utility company, without first having secured an order of the Commission authorizing it to do so.

''(3) Upon application for such approval the Commission shall give reasonable notice in writing to the Governor and State commission of each of the States in which the physical property affected, or any part thereof, is situated, and to such other persons as it may deem advisable.

''(4) After notice and opportunity for hearing, if the Commission finds that the proposed disposition, consolidation, acquisition, or control will be consistent with the public interest, it shall approve the same.

''(5) For purposes of this subsection, the terms 'electric utility company', 'gas utility company', 'holding company', and 'holding company system' have the meaning given those terms in the Public Utility Holding Company Act of 2002.

''(6) Notwithstanding section 201(b)(1), facilities used for the generation of electric energy shall be subject to the jurisdiction of the Commission for purposes of this section.''.

SEC. 203. MARKET-BASED RATES.

(a) APPROVAL OF MARKET-BASED RATES.—Section 205 of the Federal Power Act (16 U.S.C. 824d) is amended by adding at the end the following:

''(h) The Commission may determine whether a market-based rate for the sale of electric energy subject to the jurisdiction of the Commission is just and reasonable and not unduly discriminatory or preferential. In making such determination, the Commission shall consider—

''(1) whether the seller and its affiliates have, or have adequately mitigated, market power in the generation and transmission of electric energy;

''(2) whether the sale is made in a competitive market;

''(3) whether market mechanisms, such as power exchanges and bid auctions, function adequately;

''(4) the effect of demand response mechanisms;

''(5) the effect of mechanisms or requirements intended to ensure adequate reserve margins; and

''(6) other such considerations as the Commission may deem to be appropriate and in the public interest.''.

(b) REVOCATION OF MARKET-BASED RATES.—Section 206 of the Federal Power Act (16 U.S.C. 824e) is amended by adding at the end the following:

''(f) Whenever the Commission, after a hearing had upon its own motion or upon complaint, finds that a rate charged by a public utility authorized to charge a market-based rate under section 205 is unjust, unreasonable, un-

duly discriminatory or preferential, the Commission shall determine the just and reasonable rate and fix the same by order in accordance with this section, or order such other action as will, in the judgment of the Commission, adequately ensure a just and reasonable market-based rate.''.

SEC. 204. REFUND EFFECTIVE DATE.

Section 206(b) of the Federal Power Act (16 U.S.C. 824e(b)) is amended by—

(1) striking ''60 days after the filing of such complaint nor later than 5 months after the expiration of such 60-day period'' in the second sentence and inserting ''on which the complaint is filed''; and

(2) striking ''60 days after the publication by the Commission of notice of its intention to initiate such proceeding nor later than 5 months after the expiration of such 60-day period'' in the third sentence and inserting ''on which the Commission publishes notice of its intention to initiate such proceeding''.

SEC. 205. TRANSMISSION INTERCONNECTIONS.

Section 210 of the Federal Power Act (16 U.S.C. 824i) is amended to read as follows:

''TRANSMISSION INTERCONNECTION AUTHORITY

''SEC. 210. (a)(1) The Commission shall, by rule, establish technical standards and procedures for the inter-

connection of facilities used for the generation of electric energy with facilities used for the transmission of electric energy in interstate commerce. The rule shall provide—

''(A) criteria to ensure that an interconnection will not unreasonably impair the reliability of the transmission system; and

''(B) criteria for the apportionment or reimbursement of the costs of making the interconnection.

''(2) Notwithstanding section 201(f), a transmitting utility shall interconnect its transmission facilities with the generation facilities of a power producer upon the application of the power producer if the power producer complies with the requirements of the rule.

''(b) Upon the application of a power producer or its own motion, the Commission may, after giving notice and an opportunity for a hearing to any entity whose interest may be affected, issue an order requiring—

''(1) the physical connection of facilities used for the generation of electric energy with facilities used for the transmission of electric energy in interstate commerce;

''(2) such action as may be necessary to make effective any such physical connection;

''(3) such sale or exchange of electric energy or other coordination, as may be necessary to carry out the purposes of such order; or

''(4) such increase in transmission capacity as may be necessary to carry out the purposes of such order.

''(c) As used in this section, the term 'power producer' means an entity that owns or operates a facility used for the generation of electric energy.''.

SEC. 206. OPEN ACCESS TRANSMISSION BY CERTAIN UTILITIES.

Part II of the Federal Power Act is further amended by inserting after section 211 the following:

''OPEN ACCESS BY UNREGULATED TRANSMITTING UTILITIES

''SEC. 211A. (1) Subject to section 212(h), the Commission may, by rule or order, require an unregulated transmitting utility to provide transmission services—

''(A) at rates that are comparable to those that the unregulated transmitting utility charges itself, and

''(B) on terms and conditions (not relating to rates) that are comparable to those under Commission rules that require public utilities to offer open access transmission services and that are not unduly discriminatory or preferential.

''(2) The Commission shall exempt from any rule or order under this subsection any unregulated transmitting utility that—

''(A) sells no more than 4,000,000 megawatt hours of electricity per year;

''(B) does not own or operate any transmission facilities that are necessary for operating an interconnected transmission system (or any portion thereof), or

''(C) meets other criteria the Commission determines to be in the public interest.

''(3) The rate changing procedures applicable to public utilities under subsections (c) and (d) of section 205 are applicable to unregulated transmitting utilities for purposes of this section.

''(4) In exercising its authority under paragraph (1), the Commission may remand transmission rates to an unregulated transmitting utility for review and revision where necessary to meet the requirements of paragraph (1).

''(5) The provision of transmission services under paragraph (1) does not preclude a request for transmission services under section 211.

''(6) The Commission may not require a State or municipality to take action under this section that constitutes

a private business use for purposes of section 141 of the Internal Revenue Code of 1986 (26 U.S.C. 141).

''(7) For purposes of this subsection, the term 'unregulated transmitting utility' means an entity that—

''(A) owns or operates facilities used for the transmission of electric energy in interstate commerce or for the sale of electric energy at wholesale, and

''(B) is either an entity described in section 201(f) or a rural electric cooperative.''.

SEC. 207. ELECTRIC RELIABILITY STANDARDS.

Part II of the Federal Power Act is further amended by adding at the end the following:

''SEC. 215. ELECTRIC RELIABILITY STANDARDS.

''(a) DUTY OF THE COMMISSION.—The Commission shall establish and enforce one or more systems of mandatory electric reliability standards to ensure the reliable operation of the interstate transmission system, which shall be applicable to—

''(1) any entity that sells, purchases, or transmits, electric energy using the interstate transmission system, and

''(2) any entity that owns, operates, or maintains facilities that are a part of the interstate transmission system.

''(b) STANDARDS.—In carrying out its responsibility under subsection (a), the Commission may adopt and enforce, in whole or in part, a reliability standard proposed or adopted by the North American Electric Reliability Council, a regional reliability council, a similar organization, or a State regulatory authority.

''(c) ENFORCEMENT.—In carrying out its responsibility under subsection (a), the Commission may certify one or more self-regulating reliability organizations (which may include the North American Electric Reliability Council, one or more regional reliability councils, one or more regional transmission organizations, or any similar organization) to ensure the reliable operation of the interstate transmission system and to monitor and enforce compliance of their members with electric reliability standards adopted under this section.

''(d) COOPERATION WITH CANADA AND MEXICO.—The Commission shall ensure that any self-regulating reliability organization certified under this section, one or more of whose members are interconnected with transmitting utilities in Canada or the Republic of Mexico, provide for the participation of such utilities in the governance of the organization and the adoption of reliability standards. Nothing in this section shall be construed to extend the

jurisdiction of the Commission outside of the United States.

''(e) PRESERVATION OF STATE AUTHORITY.—Nothing in this section shall be construed to preempt the authority of any State to take action to ensure the safety, adequacy, and reliability of local distribution facilities service within the State, except where the exercise of such authority unreasonably impairs the reliability of the interstate transmission system.

''(f) DEFINITIONS.—For purposes of this section:

''(1) The term 'interstate transmission system' means the network of facilities used for the transmission of electric energy in interstate commerce.

''(2) The term 'reliability' means the ability of the interstate transmission system to transmit sufficient electric energy to supply the aggregate electric demand and energy requirements of electricity consumers at all times and the ability of the system to withstand sudden disturbances.''.

SEC. 208. MARKET TRANSPARENCY RULES.

Part II of the Federal Power Act is further amended by adding at the end the following:

''SEC. 216. MARKET TRANSPARENCY RULES.

''(a) COMMISSION RULES.—Not later than 180 days after the date of enactment of this section, the Commis-

sion shall issue rules establishing an electronic information system to provide information about the availability and price of wholesale electric energy and transmission services to the Commission, state commissions, buyers and sellers of wholesale electric energy, users of transmission services, and the public on a timely basis.

''(b) INFORMATION REQUIRED.—The Commission shall require—

''(1) each regional transmission organization to provide statistical information about the available capacity and capacity constraints of transmission facilities operated by the organization; and

''(2) each broker, exchange, or other market-making entity that matches offers to sell and offers to buy wholesale electric energy in interstate commerce to provide statistical information about the amount and sale price of sales of electric energy at wholesale in interstate commerce it transacts.

''(c) TIMELY BASIS.—The Commission shall require the information required under subsection (b) to be posted on the Internet as soon as practicable and updated as frequently as practicable.

''(d) PROTECTION OF SENSITIVE INFORMATION.—The Commission shall exempt from disclosure commercial or financial information that the Commission, by rule or

order, determines to be privileged, confidential, or otherwise sensitive.''.

SEC. 209. ACCESS TO TRANSMISSION BY INTERMITTENT GENERATORS.

Part II of the Federal Power Act is further amended by adding at the end the following:

''SEC. 217. ACCESS TO TRANSMISSION BY INTERMITTENT GENERATORS.

''(a) FAIR TREATMENT OF INTERMITTENT GENERATORS.—The Commission shall ensure that all transmitting utilities provide transmission service to intermittent generators in a manner that does not penalize such generators, directly or indirectly, for characteristics that are—

''(1) inherent to intermittent energy resources; and

''(2) are beyond the control of such generators.

''(b) POLICIES.—The Commission shall ensure that the requirement in subsection (a) is met by adopting such policies as it deems appropriate which shall include, but not be limited to, the following:

''(1) Subject to the sole exception set forth in paragraph (2), the Commission shall ensure that the rates transmitting utilities charge intermittent generator customers for transmission services do not di-

rectly or indirectly penalize intermittent generator customers for scheduling deviations.

''(2) The Commission may exempt a transmitting utility from the requirement set forth in subsection (b) if the transmitting utility demonstrates that scheduling deviations by its intermittent generator customers are likely to have a substantial adverse impact on the reliability of the transmitting utility's system. For purposes of administering this exemption, there shall be a rebuttable presumption of no adverse impact where intermittent generators collectively constitute 20 percent or less of total generation interconnected with transmitting utility's system and using transmission services provided by transmitting utility.

''(3) The Commission shall ensure that to the extent any transmission charges recovering the transmitting utility's embedded costs are assessed to intermittent generators, they are assessed to such generators on the basis of kilowatt-hours generated rather than the intermittent generator's capacity.

''(4) The Commission shall require transmitting utilities to offer to intermittent generators, and may require transmitting utilities to offer to all transmission customers, access to nonfirm transmission

service pursuant to long-term contracts of up to ten years duration under reasonable terms and conditions.

''(c) DEFINITIONS.—As used in this section:

''(1) The term 'intermittent generator' means a person that generates electricity using wind or solar energy.

''(2) The term 'nonfirm transmission service' means transmission service provided on an 'as available' basis.

''(3) The term 'scheduling deviation' means delivery of more or less energy than has previously been forecast in a schedule submitted by an intermittent generator to a control area operator or transmitting utility.''.

SEC. 210. ENFORCEMENT.

(a) COMPLAINTS.—Section 306 of the Federal Power Act (16 U.S.C. 825e) is amended by—

(1) inserting ''electric utility,'' after ''Any person,''; and

(2) inserting ''transmitting utility,'' after ''licensee'' each place it appears.

(b) INVESTIGATIONS.—Section 307(a) of the Federal Power Act (16 U.S.C. 825f(a)) is amended by inserting

''or transmitting utility'' after ''any person'' in the first sentence.

(c) REVIEW OF COMMISSION ORDERS.—Section 313(a) of the Federal Power Act (16 U.S.C. 8251) is amended by inserting ''electric utility,'' after ''Any person,'' in the first sentence.

(d) CRIMINAL PENALTIES.—Section 316(c) of the Federal Power Act (16 U.S.C. 825o(c)) is repealed.

(e) CIVIL PENALTIES.—Section 316A of the Federal Power Act (16 U.S.C. 825o–1) is amended by striking ''section 211, 212, 213, or 214'' each place it appears and inserting ''Part II''.

Subtitle B—Amendments to the Public Utility Holding Company Act

SEC. 221. SHORT TITLE.

This subtitle may be cited as the ''Public Utility Holding Company Act of 2002''.

SEC. 222. DEFINITIONS.

For purposes of this subtitle:

(1) The term ''affiliate'' of a company means any company, 5 percent or more of the outstanding voting securities of which are owned, controlled, or held with power to vote, directly or indirectly, by such company.

(2) The term ''associate company'' of a company means any company in the same holding company system with such company.

(3) The term ''Commission'' means the Federal Energy Regulatory Commission.

(4) The term ''company'' means a corporation, partnership, association, joint stock company, business trust, or any organized group of persons, whether incorporated or not, or a receiver, trustee, or other liquidating agent of any of the foregoing.

(5) The term ''electric utility company'' means any company that owns or operates facilities used for the generation, transmission, or distribution of electric energy for sale.

(6) The terms ''exempt wholesale generator'' and ''foreign utility company'' have the same meanings as in sections 32 and 33, respectively, of the Public Utility Holding Company Act of 1935 (15 U.S.C. 79z–5a, 79z–5b), as those sections existed on the day before the effective date of this subtitle.

(7) The term ''gas utility company'' means any company that owns or operates facilities used for distribution at retail (other than the distribution only in enclosed portable containers or distribution to tenants or employees of the company operating

such facilities for their own use and not for resale) of natural or manufactured gas for heat, light, or power.

(8) The term ''holding company'' means—

(A) any company that directly or indirectly owns, controls, or holds, with power to vote, 10 percent or more of the outstanding voting securities of a public utility company or of a holding company of any public utility company; and

(B) any person, determined by the Commission, after notice and opportunity for hearing, to exercise directly or indirectly (either alone or pursuant to an arrangement or understanding with one or more persons) such a controlling influence over the management or policies of any public utility company or holding company as to make it necessary or appropriate for the rate protection of utility customers with respect to rates that such person be subject to the obligations, duties, and liabilities imposed by this subtitle upon holding companies.

(9) The term ''holding company system'' means a holding company, together with its subsidiary companies.

(10) The term ''jurisdictional rates'' means rates established by the Commission for the transmission of electric energy in interstate commerce, the sale of electric energy at wholesale in interstate commerce, the transportation of natural gas in interstate commerce, and the sale in interstate commerce of natural gas for resale for ultimate public consumption for domestic, commercial, industrial, or any other use.

(11) The term ''natural gas company'' means a person engaged in the transportation of natural gas in interstate commerce or the sale of such gas in interstate commerce for resale.

(12) The term ''person'' means an individual or company.

(13) The term ''public utility'' means any person who owns or operates facilities used for transmission of electric energy in interstate commerce or sales of electric energy at wholesale in interstate commerce.

(14) The term ''public utility company'' means an electric utility company or a gas utility company.

(15) The term ''State commission'' means any commission, board, agency, or officer, by whatever name designated, of a State, municipality, or other

political subdivision of a State that, under the laws of such State, has jurisdiction to regulate public utility companies.

(16) The term ''subsidiary company'' of a holding company means—

(A) any company, 10 percent or more of the outstanding voting securities of which are directly or indirectly owned, controlled, or held with power to vote, by such holding company; and

(B) any person, the management or policies of which the Commission, after notice and opportunity for hearing, determines to be subject to a controlling influence, directly or indirectly, by such holding company (either alone or pursuant to an arrangement or understanding with one or more other persons) so as to make it necessary for the rate protection of utility customers with respect to rates that such person be subject to the obligations, duties, and liabilities imposed by this subtitle upon subsidiary companies of holding companies.

(17) The term ''voting security'' means any security presently entitling the owner or holder thereof

to vote in the direction or management of the affairs of a company.

SEC. 223. REPEAL OF THE PUBLIC UTILITY HOLDING COMPANY ACT OF 1935.

The Public Utility Holding Company Act of 1935 (15 U.S.C. 79 et seq.) is repealed.

SEC. 224. FEDERAL ACCESS TO BOOKS AND RECORDS.

(a) IN GENERAL.—Each holding company and each associate company thereof shall maintain, and shall make available to the Commission, such books, accounts, memoranda, and other records as the Commission deems to be relevant to costs incurred by a public utility or natural gas company that is an associate company of such holding company and necessary or appropriate for the protection of utility customers with respect to jurisdictional rates.

(b) AFFILIATE COMPANIES.—Each affiliate of a holding company or of any subsidiary company of a holding company shall maintain, and shall make available to the Commission, such books, accounts, memoranda, and other records with respect to any transaction with another affiliate, as the Commission deems to be relevant to costs incurred by a public utility or natural gas company that is an associate company of such holding company and necessary or appropriate for the protection of utility customers with respect to jurisdictional rates.

(c) HOLDING COMPANY SYSTEMS.—The Commission may examine the books, accounts, memoranda, and other records of any company in a holding company system, or any affiliate thereof, as the Commission deems to be relevant to costs incurred by a public utility or natural gas company within such holding company system and necessary or appropriate for the protection of utility customers with respect to jurisdictional rates.

(d) CONFIDENTIALITY.—No member, officer, or employee of the Commission shall divulge any fact or information that may come to his or her knowledge during the course of examination of books, accounts, memoranda, or other records as provided in this section, except as may be directed by the Commission or by a court of competent jurisdiction.

SEC. 225. STATE ACCESS TO BOOKS AND RECORDS.

(a) IN GENERAL.—Upon the written request of a State commission having jurisdiction to regulate a public utility company in a holding company system, the holding company or any associate company or affiliate thereof, other than such public utility company, wherever located, shall produce for inspection books, accounts, memoranda, and other records that—

(1) have been identified in reasonable detail in a proceeding before the State commission;

(2) the State commission deems are relevant to costs incurred by such public utility company; and

(3) are necessary for the effective discharge of the responsibilities of the State commission with respect to such proceeding.

(b) LIMITATION.—Subsection (a) does not apply to any person that is a holding company solely by reason of ownership of one or more qualifying facilities under the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2601 et seq.).

(c) CONFIDENTIALITY OF INFORMATION.—The production of books, accounts, memoranda, and other records under subsection (a) shall be subject to such terms and conditions as may be necessary and appropriate to safeguard against unwarranted disclosure to the public of any trade secrets or sensitive commercial information.

(d) EFFECT ON STATE LAW.—Nothing in this section shall preempt applicable State law concerning the provision of books, accounts, memoranda, and other records, or in any way limit the rights of any State to obtain books, accounts, memoranda, and other records under any other Federal law, contract, or otherwise.

(e) COURT JURISDICTION.—Any United States district court located in the State in which the State commis-

sion referred to in subsection (a) is located shall have jurisdiction to enforce compliance with this section.

SEC. 226. EXEMPTION AUTHORITY.

(a) RULEMAKING.—Not later than 90 days after the effective date of this subtitle, the Commission shall promulgate a final rule to exempt from the requirements of section 224 any person that is a holding company, solely with respect to one or more—

(1) qualifying facilities under the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2601 et seq.);

(2) exempt wholesale generators; or

(3) foreign utility companies.

(b) OTHER AUTHORITY.—The Commission shall exempt a person or transaction from the requirements of section 224, if, upon application or upon the motion of the Commission—

(1) the Commission finds that the books, accounts, memoranda, and other records of any person are not relevant to the jurisdictional rates of a public utility or natural gas company; or

(2) the Commission finds that any class of transactions is not relevant to the jurisdictional rates of a public utility or natural gas company.

SEC. 227. AFFILIATE TRANSACTIONS.

(a) COMMISSION AUTHORITY UNAFFECTED.—Nothing in this subtitle shall limit the authority of the Commission under the Federal Power Act (16 U.S.C. 791a et seq.) to require that jurisdictional rates are just and reasonable, including the ability to deny or approve the pass through of costs, the prevention of cross-subsidization, and the promulgation of such rules and regulations as are necessary or appropriate for the protection of utility consumers.

(b) RECOVERY OF COSTS.—Nothing in this subtitle shall preclude the Commission or a State commission from exercising its jurisdiction under otherwise applicable law to determine whether a public utility company, public utility, or natural gas company may recover in rates any costs of an activity performed by an associate company, or any costs of goods or services acquired by such public utility company from an associate company.

SEC. 228. APPLICABILITY.

Except as otherwise specifically provided in this subtitle, no provision of this subtitle shall apply to, or be deemed to include—

(1) the United States;

(2) a State or any political subdivision of a State;

(3) any foreign governmental authority not operating in the United States;

(4) any agency, authority, or instrumentality of any entity referred to in paragraph (1), (2), or (3); or

(5) any officer, agent, or employee of any entity referred to in paragraph (1), (2), or (3) acting as such in the course of his or her official duty.

SEC. 229. EFFECT ON OTHER REGULATIONS.

Nothing in this subtitle precludes the Commission or a State commission from exercising its jurisdiction under otherwise applicable law to protect utility customers.

SEC. 230. ENFORCEMENT.

The Commission shall have the same powers as set forth in sections 306 through 317 of the Federal Power Act (16 U.S.C. 825e–825p) to enforce the provisions of this subtitle.

SEC. 231. SAVINGS PROVISIONS.

(a) IN GENERAL.—Nothing in this subtitle prohibits a person from engaging in or continuing to engage in activities or transactions in which it is legally engaged or authorized to engage on the effective date of this subtitle.

(b) EFFECT ON OTHER COMMISSION AUTHORITY.—Nothing in this subtitle limits the authority of the Commission under the Federal Power Act (16 U.S.C. 791a et seq.) (including section 301 of that Act) or the Natural

Gas Act (15 U.S.C. 717 et seq.) (including section 8 of that Act).

SEC. 232. IMPLEMENTATION.

Not later than 18 months after the date of enactment of this subtitle, the Commission shall—

(1) promulgate such regulations as may be necessary or appropriate to implement this subtitle (other than section 225); and

(2) submit to the Congress detailed recommendations on technical and conforming amendments to Federal law necessary to carry out this subtitle and the amendments made by this subtitle.

SEC. 233. TRANSFER OF RESOURCES.

All books and records that relate primarily to the functions transferred to the Commission under this subtitle shall be transferred from the Securities and Exchange Commission to the Commission.

SEC. 234. INTER-AGENCY REVIEW OF COMPETITION IN THE WHOLESALE AND RETAIL MARKETS FOR ELECTRIC ENERGY.

(a) TASK FORCE.—There is established an inter-agency task force, to be known as the ''Electric Energy Market Competition Task Force'' (referred to in this section as the ''task force''), which shall consist of—

(1) 1 member each from—

(A) the Department of Justice, to be appointed by the Attorney General of the United States;

(B) the Federal Energy Regulatory Commission, to be appointed by the chairman of that Commission; and

(C) the Federal Trade Commission, to be appointed by the chairman of that Commission; and

(2) 2 advisory members (who shall not vote), of whom—

(A) 1 shall be appointed by the Secretary of Agriculture to represent the Rural Utility Service; and

(B) 1 shall be appointed by the Chairman of the Securities and Exchange Commission to represent that Commission.

(b) STUDY AND REPORT.—

(1) STUDY.—The task force shall perform a study and analysis of the protection and promotion of competition within the wholesale and retail market for electric energy in the United States.

(2) REPORT.—

(A) FINAL REPORT.—Not later than 1 year after the effective date of this subtitle, the

task force shall submit a final report of its findings under paragraph (1) to the Congress.

(B) PUBLIC COMMENT.—At least 60 days before submission of a final report to the Congress under subparagraph (A), the task force shall publish a draft report in the Federal Register to provide for public comment.

(c) FOCUS.—The study required by this section shall examine—

(1) the best means of protecting competition within the wholesale and retail electric market;

(2) activities within the wholesale and retail electric market that may allow unfair and unjustified discriminatory and deceptive practices;

(3) activities within the wholesale and retail electric market, including mergers and acquisitions, that deny market access or suppress competition;

(4) cross-subsidization that may occur between regulated and nonregulated activities; and

(5) the role of State public utility commissions in regulating competition in the wholesale and retail electric market.

(d) CONSULTATION.—In performing the study required by this section, the task force shall consult with and solicit comments from its advisory members, the

States, representatives of the electric power industry, and the public.

SEC. 235. GAO STUDY ON IMPLEMENTATION.

(a) STUDY.—The Comptroller General shall conduct a study of the success of the Federal Government and the States during the 18–month period following the effective date of this subtitle in—

(1) the prevention of anticompetitive practices and other abuses by public utility holding companies, including cross-subsidization and other market power abuses; and

(2) the promotion of competition and efficient energy markets to the benefit of consumers.

(b) REPORT TO CONGRESS.—Not earlier than 18 months after the effective date of this subtitle or later than 24 months after that effective date, the Comptroller General shall submit a report to the Congress on the results of the study conducted under subsection (a), including probable causes of its findings and recommendations to the Congress and the States for any necessary legislative changes.

SEC. 236. EFFECTIVE DATE.

This subtitle shall take effect 18 months after the date of enactment of this subtitle.

SEC. 237. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated such funds as may be necessary to carry out this subtitle.

SEC. 238. CONFORMING AMENDMENTS TO THE FEDERAL POWER ACT.

(a) CONFLICT OF JURISDICTION.—Section 318 of the Federal Power Act (16 U.S.C. 825q) is repealed.

(b) DEFINITIONS.—

(1) Section 201(g) of the Federal Power Act (16 U.S.C. 824(g)) is amended by striking ''1935'' and inserting ''2002''.

(2) Section 214 of the Federal Power Act (16 U.S.C. 824m) is amended by striking ''1935'' and inserting ''2002''.

Subtitle C—Amendments to the Public Utility Regulatory Policies Act of 1978

SEC. 241. REAL-TIME PRICING STANDARD.

(a) ADOPTION OF STANDARD.—Section 111(d) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2621(d)) is amended by adding at the end the following:

''(11) REAL-TIME PRICING.—(A) Each electric utility shall, at the request of an electric consumer, provide electric service under a real-time rate schedule, under which the rate charged by the electric utility varies by the hour (or smaller time interval)

according to changes in the electric utility's wholesale power cost. The real-time pricing service shall enable the electric consumer to manage energy use and cost through real-time metering and communications technology.

''(B) For purposes of implementing this paragraph, any reference contained in this section to the date of enactment of the Public Utility Regulatory Policies Act of 1978 shall be deemed to be a reference to the date of enactment of this paragraph.

''(C) Notwithstanding subsections (b) and (c) of section 112, each State regulatory authority shall consider and make a determination concerning whether it is appropriate to implement the standard set out in subparagraph (A) not later than one year after the date of enactment of this paragraph.''.

(b) SPECIAL RULES FOR REAL-TIME PRICING STANDARD.—Section 115 of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2625) is amended by adding at the end the following:

''(i) REAL-TIME PRICING.—In a state that permits third-party marketers to sell electric energy to retail electric consumers, the electric consumer shall be entitled to receive the same real-time metering and communication

service as a direct retail electric consumer of the electric utility.''.

SEC. 242. ADOPTION OF ADDITIONAL STANDARDS.

(a) ADOPTION OF STANDARDS.—Section 113(b) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2623(b)) is amended by adding at the end the following:

''(6) DISTRIBUTED GENERATION.—Each electric utility shall provide distributed generation, combined heat and power, and district heating and cooling systems competitive access to the local distribution grid and competitive pricing of service, and shall use simplified standard contracts for the interconnection of generating facilities that have a power production capacity of 250 kilowatts or less.

''(7) DISTRIBUTION INTERCONNECTIONS.—No electric utility may refuse to interconnect a generating facility with the distribution facilities of the electric utility if the owner or operator of the generating facility complies with technical standards adopted by the State regulatory authority and agrees to pay the costs established by such State regulatory authority.

''(8) MINIMUM FUEL AND TECHNOLOGY DIVERSITY STANDARD.—Each electric utility shall develop

a plan to minimize dependence on one fuel source and to ensure that the electric energy it sells to consumers is generated using a diverse range of fuels and technologies, including renewable technologies.

''(9) FOSSIL FUEL EFFICIENCY.—Each electric utility shall develop and implement a ten-year plan to increase the efficiency of its fossil fuel generation and shall monitor and report to its State regulatory authority excessive greenhouse gas emissions resulting from the inefficient operation of its fossil fuel generating plants.''.

(c) TIME FOR ADOPTING STANDARD.—Section 113 of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2623) is further amended by adding at the end the following:

''(d) SPECIAL RULE.—For purposes of implementing paragraphs (6), (7), (8), and (9) of subsection (b), any reference contained in this section to the date of enactment of the Public Utility Regulatory Policies Act of 1978 shall be deemed to be a reference to the date of enactment of this subsection.''.

SEC. 243. TECHNICAL ASSISTANCE.

Section 132(c) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2642(c)) is amended to read as follows:

''(c) TECHNICAL ASSISTANCE FOR CERTAIN RESPONSIBILITIES.—The Secretary may provide such technical assistance as he determines appropriate to assist State regulatory authorities and electric utilities in carrying out their responsibilities under section 111(d)(11) and paragraphs (6), (7), (8), and (9) of section 113(b).''.

SEC. 244. COGENERATION AND SMALL POWER PRODUCTION PURCHASE AND SALE REQUIREMENTS.

(a) TERMINATION OF MANDATORY PURCHASE AND SALE REQUIREMENTS.—Section 210 of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 824a–3) is amended by adding at the end the following:

''(m) TERMINATION OF MANDATORY PURCHASE AND SALE REQUIREMENTS.—

''(1) IN GENERAL.—After the date of enactment of this subsection, no electric utility shall be required to enter into a new contract or obligation to purchase or sell electric energy under this section.

''(2) NO EFFECT ON EXISTING RIGHTS AND REMEDIES.—Nothing in this subsection affects the rights or remedies of any party with respect to the purchase or sale of electric energy or capacity from or to a facility under this section under any contract or obligation to purchase or to sell electric energy or

capacity on the date of enactment of this subsection, including—

"(A) the right to recover costs of purchasing such electric energy or capacity; and

"(B) in States without competition for retail electric supply, the obligation of a utility to provide, at just and reasonable rates for consumption by a qualifying small power production facility or a qualifying cogeneration facility, backup, standby, and maintenance power.

"(3) RECOVERY OF COSTS.—

"(A) REGULATION.—To ensure recovery by an electric utility that purchases electric energy or capacity from a qualifying facility pursuant to any legally enforceable obligation entered into or imposed under this section before the date of enactment of this subsection, of all prudently incurred costs associated with the purchases, the Commission shall issue and enforce such regulations as may be required to ensure that the electric utility shall collect the prudently incurred costs associated with such purchases.

"(B) ENFORCEMENT.—A regulation under subparagraph (A) shall be enforceable in ac-

cordance with the provisions of law applicable to enforcement of regulations under the Federal Power Act (16 U.S.C. 791a et seq.).''.

(b) ELIMINATION OF OWNERSHIP LIMITATIONS.—

(1) Section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)) is amended to read as follows:

''(C) 'qualifying small power production facility' means a small power production facility that the Commission determines, by rule, meets such requirements (including requirements respecting minimum size, fuel use, and fuel efficiency) as the Commission may, by rule, prescribe.''.

(2) Section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)) is amended to read as follows:

''(B) 'qualifying cogeneration facility' means a cogeneration facility that the Commission determines, by rule, meets such requirements (including requirements respecting minimum size, fuel use, and fuel efficiency) as the Commission may, by rule, prescribe.''.

SEC. 245. NET METERING.

Title VI of the Public Utility Regulatory Policies Act of 1978 is amended by adding at the end the following:

"SEC. 605. NET METERING FOR RENEWABLE ENERGY AND FUEL CELLS.

''(a) DEFINITIONS.—For purposes of this section:

''(1) The term 'eligible on-site generating facility' means—

''(A) a facility on the site of a residential electric consumer with a maximum generating capacity of 10 kilowatts or less that is fueled by solar energy, wind energy, or fuel cells; or

''(B) a facility on the site of a commercial electric consumer with a maximum generating capacity of 500 kilowatts or less that is fueled solely by a renewable energy resource, landfill gas, or a high efficiency system.

''(2) The term 'renewable energy resource' means solar, wind, biomass, or geothermal energy.

''(3) The term 'high efficiency system' means fuel cells or combined heat and power.

''(4) The term 'net metering service' means service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset

electric energy provided by the electric utility to the electric consumer during the applicable billing period.

''(b) REQUIREMENT TO PROVIDE NET METERING SERVICE.—Each electric utility shall make available upon request net metering service to an electric consumer that the electric utility serves.

''(c) RATES AND CHARGES.—

''(1) IDENTICAL CHARGES.—An electric utility—

''(A) shall charge the owner or operator of an on-site generating facility rates and charges that are identical to those that would be charged other electric consumers of the electric utility in the same rate class; and

''(B) shall not charge the owner or operator of an on-site generating facility any additional standby, capacity, interconnection, or other rate or charge.

''(2) MEASUREMENT.—An electric utility that sells electric energy to the owner or operator of an on-site generating facility shall measure the quantity of electric energy produced by the on-site facility and the quantity of electric energy consumed by the owner or operator of an on-site generating facility

during a billing period in accordance with normal metering practices.

''(3) ELECTRIC ENERGY SUPPLIED EXCEEDING ELECTRIC ENERGY GENERATED.—If the quantity of electric energy sold by the electric utility to an on-site generating facility exceeds the quantity of electric energy supplied by the on-site generating facility to the electric utility during the billing period, the electric utility may bill the owner or operator for the net quantity of electric energy sold, in accordance with normal metering practices.

''(4) ELECTRIC ENERGY GENERATED EXCEEDING ELECTRIC ENERGY SUPPLIED.—If the quantity of electric energy supplied by the on-site generating facility to the electric utility exceeds the quantity of electric energy sold by the electric utility to the on-site generating facility during the billing period—

''(A) the electric utility may bill the owner or operator of the on-site generating facility for the appropriate charges for the billing period in accordance with paragraph (2); and

''(B) the owner or operator of the on-site generating facility shall be credited for the excess kilowatt-hours generated during the billing

period, with the kilowatt-hour credit appearing on the bill for the following billing period.

''(d) SAFETY AND PERFORMANCE STANDARDS.—

''(1) An eligible on-site generating facility and net metering system used by an electric consumer shall meet all applicable safety, performance, reliability, and interconnection standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, and Underwriters Laboratories.

''(2) The Commission, after consultation with State regulatory authorities and nonregulated electric utilities and after notice and opportunity for comment, may adopt, by rule, additional control and testing requirements for on-site generating facilities and net metering systems that the Commission determines are necessary to protect public safety and system reliability.

''(e) APPLICATION.—This section applies to each electric utility during any calendar year in which the total sales of electric energy by such utility for purposes other than resale exceeded 1,000,000,000 kilowatt-hours during the preceding calendar year. ''.

Subtitle D—Consumer Protections

SEC. 251. INFORMATION DISCLOSURE.

(a) OFFERS AND SOLICITATIONS.—The Federal Trade Commission shall issue rules requiring each electric utility that makes an offer to sell electric energy, or solicits electric consumers to purchase electric energy to provide the electric consumer a statement containing the following information:

(1) the nature of the service being offered, including information about interruptibility of service;

(2) the price of the electric energy, including a description of any variable charges;

(3) a description of all other charges associated with the service being offered, including access charges, exit charges, back-up service charges, stranded cost recovery charges, and customer service charges; and

(4) information the Federal Trade Commission determines is technologically and economically feasible to provide, is of assistance to electric consumers in making purchasing decisions, and concerns—

(A) the product or its price,

(B) the share of electric energy that is generated by each fuel type; and

(C) the environmental emissions produced in generating the electric energy.

(b) PERIODIC BILLINGS.—The Federal Trade Commission shall issue rules requiring any electric utility that sells electric energy to transmit to each of its electric consumers, in addition to the information transmitted pursuant to section 115(f) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2625(f)), a clear and concise statement containing the information described in subsection (a)(4) for each billing period (unless such information is not reasonably ascertainable by the electric utility).

SEC. 252. CONSUMER PRIVACY.

(a) PROHIBITION.—The Federal Trade Commission shall issue rules prohibiting any electric utility that obtains consumer information in connection with the sale or delivery of electric energy to an electric consumer from using, disclosing, or permitting access to such information unless the electric consumer to whom such information relates provides prior written approval.

(b) PERMITTED USE.—The rules issued under this section shall not prohibit any electric utility from using, disclosing, or permitting access to consumer information referred to in subsection (a) for any of the following purposes:

(1) to facilitate an electric consumer's change in selection of an electric utility under procedures approved by the State or State regulatory authority;

(2) to initiate, render, bill, or collect for the sale or delivery of electric energy to electric consumers or for related services;

(3) to protect the rights or property of the person obtaining such information;

(4) to protect retail electric consumers from fraud, abuse, and unlawful subscription in the sale or delivery of electric energy to such consumers;

(5) for law enforcement purposes; or

(6) for purposes of compliance with any Federal, State, or local law or regulation authorizing disclosure of information to a Federal, State, or local agency.

(c) AGGREGATE CONSUMER INFORMATION.—The rules issued under this subsection may permit a person to use, disclose, and permit access to aggregate consumer information and may require an electric utility to make such information available to other electric utilities upon request and payment of a reasonable fee.

(d) DEFINITIONS.—As used in this section:

(1) The term ''aggregate consumer information'' means collective data that relates to a group

or category of retail electric consumers, from which individual consumer identities and characteristics have been removed.

(2) The term ''consumer information'' means information that relates to the quantity, technical configuration, type, destination, or amount of use of electric energy delivered to any retail electric consumer.

SEC. 253. UNFAIR TRADE PRACTICES.

(a) SLAMMING.—The Federal Trade Commission shall issue rules prohibiting the change of selection of an electric utility except with the informed consent of the electric consumer.

(b) CRAMMING.—The Federal Trade Commission shall issue rules prohibiting the sale of goods and services to an electric consumer unless expressly authorized by law or the electric consumer.

SEC. 254. APPLICABLE PROCEDURES.

The Federal Trade Commission shall proceed in accordance with section 553 of title 5, United States Code, when prescribing a rule required by this subtitle.

SEC. 255. FEDERAL TRADE COMMISSION ENFORCEMENT.

Violation of a rule issued under this subtitle shall be treated as a violation of a rule under section 18 of the Federal Trade Commission Act (15 U.S.C. 57a) respect-

ing unfair or deceptive acts or practices. All functions and powers of the Federal Trade Commission under such Act are available to the Federal Trade Commission to enforce compliance with this subtitle notwithstanding any jurisdictional limits in such Act.

SEC. 256. STATE AUTHORITY.

Nothing in this subtitle shall be construed to preclude a State or State regulatory authority from prescribing and enforcing additional laws, rules, or procedures regarding the practices which are the subject of this section, so long as such laws, rules, or procedures are not inconsistent with the provisions of this section or with any rule prescribed by the Federal Trade Commission pursuant to it.

SEC. 257. APPLICATION OF SUBTITLE.

The provisions of this subtitle apply to each electric utility if the total sales of electric energy by such utility for purposes other than resale exceed 500 million kilowatt-hours per calendar year. The provisions of this stubtitle do not apply to the operations of an electric utility to the extent that such operations relate to sales of electric energy for purposes of resale.

SEC. 258. DEFINITIONS.

As used in this subtitle:

(1) The term ''aggregate consumer information'' means collective data that relates to a group

or category of electric consumers, from which individual consumer identities and identifying characteristics have been removed.

(2) The term ''consumer information'' means information that relates to the quantity, technical configuration, type, destination, or amount of use of electric energy delivered to an electric consumer.

(3) The terms ''electric consumer'', ''electric utility'', and ''State regulatory authority'' have the meanings given such terms in section 3 of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2602).

Subtitle E—Renewable Energy and Rural Construction Grants

SEC. 261. RENEWABLE ENERGY PRODUCTION INCENTIVE.

(a) INCENTIVE PAYMENTS.—Section 1212(a) of the Energy Policy Act of 1992 (42 U.S.C. 13317(a)) is amended by striking ''and which satisfies'' and all that follows through ''Secretary shall establish.'' and inserting the following:

''. The Secretary shall establish other procedures necessary for efficient administration of the program. The Secretary shall not establish any criteria or procedures that have the effect of assigning to proposals a higher or

lower priority for eligibility or allocation of appropriated funds on the basis of the energy source proposed.''.

(b) QUALIFIED RENEWABLE ENERGY FACILITY.—Section 1212(b) of the Energy Policy Act of 1992 (42 U.S.C. 13317(b)) is amended—

(1) by striking ''a State or any political'' and all that follows through ''nonprofit electrical cooperative'' and inserting the following: ''an electricity-generating cooperative exempt from taxation under section 501(c)(12) or section 1381(a)(2)(C) of the Internal Revenue Code of 1986, a public utility described in section 115 of such Code, a State, Commonwealth, territory, or possession of the United States or the District of Columbia, or a political subdivision thereof, or an Indian tribal government or subdivision thereof,''; and

(2) by inserting ''landfill gas, incremental hydropower, ocean'' after ''wind, biomass,''.

(c) ELIGIBILITY WINDOW.—Section 1212(c) of the Energy Policy Act of 1992 (42 U.S.C. 13317(c)) is amended by striking ''during the 10-fiscal year period beginning with the first full fiscal year occurring after the enactment of this section'' and inserting ''before October 1, 2013''.

(d) PAYMENT PERIOD.—Section 1212(d) of the Energy Policy Act of 1992 (42 U.S.C. 13317(d)) is amended by inserting ''or in which the Secretary finds that all necessary Federal and State authorizations have been obtained to begin construction of the facility'' after ''eligible for such payments''.

(e) AMOUNT OF PAYMENT.—Section 1212(e)(1) of the Energy Policy Act of 1992 (42 U.S.C. 13317(e)(1)) is amended by inserting ''landfill gas, incremental hydropower, ocean'' after ''wind, biomass,''.

(f) SUNSET.—Section 1212(f) of the Energy Policy Act of 1992 (42 U.S.C. 13317(f)) is amended by striking ''the expiration of'' and all that follows through ''of this section'' and inserting ''September 30, 2023''.

(g) INCREMENTAL HYDROPOWER; AUTHORIZATION OF APPROPRIATIONS.—Section 1212 of the Energy Policy Act of 1992 (42 U.S.C. 13317) is further amended by striking subsection (g) and inserting the following:

''(g) CREMENTAL HYDROPOWER.—

''(1) PROGRAMS.—Subject to subsection (h)(2), if an incremental hydropower program meets the requirements of this section, as determined by the Secretary, the incremental hydropower program shall be eligible to receive incentive payments under this section.

''(2) DEFINITION OF INCREMENTAL HYDROPOWER.—In this subsection, the term 'incremental hydropower' means additional generating capacity achieved from increased efficiency or additions of new capacity at a hydroelectric facility in existence on the date of enactment of this paragraph.

''(h) AUTHORIZATION OF APPROPRIATIONS.—

''(1) IN GENERAL.—Subject to paragraph (2), there are authorized to be appropriated such sums as may be necessary to carry out this section for fiscal years 2003 through 2023.

''(2) LIMITATION ON FUNDS USED FOR INCREMENTAL HYDROPOWER PROGRAMS.—Not more than 30 percent of the amounts made available under paragraph (1) shall be used to carry out programs described in subsection (g)(2).

''(3) AVAILABILITY OF FUNDS.—Funds made available under paragraph (1) shall remain available until expended.''.

SEC. 262. ASSESSMENT OF RENEWABLE ENERGY RESOURCES.

(a) RESOURCE ASSESSMENT.—Not later than 3 months after the date of enactment of this title, and each year thereafter, the Secretary of Energy shall review the available assessments of renewable energy resources avail-

able within the United States, including solar, wind, biomass, ocean, geothermal, and hydroelectric energy resources, and undertake new assessments as necessary, taking into account changes in market conditions, available technologies and other relevant factors.

(b) CONTENTS OF REPORTS.—Not later than one year after the date of enactment of this title, and each year thereafter, the Secretary shall publish a report based on the assessment under subsection (a). The report shall contain—

(1) a detailed inventory describing the available amount and characteristics of the renewable energy resources, and

(2) such other information as the Secretary of Energy believes would be useful in developing such renewable energy resources, including descriptions of surrounding terrain, population and load centers, nearby energy infrastructure, location of energy and water resources, and available estimates of the costs needed to develop each resource.

SEC. 263. FEDERAL PURCHASE REQUIREMENT.

(a) REQUIREMENT.—The President shall ensure that, of the total amount of electric energy the federal government consumes during any fiscal year—

(1) not less than 3 percent in fiscal years 2003 through 2004,

(2) not less than 5 percent in fiscal years 2005 through 2009, and

(3) not less than 7.5 percent in fiscal year 2010 and each fiscal year thereafter—shall be renewable energy. The President shall encourage the use of innovative purchasing practices, including aggregation and the use of renewable energy derivatives, by federal agencies.

(b) DEFINITION.—For purposes of this section, the term ''renewable energy'' means electric energy generated from solar, wind, biomass, geothermal, fuel cells, or additional hydroelectric generation capacity achieved from increased efficiency or additions of new capacity at an existing hydroelectric dam.

(c) TRIBAL POWER GENERATION.—To the maximum extent practicable, the President shall ensure that not less than one-tenth of the amount specified in subsection (a) shall be renewable energy that is generated by an Indian tribe or by a corporation, partnership, or business association which is wholly or majority owned, directly or indirectly, by an Indian tribe. For purposes of this subsection, the term ''Indian tribe'' means any Indian tribe, band, nation, or other organized group or community, including

any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

SEC. 264. RURAL CONSTRUCTION GRANTS.

Section 313 of the Rural Electrification Act of 1936 (7 U.S.C. 940c) is amended by adding after subsection (b) the following:

''(c) RURAL AND REMOTE COMMUNITIES ELECTRIFICATION GRANTS.—The Secretary of Agriculture, in consultation with the Secretary of Energy and the Secretary of the Interior, may provide grants to eligible borrowers under this Act for the purpose of increasing energy efficiency, siting or upgrading transmission and distribution lines, or providing or modernizing electric facilities for—

''(1) a unit of local government of a State or territory; or

''(2) an Indian tribe.

''(d) GRANT CRITERIA.—The Secretary shall make grants based on a determination of cost-effectiveness and most effective use of the funds to achieve the stated purposes of this section.

''(e) PREFERENCE.—In making grants under this section, the Secretary shall give a preference to renewable energy facilities.

''(f) DEFINITION.—For purposes of this section, the term 'Indian tribe' means any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians;

''(e) AUTHORIZATION.—For the purpose of carrying out subsection (c), there are authorized to be appropriated to the Secretary $20,000,000 for each of the seven fiscal years following the date of enactment of this subsection.''.

SEC. 265. RENEWABLE PORTFOLIO STANDARD.

Title VI of the Public Utility Regulatory Policies Act of 1978 is further amended by adding at the end the following:

''SEC. 606. FEDERAL RENEWABLE PORTFOLIO STANDARD.

''(a) MINIMUM RENEWABLE GENERATION REQUIREMENT.—For each calendar year beginning with 2003, each retail electric supplier shall submit to the Secretary renewable energy credits in an amount equal to the required

annual percentage, specified in subsection (b), of the total electric energy sold by the retail electric supplier to electric consumers in the calendar year. The retail electric supplier shall make this submission before April 1 of the following calendar year.

''(b) REQUIRED ANNUAL PERCENTAGE.—

''(1) For calendar years 2003 and 2004, the required annual percentage shall be determined by the Secretary in an amount less than the amount in paragraph (2);

''(2) For calendar year 2005 the required annual percentage shall be 2.5 percent of the retail electric supplier's base amount; and

''(3) For each calendar year from 2006 through 2020, the required annual percentage of the retail electric supplier's base amount shall be .5 percent greater than the required annual percentage for the calendar year immediately preceding.

''(c) SUBMISSION OF CREDITS.—(1) A retail electric supplier may satisfy the requirements of subsection (a) through the submission of—

''(A) renewable energy credits issued under subsection (d) for renewable energy generated by the retail electric supplier in the calendar year for which

credits are being submitted or any of the two previous calendar years;

''(B) renewable energy credits obtained by purchase or exchange under subsection (e);

''(C) renewable energy credits borrowed against future years under subsection (f); or

''(D) any combination of credits under subparagraphs (A), (B), and (C).

''(2) A credit may be counted toward compliance with subsection (a) only once.

''(d) ISSUANCE OF CREDITS.—(1) The Secretary shall establish, not later than one year after the date of enactment of this section, a program to issue, monitor the sale or exchange of, and track renewable energy credits.

''(2) Under the program, an entity that generates electric energy through the use of a renewable energy resource may apply to the Secretary for the issuance of renewable energy credits. The application shall indicate—

''(A) the type of renewable energy resource used to produce the electricity,

''(B) the State in which the electric energy was produced, and

''(C) any other information the Secretary determines appropriate.

''(3)(A) Except as provided in paragraphs (B) and (C), the Secretary shall issue to an entity one renewable energy credit for each kilowatt-hour of electric energy the entity generates in calendar year 2002 and any succeeding year through the use of a renewable energy resource at an eligible facility in any State.

''(B) For incremental hydropower the credits shall be calculated based on a normalized annual capacity factor for each facility, and not actual generation. The calculation of the credits for incremental hydropower shall not be based on any operational changes at the hydroelectric facility not directly associated with the efficiency improvements or capacity additions.

''(C) The Secretary shall issue two renewable energy credits for each kilowatt-hour of electric energy generated in calendar year 2002 and any succeeding year through the use of a renewable energy resource at an eligible facility in any State, if the generating facility is located on Indian land. For purposes of this paragraph, renewable energy generated by biomass cofired with other fuels is eligible for two credits only if the biomass was grown on the land eligible under this paragraph.

''(D) To be eligible for a renewable energy credit, the unit of electric energy generated through the use of a renewable energy resource may be sold or may be used by

the generator. If both a renewable energy resource and a non-renewable energy resource are used to generate the electric energy, the Secretary shall issue credits based on the proportion of the renewable energy resource used. The Secretary shall identify renewable energy credits by type of generation and by the State in which the generating facility is located.

''(4) In order to receive a renewable energy credit, the recipient of a renewable energy credit shall pay a fee, calculated by the Secretary, in an amount that is equal to the administrative costs of issuing, recording, monitoring the sale or exchange of, and tracking the credit or does not exceed five percent of the dollar value of the credit, whichever is lower. The Secretary shall retain the fee and use it to pay these administrative costs.

''(5) When a generator sells electric energy generated through the use of a renewable energy resource to a retail electric supplier under a contract subject to section 210 of this Act, the retail electric supplier is treated as the generator of the electric energy for the purposes of this section for the duration of the contract.

''(e) CREDIT TRADING.—A renewable energy credit may be sold or exchanged by the entity to whom issued or by any other entity who acquires the credit. A renewable energy credit for any year that is not used to satisfy

the minimum renewable generation requirement of subsection (a) for that year may be carried forward for use in another year.

''(f) CREDIT BORROWING.—At any time before the end of calendar year 2003, a retail electric supplier that has reason to believe that it will not have sufficient renewable energy credits to comply with subsection (a) may—

''(1) submit a plan to the Secretary demonstrating that the retail electric supplier will earn sufficient credits within the next 3 calendar years which, when taken into account, will enable the retail electric supplier to meet the requirements of subsection (a) for the calendar year involved; and

''(2) upon the approval of the plan by the Secretary, apply credits that the plan demonstrates will be earned within the next 3 calendar years to meet the requirements of subsection (a) for the calendar year involved.

''(g) ENFORCEMENT.—The Secretary may bring an action in the appropriate United States district court to impose a civil penalty on a retail electric supplier that does not comply with subsection (a). A retail electric supplier who does not submit the required number of renewable energy credits under subsection (a) is subject to a civil

penalty of not more than 3 cents each for the renewable energy credits not submitted.

''(h) INFORMATION COLLECTION.—The Secretary may collect the information necessary to verify and audit—

''(1) the annual electric energy generation and renewable energy generation of any entity applying for renewable energy credits under this section,

''(2) the validity of renewable energy credits submitted by a retail electric supplier to the Secretary, and

''(3) the quantity of electricity sales of all retail electric suppliers.

''(i) ENVIRONMENTAL SAVINGS CLAUSE.—Incremental hydropower shall be subject to all applicable environmental laws and licensing and regulatory requirements.

''(j) STATE SAVINGS CLAUSE.—This section does not preclude a State from requiring additional renewable energy generation in that State.

''(k) DEFINITIONS.—For purposes of this section—

''(1) The term 'eligible facility' means—

''(A) a facility for the generation of electric energy from a renewable energy resource that is placed in service on or after January 1, 2002; or

''(B) a repowering or cofiring increment that is placed in service on or after January 1, 2002 at a facility for the generation of electric energy from a renewable energy resource that was placed in service before January 1, 2002. An eligible facility does not have to be interconnected to the transmission or distribution system facilities of an electric utility.

''(2) The term 'generation offset' means reduced electricity usage metered at a site where a customer consumes electricity from a renewable energy technology.

''(3) The term 'incremental hydropower' means additional generation capacity achieved from increased efficiency or additions of capacity after January 1, 2002 at a hydroelectric dam that was placed in service before January 1, 2002.

''(4) The term 'Indian land' means—

''(A) any land within the limits of any Indian reservation, pueblo or rancheria,

''(B) any land not within the limits of any Indian reservation, pueblo or rancheria title to which was on the date of enactment of this paragraph either held by the United States for the benefit of any Indian tribe or individual or

held by any Indian tribe or individual subject to restriction by the United States against alienation,

"(C) any dependent Indian community, and

"(D) any land conveyed to any Alaska Native corporation under the Alaska Native Claims Settlement Act.

"(5) The term 'Indian tribe' means any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

"(6) The term 'renewable energy' means electric energy generated by a renewable energy resource.

"(7) The term 'renewable energy resource' means solar, wind, biomass, ocean, or geothermal energy, a generation offset, or incremental hydropower facility.

''(8) The term 'repowering or cofiring increment' means the additional generation from a modification that is placed in service on or after January 1, 2002 to expand electricity production at a facility used to generate electric energy from a renewable energy resource or to cofire biomass that was placed in service before January 1, 2002.

''(9) The term 'retail electric supplier' means a person, State agency, or Federal agency that sells electric energy to electric consumers and sold not less than 500,000,000 kilowatt-hours of electric energy to electric consumers for purposes other than resale during the preceding calendar year.

''(10) The term 'retail electric supplier's base amount' means the total amount of electric energy sold by the retail electric supplier to electric customers during the most recent calendar year for which information is available, excluding electric energy generated by a renewable energy resource, landfill gas, or a hydroelectric facility.

''(l) SUNSET.—Subsection (a) of this section expires December 31, 2020.''.

SEC. 266. RENEWABLE ENERGY ON FEDERAL LAND.

(a) PILOT PROGRAM.—Within 12 months after the date of enactment of this section, the Secretary of the In-

terior, in consultation with the Secretaries of Agriculture and Energy, shall develop guidelines for a pilot program for the development of wind and solar energy on Federal land.

(b) DEFINITION OF FEDERAL LAND.—As used in this section, the term ''Federal land'' means land owned by the United States that is subject to the operation of the mineral leasing laws; and is either:

(1) public land as defined in section 103(e) of the Federal Land Policy and Management Act of 1976 (42 U.S.C. 1702(e)); or

(2) a unit of the National Forest System as that term is used in section 11(a) of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1609(a)).

(c) RIGHTS-OF-WAYS.—The pilot program shall provide for the issuance of rights-of-way pursuant to the provisions of title V of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1761 et seq.) by the Secretary of the Interior with respect to Federal land under the jurisdiction of the Department of the Interior, and by the Secretary of Agriculture with respect to federal lands under the jurisdiction of the Department of Agriculture.

(d) ELIGIBLE SITES.—For purposes of this pilot program, the issuance of rights-of-way shall be limited to areas:

(1) of high energy potential for wind or solar development;

(2) that have been identified by the wind or solar energy industry, through a process of nominations or otherwise, as being of particular interest to one or both industries;

(3) that are not located within roadless areas;

(4) where operation of wind or solar facilities would be compatible with the scenic, recreational, environmental, cultural, or historic values of the Federal land, and would not require the construction of new roads for the siting of lines or other transmission facilities; and

(5) where issuance of the right-of-way is consistent with the land and resource management plans of the relevant land management agencies.

(e) COST-SHARE PAYMENTS BY DOE.—The Secretary of Energy, in cooperation with the Secretary of the Interior with respect to Federal land under the jurisdiction of the Department of the Interior, and the Secretary of Agriculture with respect to Federal land under the jurisdiction of the Department of Agriculture, shall deter-

mine if a project is eligible for funding pursuant to this section. Only those projects that are consistent with the requirements of this section and further the purposes of this section shall be eligible. In the event a project is selected for funding, the Secretary of Energy shall provide no more than 15 percent of the costs of the project, and the remainder of the costs shall be paid by non-Federal sources.

(f) REVISION OF LAND USE PLANS.—The Secretary of the Interior shall consider development of wind and solar energy, as appropriate, in revisions of land use plans under section 202 of the Federal Land Policy and Management Act of 1976 (42 U.S.C. 1712); and the Secretary of Agriculture shall consider development of wind and solar energy, as appropriate, in revisions of land and resource management plans under section 5 of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1604). Nothing in this subsection shall preclude the issuance of a right-of-way for the development of a wind or solar energy project prior to the revision of a land use plan by the appropriate land management agency.

(g) REPORT TO CONGRESS.—Within 24 months after the date of enactment of this section, the Secretary of the Interior shall develop and report to Congress recommenda-

tions on any statutory or regulatory changes the Secretary believes would assist in the development of renewable energy on Federal land. The report shall include—

(1) a five-year plan developed by the Secretary of the Interior, in cooperation with the Secretary of Agriculture, for encouraging the development of wind and solar energy on Federal land in an environmentally sound manner; and

(2) an analysis of—

(A) whether the use of rights-of-ways is the best means of authorizing use of Federal land for the development of wind and solar energy, or whether such resources could be better developed through a leasing system, or other method;

(B) the desirability of grants, loans, tax credits or other provisions to promote wind and solar energy development on Federal land; and

(C) any problems, including environmental concerns, which the Secretary of the Interior or the Secretary of Agriculture have encountered in managing wind or solar energy projects on Federal land, or believe are likely to arise in relation to the development of wind or solar energy on Federal land;

(3) a list, developed in consultation with the Secretaries of Energy and Defense, of lands under the jurisdiction of the Departments of Energy and Defense that would be suitable for development for wind or solar energy, and recommended statutory and regulatory mechanisms for such development; and

(4) an analysis, developed in consultation with the Secretaries of Energy and Commerce, of the potential for development of wind, solar, and ocean energy on the Outer Continental Shelf, along with recommended statutory and regulatory mechanisms for such development.

TITLE III—HYDROELECTRIC RELICENSING

SEC. 301. ALTERNATIVE CONDITIONS.

(a) ALTERNATIVE MANDATORY CONDITIONS.—Section 4 of the Federal Power Act (16 U.S.C. 797) is amended by adding at the end the following:

''(h)(1) Whenever any person applies for a license for any project works within any reservation of the United States under subsection (e), and the Secretary of the department under whose supervision such reservation falls (in this subsection referred to as the 'Secretary') shall deem a condition to such license to be necessary under

the first proviso of such section, the license applicant may propose an alternative condition that will either—

''(A) cost less to implement, or

''(B) result in improved operation of the project works for electricity production.

''(2) Notwithstanding the first proviso of subsection (e), the Secretary shall accept the alternative condition proposed by the license applicant, and the Commission shall include in the license such alternative condition, if the Secretary determines that the alternative condition provides no less protection for the reservation than provided by the condition deemed necessary by the Secretary.

''(3) The Secretary shall give interested persons other than the license applicant an opportunity to propose alternative conditions. After consideration of the relevant matter presented, the Secretary shall accept or reject each proposed condition.

''(4) The Secretary shall submit to the Commission with any condition under subsection (e) or alternative condition it accepts under this subsection a written statement explaining the basis for accepting such condition and for not accepting any condition proposed by the license applicant under paragraph (1) or by an interested person under paragraph (3), along with all studies, data, and other information on which the Secretary based his decision.

''(5) The Commission shall place any statement, study, data, or other information received from the Secretary under paragraph (4) on the public record of the licensing proceeding.

''(6) The Secretary shall establish schedules for the submission of proposed conditions and the review of the acceptance or rejection of proposed conditions as may be necessary to coordinate with the Commission's license application process.''.

(b) ALTERNATIVE FISHWAYS.—Section 18 of the Federal Power Act (16 U.S.C. 811) is amended by—

(1) inserting ''(a)'' before the first sentence; and

(2) adding at the end the following:

''(b)(1) Whenever the Commission shall require a licensee to construct, maintain, or operate a fishway prescribed by the Secretary of the Interior or the Secretary of Commerce under this section, the licensee may propose an alternative that will either—

''(A) cost less to implement, or

''(B) result in improved operation of the project works for electricity production.

''(2) Notwithstanding subsection (a), the Secretary of the Interior or the Secretary of Commerce, as appropriate, shall accept and prescribe, and the Commission shall re-

quire, the alternative proposed by the licensee, if the Secretary of the appropriate department determines that the alternative will be no less effective than the fishway initially prescribed by the Secretary.

''(3) The Secretary of the appropriate department shall give interested persons other than the licensee an opportunity to propose alternative fishway prescriptions. After consideration of the relevant matter presented, the Secretary shall accept or reject each proposed alternative.

''(4) The Secretary of the appropriate department shall submit to the Commission with any fishway prescription under subsection (a) or alternative fishway prescription it accepts under this subsection a written statement explaining the basis for accepting such prescription and for not accepting any prescription proposed by the licensee under paragraph (1) or by an interested person under paragraph (3), along with all studies, data, and other information on which the Secretary based his decision.

''(5) The Commission shall place any statement, study, data, or other information received from the Secretary under paragraph (4) on the public record of the licensing proceeding.

''(6) The Secretary of the appropriate department shall establish schedules for the submission of proposed conditions and the review of the acceptance or rejection

of proposed conditions as may be necessary to coordinate with the Commission's license application process.''.

SEC. 302. CHARGES FOR TRIBAL LANDS.

Section 10(e)(1) of the Federal Power Act (16 U.S.C. 803(e)(1) is amended by inserting after the second proviso the following: ''*Provided further,* That the Commission shall not issue a new or original license for projects involving tribal lands embraced within Indian reservations until annual charges required under this section have been fixed.''

SEC. 303. DISPOSITION OF HYDROELECTRIC CHARGES.

Section 17 of the Federal Power Act (16 U.S.C. 810) is further amended—

(1) by striking ''is hereby appropriated to be paid into the Treasury of the United States and credited to 'Miscellaneous receipts' '' and inserting ''shall be reserved, subject to appropriation, for the purpose of carrying out activities for the protection of water resources under subsection (c)''; and

(2) by adding at the end the following:

''(c)(1) Of the amount reserved for the protection of water resources under subsection (a), there are authorized to be appropriated to the Secretary responsible for the reservation from which the charges were paid such sums as may be necessary for the purpose of carrying out activities

for the protection of the water resources on or for the benefit of—

''(A) the reservation on which the project for which the charges were paid is located; or

''(B) the reservation on which the headwaters of the waterway, on which the project for which the charges were paid, is located.

''(2) For purposes of this subsection, activities for the protection of water resources for which funds are authorized to be appropriated under this subsection may be used may only include the following:

''(A) promoting the recovery of threatened and endangered species;

''(B) road and trail assessments and plans, maintenance, obliteration, or closure;

''(C) wildlife and fish habitat management;

''(D) multiparty monitoring of water protection activities;

''(E) watershed analysis, including resource conditions and trend assessments;

''(F) erosion control and restoring hydrologic function to meadows, wetlands, and floodplains; and

''(G) job training associated with paragraph (3).

''(3) In carrying out the activities provided for in paragraph (2) and in order to provide employment and job training opportunities to residents of rural communities located within or near a reservation identified in paragraph (1), the Secretary may make grants or enter into cooperative agreements or contracts with—

''(A) a private, non-profit, or cooperative entity within the same county as the reservation;

''(B) businesses that employ 25 or less employees;

''(C) an entity that will hire or train residents of communities located within or near the reservation to perform the contract; or

''(D) the Youth Conservation Corps or related partnerships with State, local, or non-profit youth groups.''.

SEC. 304. ANNUAL LICENSES.

Section 15(a) of the Federal Power Act (16 U.S.C. 808(a)) is amended by adding at the end the following:

''(4) Prior to issuing a fourth and subsequent annual license under paragraph (1), the Commission shall first consult with the Secretary of the Interior and the Secretary of Commerce, and if the project is within any reservation, with the Secretary under whose supervision such reservation falls.

''(5) Prior to issuing a fourth and subsequent annual license under paragraph (1), the Commission shall publish a written statement setting forth the reasons why the annual license is needed, and describing the results of consultation with the Secretary of the Interior, the Secretary of Commerce, and the Secretary under whose supervision the reservation falls. Such explanation shall also contain the best judgement of the Commission as to whether the Commission anticipates issuing an additional annual license, and if so, the likely terms and conditions of such additional annual license.

''(6) At least 60 days prior to expiration of the seventh and subsequent annual licenses issued under paragraph (1), the Commission shall submit to Congress the written statement required in paragraph (5).''.

SEC. 305. ENFORCEMENT.

(a) MONITORING AND INVESTIGATIONS OF MANDATORY CONDITIONS AND FISHWAY PRESCRIPTIONS.—The first sentence of section 31(a) of the Federal Power Act (16 U.S.C. 823b(a)) is amended to read as follows: ''The Commission shall monitor and investigate compliance with each license and permit issued under this Part, each condition imposed under section 4(e) or 4(h), each fishway pre-

scription imposed under section 18, and each exemption granted from any requirement of this Part.''

(b) COMPLIANCE ORDERS.—The third sentence of section 31(a) of the Federal Power Act (16 U.S.C. 823(a)) is amended to read as follows: ''After notice and opportunity for public hearing, the Commission may issue such orders as necessary to require compliance with the terms and conditions of licenses and permits issued under this Part, with conditions imposed under section 4(e) or 4(h), with fishway prescriptions imposed under section 18, and with the terms and conditions of exemptions granted from any requirement of this Part.''

SEC. 306. ESTABLISHMENT OF HYDROELECTRIC RELICENSING PROCEDURES.

(a) JOINT PROCEDURES OF THE COMMISSION AND RESOURCE AGENCIES.—

(1) Within 18 months after the date of enactment of this section, the Commission, the Secretary of the Interior, the Secretary of Commerce, and the Secretary of Agriculture, shall, after public review and comment, issue coordinated regulations governing the issuance of a license under section 15 of the Federal Power Act (16 U.S.C. 808).

(2) Such regulations shall provide for—

(A) the participation of the Commission in the pre-application environmental scoping process conducted by the resource agencies pursuant to section 15(b) of the Federal Power Act (16 U.S.C. 808(b)), sufficient to allow the Commission and the resource agencies to coordinate environmental reviews and other regulatory procedures of the Commission and the resource agencies under Part I of the Federal Power Act, and under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

(B) issuance by the resource agencies of draft and final mandatory conditions under section 4(e) of the Federal Power Act (16 U.S.C. 797(e)), and draft and final fishway prescriptions under section 18 of the Federal Power Act (16 U.S.C. 811);

(C) to the maximum extent possible, identification by the Commission staff in the draft analysis of the license application conducted under the National Environmental Policy Act, of all license articles and license conditions the Commission is likely to include in the license;

(D) coordination by the Commission and the resource agencies of analysis under the Na-

tional Environmental Policy Act for final license articles and conditions recommended by Commission staff, and the final mandatory conditions and fishway prescriptions of the resource agencies; and

(E) procedures for ensuring coordination and sharing, to the maximum extent possible, of information, studies, data and analysis by the Commission and the resource agencies to reduce the need for duplicative studies and analysis by license applicants and other parties to the license proceeding.

(b) PROCEDURES OF THE COMMISSION.—Within 18 months after the date of enactment of this section, the Commission shall, after public comment and review, issue additional regulations governing the issuance of a license under section 15 of the Federal Power Act (16 U.S.C. 808). Such regulations shall—

(1) set a schedule for the Commission to issue—

(A) a tendering notice indicating that an application has been filed with the Commission;

(B) advanced notice to resource agencies of the issuance of the Ready for Environmental Analysis Notice requesting submission of rec-

ommendations, conditions, prescriptions, and comments;

(C) a license decision after completion of environmental assessments or environmental impact statements prepared pursuant to the National Environmental Policy Act; and

(D) responses to petitions, motions, complaints and requests for rehearing;

(2) set deadlines for an applicant to conduct all needed resource studies in support of its license application;

(3) ensure a coordinated schedule for all major actions by the applicant, the Commission, affected Federal and State agencies, Indian Tribes and other parties, through final decision on the application; and

(4) provide for the adjustment of schedules if unavoidable delays occur.

SEC. 307. RELICENSING STUDY.

(a) IN GENERAL.—The Federal Energy Regulatory Commission shall, jointly with the Secretary of Commerce, the Secretary of the Interior, and the Secretary of Agriculture, conduct a study of all new licenses issued for existing projects under section 15 of the Federal Power Act (16 U.S.C. 808) since January 1, 1994.

(b) SCOPE.—The study shall analyze:

(1) the length of time the Commission has taken to issue each new license for an existing project;

(2) the additional cost to the licensee attributable to new license conditions;

(3) the change in generating capacity attributable to new license conditions;

(4) the environmental benefits achieved by new license conditions;

(5) significant unmitigated environmental damage of the project and costs to mitigate such damage; and

(6) litigation arising from the issuance or failure to issue new licenses for existing projects under section 15 of the Federal Power Act or the imposition or failure to impose new license conditions.

(c) DEFINITION.—As used in this section, the term ''new license condition'' means any condition imposed under—

(1) section 4(e) of the Federal Power Act (16 U.S.C. 797(e)),

(2) section 10(a) of the Federal Power Act (16 U.S.C. 803(a)),

(2) section 10(e) of the Federal Power Act (16 U.S.C. 803(e)),

(3) section 10(j) of the Federal Power Act (16 U.S.C. 803(j)),

(4) section 18 of the Federal Power Act (16 U.S.C. 811), or

(5) section 401(d) of the Clean Water Act (33 U.S.C. 1341(d)).

(d) CONSULTATION.—The Commission shall give interested persons and licensees an opportunity to submit information and views in writing.

(e) REPORT.—The Commission shall report its findings to the Committee on Energy and Natural Resources of the United States Senate and the Committee on Energy and Commerce of the House of Representatives not later than 24 months after the date of enactment of this section.

SEC. 308. DATA COLLECTION PROCEDURES.

Within 24 months after the date of enactment of this section, the Federal Energy Regulatory Commission, the Secretary of the Interior, the Secretary of Commerce, and the Secretary of Agriculture shall jointly develop procedures for ensuring complete and accurate information concerning the time and cost to parties in the hydroelectric licensing process under part I of the Federal Power Act

(16 U.S.C. 791 et seq.). Such data shall be published regularly, but no less frequently than every three years.

TITLE IV—INDIAN ENERGY

SEC. 401. COMPREHENSIVE INDIAN ENERGY PROGRAM.

Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501–3506) is amended by adding after section 2606 the following:

"SEC. 2607. COMPREHENSIVE INDIAN ENERGY PROGRAM.

''(a) DEFINITIONS.—For purposes of this section—

''(1) the term 'Director' means the Director of the Office of Indian Energy Policy and Programs established by section 217 of the Department of Energy Organization Act, and

''(2) the term 'Indian land' means—

''(A) any land within the limits of an Indian reservation, pueblo, or rancheria;

''(B) any land not within the limits of an Indian reservation, pueblo, or rancheria whose title on the date of enactment of this section was held—

''(i) in trust by the United States for the benefit of an Indian tribe,

''(ii) by an Indian tribe subject to restriction by the United States against alienation, or

''(iii) by a dependent Indian community; and

''(C) land conveyed to an Alaska Native Corporation under the Alaska Native Claims Settlement Act.

''(b) INDIAN ENERGY EDUCATION PLANNING AND MANAGEMENT ASSISTANCE.—

''(1) The Director shall establish programs within the Office of Indian Energy Policy and Programs to assist Indian tribes in meeting their energy education, research and development, planning, and management needs.

''(2) The Director may make grants, on a competitive basis, to an Indian tribe for—

''(A) renewable energy, energy efficiency, and conservation programs;

''(B) studies and other activities supporting tribal acquisition of energy supplies, services, and facilities;

''(C) planning, constructing, developing, operating, maintaining, and improving tribal electrical generation, transmission, and distribution facilities; and

''(D) developing, constructing, and interconnecting electric power transmission facilities

with transmission facilities owned and operated by a Federal power marketing agency or an electric utility that provides open access transmission service.

''(3) The Director may develop, in consultation with Indian tribes, a formula for making grants under this section. The formula may take into account the following—

''(A) the total number of acres of Indian land owned by an Indian tribe;

''(B) the total number of households on the Indian tribe's Indian land;

''(C) the total number of households on the Indian tribe's Indian land that have no electricity service or are under-served; and

''(D) financial or other assets available to the Indian tribe from any source.

''(4) In making a grant under paragraph (2), the Director shall give priority to an application received from an Indian tribe that is not served or is served inadequately by an electric utility, as that term is defined in section 3(4) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2602(4)), or by a person, State agency, or any other non-federal entity that owns or operates a local dis-

tribution facility used for the sale of electric energy to an electric consumer.

''(5) There are authorized to be appropriated to the Department of Energy such sums as may be necessary to carry out the purposes of this section.

''(6) The Secretary is authorized to promulgate such regulations as the Secretary determines to be necessary to carry out the provisions of this subsection.

''(c) LOAN GUARANTEE PROGRAM.—

''(1) AUTHORITY.—The Secretary may guarantee not more than 90 percent of the unpaid principal and interest due on any loan made to any Indian tribe for energy development, including the planning, development, construction, and maintenance of electrical generation plants, and for transmission and delivery mechanisms for electricity produced on Indian land. A loan guaranteed under this subsection shall be made by—

''(A) a financial institution subject to the examination of the Secretary; or

''(B) an Indian tribe, from funds of the Indian tribe, to another Indian tribe.

''(2) AVAILABILITY OF APPROPRIATIONS.—Amounts appropriated to cover the cost of loan

guarantees shall be available without fiscal year limitation to the Secretary to fulfill obligations arising under this subsection.

''(3) AUTHORIZATION OF APPROPRIATIONS.—

''(A) There are authorized to be appropriated to the Secretary such sums as may be necessary to cover the cost of loan guarantees, as defined by section 502(5) of the Federal Credit Reform Act of 1990 (2 U.S.C. 661a(5)).

''(B) There are authorized to be appropriated to the Secretary such sums as may be necessary to cover the administrative expenses related to carrying out the loan guarantee program established by this subsection.

''(4) LIMITATION ON AMOUNT.—The aggregate outstanding amount guaranteed by the Secretary of Energy at any one time under this subsection shall not exceed $2,000,000,000.

''(5) REGULATIONS.—The Secretary is authorized to promulgate such regulations as the Secretary determines to be necessary to carry out the provisions of this subsection.

''(d) INDIAN ENERGY PREFERENCE.—(1) An agency or department of the United States Government may give, in the purchase of electricity, oil, gas, coal, or other energy

product or by-product, preference in such purchase to an energy and resource production enterprise, partnership, corporation, or other type of business organization majority or wholly owned and controlled by a tribal government.

''(2) In implementing this subsection, an agency or department shall pay no more than the prevailing market price for the energy product or by-product and shall obtain no less than existing market terms and conditions.

''(e) EFFECT ON OTHER LAWS.—This section does not—

''(1) limit the discretion vested in an Administrator of a Federal power marketing agency to market and allocate Federal power, or

''(2) alter Federal laws under which a Federal power marketing agency markets, allocates, or purchases power.''.

SEC. 402. OFFICE OF INDIAN ENERGY POLICY AND PROGRAMS.

Title II of the Department of Energy Organization Act is amended by adding at the end the following:

''OFFICE OF INDIAN ENERGY POLICY AND PROGRAMS.

''SEC. 217. (a) There is established within the Department an Office of Indian Energy Policy and Programs. This Office shall be headed by a Director, who shall be appointed by the Secretary and compensated at

the rate equal to that of level IV of the Executive Schedule under section 5315 of Title 5, United States Code.

''(b) The Director shall provide, direct, foster, coordinate, and implement energy planning, education, management, conservation, and delivery programs of the Department that—

''(1) promote tribal energy efficiency and utilization;

''(2) modernize and develop, for the benefit of Indian tribes, tribal energy and economic infrastructure related to natural resource development and electrification;

''(3) preserve and promote tribal sovereignty and self determination related to energy matters and energy deregulation;

''(4) lower or stabilize energy costs; and

''(5) electrify tribal members' homes and tribal lands.

''(c) The Director shall carry out the duties assigned the Secretary or the Director under title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 et seq.).''.

SEC. 403. CONFORMING AMENDMENTS.

(a) AUTHORIZATION OF APPROPRIATIONS.—Section 2603(c) of the Energy Policy Act of 1992 (25 U.S.C. 3503(c)) is amended to read as follows:

''(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as may be necessary to carry out the purposes of this section.''.

(b) TABLE OF CONTENTS.—The Table of Contents of the Department of Energy Act is amended by inserting after the item relating to section 216 the following new item:

''Sec. 217. Office of Indian Energy Policy and Programs.''.

(c) EXECUTIVE SCHEDULE.—Section 5315 of title 5, United States Code, is amended by inserting ''Director, Office of Indian Energy Policy and Programs, Department of Energy.'' after ''Inspector General, Department of Energy.''.

SEC. 404. SITING ENERGY FACILITIES ON TRIBAL LANDS.

(a) DEFINITIONS.—For purposes of this section:

(1) INDIAN TRIBE.—The term ''Indian tribe'' means any Indian tribe, band, nation, or other organized group or community, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians, except that such term does not include any Regional Corporation as defined in section 3(g) of the Alaska Native Claims Settlement Act (43 U.S.C. 1602(g)).

(2) INTERESTED PARTY.—The term ''interested party'' means a person whose interests could be ad-

versely affected by the decision of an Indian tribe to grant a lease or right-of-way pursuant to this section.

(3) PETITION.—The term ''petition'' means a written request submitted to the Secretary for the review of an action (or inaction) of the Indian tribe that is claimed to be in violation of the approved tribal regulations;

(4) RESERVATION.—The term ''reservation'' means—

(A) with respect to a reservation in a State other than Oklahoma, all land that has been set aside or that has been acknowledged as having been set aside by the United States for the use of an Indian tribe, the exterior boundaries of which are more particularly defined in a final tribal treaty, agreement, executive order, federal statute, secretarial order, or judicial determination;

(B) with respect to a reservation in the State of Oklahoma, all land that is—

(i) within the jurisdictional area of an Indian tribe, and

(ii) within the boundaries of the last reservation of such tribe that was estab-

lished by treaty, executive order, or secretarial order.

(5) SECRETARY.—The term ''Secretary'' means the Secretary of the Interior.

(6) TRIBAL LANDS.—The term ''tribal lands'' means any tribal trust lands or other lands owned by an Indian tribe that are within a reservation, or tribal trust lands located contiguous thereto.

(b) LEASES INVOLVING GENERATION, TRANSMISSION, DISTRIBUTION OR ENERGY PROCESSING FACILITIES.—An Indian tribe may grant a lease of tribal land for electric generation, transmission, or distribution facilities, or facilities to process or refine renewable or nonrenewable energy resources developed on tribal lands, and such leases shall not require the approval of the Secretary if the lease is executed under tribal regulations approved by the Secretary under this subsection and the term of the lease does not exceed 30 years.

(c) RIGHTS-OF-WAY FOR ELECTRIC GENERATION, TRANSMISSION, DISTRIBUTION OR ENERGY PROCESSING FACILITIES.—An Indian tribe may grant a right-of-way over tribal lands for a pipeline or an electric transmission or distribution line without separate approval by the Secretary, if—

(1) the right-of-way is executed under and complies with tribal regulations approved by the Secretary and the term of the right-of-way does not exceed 30 years; and

(2) the pipeline or electric transmission or distribution line serves—

(A) an electric generation, transmission or distribution facility located on tribal land, or

(B) a facility located on tribal land that processes or refines renewable or nonrenewable energy resources developed on tribal lands.

(d) RENEWALS.—Leases or rights-of-way entered into under this subsection may be renewed at the discretion of the Indian tribe in accordance with the requirements of this section.

(e) TRIBAL REGULATION REQUIREMENTS.—

(1) The Secretary shall have the authority to approve or disapprove tribal regulations required under this subsection. The Secretary shall approve such tribal regulations if they are comprehensive in nature, including provisions that address—

(A) securing necessary information from the lessee or right-of-way applicant;

(B) term of the conveyance;

(C) amendments and renewals;

(D) consideration for the lease or right-of-way;

(E) technical or other relevant requirements;

(F) requirements for environmental review as set forth in paragraph (3);

(G) requirements for complying with all applicable environmental laws; and

(H) final approval authority.

(2) No lease or right-of-way shall be valid unless authorized in compliance with the approved tribal regulations.

(3) An Indian tribe, as a condition of securing Secretarial approval as contemplated in paragraph (1), must establish an environmental review process that includes the following—

(A) an identification and evaluation of all significant environmental impacts of the proposed action as compared to a no action alternative;

(B) identification of proposed mitigation;

(C) a process for ensuring that the public is informed of and has an opportunity to comment on the proposed action prior to tribal approval of the lease or right-of-way; and

(D) sufficient administrative support and technical capability to carry out the environmental review process.

(4) The Secretary shall review and approve or disapprove the regulations of the Indian tribe within 180 days of the submission of such regulations to the Secretary. Any disapproval of such regulations by the Secretary shall be accompanied by written documentation that sets forth the basis for the disapproval. The 180-day period may be extended by the Secretary after consultation with the Indian tribe.

(5) If the Indian tribe executes a lease or right-of-way pursuant to tribal regulations required under this subsection, the Indian tribe shall provide the Secretary with—

(A) a copy of the lease or right-of-way document and all amendments and renewals thereto; and

(B) in the case of regulations or a lease or right-of-way that permits payment to be made directly to the Indian tribe, documentation of the payments sufficient to enable the Secretary to discharge the trust responsibility of the

United States as appropriate under existing law.

(6) The United States shall not be liable for losses sustained by any party to a lease executed pursuant to tribal regulations under this subsection, including the Indian tribe.

(7)(A) An interested party may, after exhaustion of tribal remedies, submit, in a timely manner, a petition to the Secretary to review the compliance of the Indian tribe with any tribal regulations approved under this subsection. If upon such review, the Secretary determines that the regulations were violated, the Secretary may take such action as may be necessary to remedy the violation, including rescinding or holding the lease or right-of-way in abeyance until the violation is cured. The Secretary may also rescind the approval of the tribal regulations and reassume the responsibility for approval of leases or rights-of-way associated with the facilities addressed in this section.

(B) If the Secretary seeks to remedy a violation described in subparagraph (A), the Secretary shall—

(i) make a written determination with respect to the regulations that have been violated;

(ii) provide the Indian tribe with a written notice of the alleged violation together with such written determination; and

(iii) prior to the exercise of any remedy or the rescission of the approval of the regulations involved and reassumption of the lease or right-of-way approval responsibility, provide the Indian tribe with a hearing and a reasonable opportunity to cure the alleged violation.

(C) The tribe shall retain all rights to appeal as provided by regulations promulgated by the Secretary.

(f) AGREEMENTS.—

(1) Agreements between an Indian tribe and a business entity that are directly associated with the development of electric generation, transmission or distribution facilities, or facilities to process or refine renewable or nonrenewable energy resources developed on tribal lands, shall not separately require the approval of the Secretary pursuant to section 18 of title 25, United States Code, so long as the activity that is the subject of the agreement has been the subject of an environmental review process pursuant to subsection (e) of this section.

(2) The United States shall not be liable for any losses or damages sustained by any party, including the Indian tribe, that are associated with an agreement entered into under this subsection.

(g) DISCLAIMER.—Nothing in this section is intended to modify or otherwise affect the applicability of any provision of the Indian Mineral Leasing Act of 1938 (25 U.S.C. 396a–396g); Indian Mineral Development Act of 1982 (25 U.S.C. 2101–2108); Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201–1328); any amendments thereto; or any other laws not specifically addressed in this section.

SEC. 405. INDIAN MINERAL DEVELOPMENT ACT REVIEW.

(a) IN GENERAL.—The Secretary of the Interior shall conduct a review of the activities that have been conducted by the governments of Indian tribes under the authority of the Indian Mineral Development Act of 1982 (25 U.S.C. 2101 et seq.).

(b) REPORT.—Not later than one year after the date of the enactment of this Act, the Secretary shall transmit to the Committee on Resources of the House of Representatives and the Committee on Indian Affairs and the Committee on Energy and Natural Resources of the Senate a report containing:

(1) the results of the review;

(2) recommendations designed to help ensure that Indian tribes have the opportunity to develop their nonrenewable energy resources; and

(3) an analysis of the barriers to the development of energy resources on Indian land, including federal policies and regulations, and make recommendations regarding the removal of those barriers.

(c) CONSULTATION.—The Secretary shall consult with Indian tribes on a government-to-government basis in developing the report and recommendations as provided in this subsection.

SEC. 406. RENEWABLE ENERGY STUDY.

(a) IN GENERAL.—Not later than 2 years after the date of the enactment of this Act, and once every 2 years thereafter, the Secretary of Energy shall transmit to the Committees on Energy and Commerce and Resources of the House of Representatives and the Committees on Energy and Natural Resources and Indian Affairs of the Senate a report on energy consumption and renewable energy development potential on Indian land. The report shall identify barriers to the development of renewable energy by Indian tribes, including federal policies and regulations, and make recommendations regarding the removal of such barriers.

(b) CONSULTATION.—The Secretary shall consult with Indian tribes on a government-to-government basis in developing the report and recommendations as provided in this section.

SEC. 407. FEDERAL POWER MARKETING ADMINISTRATIONS.

Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501) (as amended by section 201) is amended by adding the at the end of the following:

"SEC. 2608. FEDERAL POWER MARKETING ADMINISTRATIONS.

''(a) DEFINITION OF ADMINISTRATOR.—In this section, the term 'Administrator' means—

''(1) the Administrator of the Bonneville Power Administration; or

''(2) the Administrator of the Western Area Power Administration.

''(b) ASSISTANCE FOR TRANSMISSION STUDIES.—

''(1) Each Administrator may provide technical assistance to Indian tribes seeking to use the high-voltage transmission system for delivery of electric power. The costs of such technical assistance shall be funded—

''(A) by the Administrator using non-reimbursable funds appropriated for this purpose, or

''(B) by the Indian tribe.

''(2) PRIORITY FOR ASSISTANCE FOR TRANSMISSION STUDIES.—In providing discretionary assistance to Indian tribes under paragraph (1), each Administrator shall give priority in funding to Indian tribes that have limited financial capability to conduct such studies.''.

SEC. 408. FEASIBILITY STUDY OF COMBINED WIND AND HYDROPOWER DEMONSTRATION PROJECT.

(a) STUDY.—The Secretary of Energy, in coordination with the Secretary of the Army and the Secretary of the Interior, shall conduct a study of the cost and feasibility of developing a demonstration project that would use wind energy generated by Indian tribes and hydropower generated by the Army Corps of Engineers on the Missouri River to supply firming power to the Western Area Power Administration.

(b) SCOPE OF STUDY.—The study shall—

(1) determine the feasibility of the blending of wind energy and hydropower generated from the Missouri River dams operated by the Army Corps of Engineers;

(2) review historical purchase requirements and projected purchase requirements for firming and the patterns of availability and use of firming energy;

(3) assess the wind energy resource potential on tribal lands and projected cost savings through a blend of wind and hydropower over a thirty-year period; and

(4) include a preliminary interconnection study and a determination of resource adequacy of the Upper Great Plains Region of the Western Area Power Administration;

(5) determine seasonal capacity needs and associated transmission upgrades for integration of tribal wind generation; and

(6) include an independent tribal engineer as a study team member.

(c) REPORT.—The Secretary of Energy and Secretary of the Army shall submit a report to Congress not later than one year after the date of enactment of this title. The Secretaries shall include in the report—

(1) an analysis of the potential energy cost savings to the customers of the Western Area Power Administration through the blend of wind and hydropower;

(2) an evaluation of whether a combined wind and hydropower system can reduce reservoir fluctuation, enhance efficient and reliable energy production and provide Missouri River management flexibility;

(3) recommendations for a demonstration project which the Western Area Power Administration could carry out in partnership with an Indian tribal government or tribal government energy consortium to demonstrate the feasibility and potential of using wind energy produced on Indian lands to supply firming energy to the Western Area Power Administration or other Federal power marketing agency; and

(4) an identification of the economic and environmental benefits to be realized through such a federal-tribal partnership and identification of how such a partnership could contribute to the energy security of the United States.

(d) CONSULTATION.—The Secretary shall consult with Indian tribes on a government-to-government basis in developing the report and recommendations provided in this section.

(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated $500,000 to carry out this section, which shall remain available until expended. All costs incurred by the Western Area Power Administration associated with performing the tasks required under this section shall be non-reimbursable.

TITLE V—NUCLEAR POWER

Subtitle A—Price-Anderson Act Reauthorization

SEC. 501. SHORT TITLE.

This subtitle may be cited as the ''Price-Anderson Amendments Act of 2002''.

SEC. 502. EXTENSION OF DEPARTMENT OF ENERGY INDEMNIFICATION AUTHORITY.

Section 170 d.(1)(A) of the Atomic Energy Act of 1954 (42 U.S.C. 2210(d)(1)(A)) is amended by striking '', until August 1, 2002,''.

SEC. 503. DEPARTMENT OF ENERGY LIABILITY LIMIT.

(a) INDEMNIFICATION OF DEPARTMENT OF ENERGY CONTRACTORS.—Section 170 d. of the Atomic Energy Act of 1954 (42 U.S.C. 2210(d)) is amended by striking paragraph (2) and inserting the following:

''(2) In agreements of indemnification entered into under paragraph (1), the Secretary—

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

''(B) shall indemnify the persons indemnified against such claims above the amount of the financial protection required, in the amount of $10,000,000,000 (subject to adjustment for inflation under subsection t.), in the aggregate, for all persons indemnified in connection with such contract and for each nuclear incident, including such legal costs of the contractor as are approved by the Secretary.''.

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

''(3) All agreements of indemnification under which the Department of Energy (or its predecessor agencies) may be required to indemnify any person, shall be deemed to be amended, on the date of the enactment of the Price-Anderson Amendments Act of 2002, to reflect the amount of indemnity for public liability and any applicable financial protection required of the contractor under this subsection on such date.''.

(c) LIABILITY LIMIT.—Section 170 e.(1)(B) of the Atomic Energy Act of 1954 (42 U.S.C. 2210(e)(1)(B)) is

amended by striking ''paragraph (3)'' and inserting ''paragraph (2)(B)''.

SEC. 504. INCIDENTS OUTSIDE THE UNITED STATES.

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

(b) LIABILITY LIMIT.—Section 170 e.(4) of the Atomic Energy Act of 1954 (42 U.S.C. 2210(e)(4) is amended by striking ''$100,000,000'' and inserting ''$500,000,000''.

SEC. 505. REPORTS.

Section 170 p. of the Atomic Energy Act of 1954 (42 U.S.C. 2210(p)) is amended by striking ''August 1, 1998'' and inserting ''August 1, 2013''.

SEC. 506. INFLATION ADJUSTMENT.

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

(1) by renumbering paragraph (2) as paragraph (3); and

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

''(2) The Secretary shall adjust the amount of indemnification provided under an agreement of indemnification under subsection d. not less than once during each 5-year period following July 1, 2002, in

accordance with the aggregate percentage change in the Consumer Price Index since—

"(A) such date of enactment, in the case of the first adjustment under this paragraph; or

"(B) the previous adjustment under this paragraph.".

SEC. 507. CIVIL PENALTIES.

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

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

"d. In the case of a contractor, subcontractor, or supplier of the Department of Energy that is an organization described in section 501(c)(3) of the Internal Revenue Code of 1986 and that is exempt from taxation under section 501(a) of the Code—

"(1) the assessment of any civil penalty under subsection a. against that entity may not be made until the entity enters into a new contract with the Department of Energy or an extension of a current contract with the Department; and

''(2) the total amount of civil penalties under subsection a. in a fiscal year may not exceed the total amount of fees paid by the Department of Energy to that entity in that fiscal year.''.

SEC. 508. EFFECTIVE DATE.

The amendments made by sections 503(a) and 504 shall not apply to any nuclear incident that occurs before the date of the enactment of this subtitle.

Subtitle B—Miscellaneous Provisions

SEC. 511. URANIUM SALES.

(a) URANIUM HEXAFLUORIDE DERIVED FROM RUSSIAN HIGHLY ENRICHED URANIUM.—Section 3112(b)(2) of the USEC Privatization Act (42 U.S.C. 2297h–10(b)(2)) is amended to read as follows:

''(2) The Secretary may not sell any uranium hexafluoride transferred to the Secretary pursuant to paragraph (1) to any end user other than the United States for consumption in the United States prior to March 24, 2009, and may not sell or transfer more than 3,000,000 pounds of U_3O_8 equivalent for consumption in the United States in calendar year 2009 or in any calendar year thereafter.''.

(b) INVENTORY SALES.—Section 3112(d)(1) of the USEC Privatization Act (42 U.S.C. 2297h–10(d)(1)) is amended to read as follows:

''(1) Except as provided in subsections (b), (c), and (e), and except for transfers or sales of any uranium that will be further processed at a domestic uranium mill, the Secretary may not sell natural or low-enriched uranium (including low-enriched uranium derived from highly enriched uranium) from the Department of Energy's stockpile prior to May 24, 2009.''.

SEC. 512. REAUTHORIZATION OF THORIUM REIMBURSEMENT.

(a) REIMBURSEMENT OF THORIUM LICENSEES.—Section 1001(b)(2)(C) of the Energy Policy Act of 1992 (42 U.S.C. 2296a) is amended by striking ''$140,000,000'' and inserting ''$263,000,000''.

(b) AUTHORIZATION OF APPROPRIATIONS.—Section 1003(a) of the Energy Policy Act of 1992 (42 U.S.C. 2296a–2) is amended by striking ''$490,000,000'' and inserting ''$613,000,000''.

(c) DECONTAMINATION AND DECOMMISSIONING FUND.—Section 1802(a) of the Atomic Energy Act of 1954 (42 U.S.C. 2297g–1) is amended by striking ''$488,333,333'' and inserting ''$508,833,333''.

SEC. 513. FAST FLUX TEST FACILITY.

The Secretary of Energy shall not reactivate the Fast Flux Test Facility to conduct—

(1) any atomic energy defense activity,

(2) any space-related mission, or

(3) any program for the production or utilization of nuclear material if the Secretary has determined, in a record of decision, that the program can be carried out at existing operating facilities.

DIVISION B—DOMESTIC OIL AND GAS PRODUCTION AND TRANSPORTATION

TITLE VI—OIL AND GAS PRODUCTION

SEC. 601. PERMANENT AUTHORITY TO OPERATE THE STRATEGIC PETROLEUM RESERVE.

(a) AMENDMENT TO TITLE I OF THE ENERGY POLICY AND CONSERVATION ACT.—Title I of the Energy Policy and Conservation Act (42 U.S.C. 6211 et seq.) is amended—

(1) by striking section 166 (42 U.S.C. 6246) and inserting—

"SEC. 166. There are authorized to be appropriated to the Secretary such sums as may be necessary to carry out this part, to remain available until expended."; and

(2) by striking part E (42 U.S.C. 6251; relating to the expiration of title I of the Act) and its heading.

(b) AMENDMENT TO TITLE II OF THE ENERGY POLICY AND CONSERVATION ACT.—Title II of the Energy Policy and Conservation Act (42 U.S.C. 6271 et seq.) is amended—

(1) by striking section 256(h) (42 U.S.C. 6276(h)) and inserting—

''(h) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary such sums as may be necessary to carry out this part, to remain available until expended.''.

(2) by striking section 273(e) (42 U.S.C. 6283(e); relating to the expiration of summer fill and fuel budgeting programs); and

(3) by striking part D (42 U.S.C. 6285; relating to the expiration of title II of the Act) and its heading.

(c) TECHNICAL AMENDMENTS.—The table of contents for the Energy Policy and Conservation Act is amended by striking the items relating to part D of title I and part D of title II.

SEC. 602. FEDERAL ONSHORE LEASING PROGRAMS FOR OIL AND GAS.

(a) TIMELY ACTION ON LEASES AND PERMITS.—The Secretary of the Interior shall provide for the timely leasing of lands containing oil or gas and timely action on applications for permits to drill under section 17 of the Mineral Leasing Act (30 U.S.C. 226). To ensure timely action on oil and gas leases and applications for permits to drill, the Secretary shall—

(1) ensure expeditious compliance with the requirements section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C));

(2) improve consultation and coordination with the States;

(3) improve the collection, storage, and retrieval of information related to such leasing activities; and

(4) improve inspection and enforcement activities related to oil and gas leases.

(b) AUTHORIZATION OF APPROPRIATIONS.—For the purpose of carrying out paragraphs (1) through (4) of subsection (a), there are authorized to be appropriated to the Secretary of the Interior $60,000,000 for each of the fiscal years 2003 through 2006, in addition to amounts otherwise authorized to be appropriated for the purpose

of carrying out section 17 of the Mineral Leasing Act (30 U.S.C. 226).

SEC. 603. OIL AND GAS LEASE ACREAGE LIMITATIONS.

Section 27(d)(1) of the Mineral Leasing Act (30 U.S.C. 184(d)(1)) is amended by inserting after ''acreage held in special tar sand areas'' the following: ''as well as acreage under any lease any portion of which has been committed to a Federally approved unit or cooperative plan or communitization agreement, or for which royalty, including compensatory royalty or royalty in kind, was paid in the preceding calendar year,''.

SEC. 604. HYDRAULIC FRACTURING.

Section 1421 of the Safe Drinking Water Act (42 U.S.C. Sec. 300h) is amended by adding at the end the following:

''(e) HYDRAULIC FRACTURING FOR OIL AND GAS PRODUCTION.—

''(1) STUDY OF THE EFFECTS OF HYDRAULIC FRACTURING.—

''(A) IN GENERAL.—Not later than 24 months after the date of enactment of this subsection, the Administrator shall complete a study of the known and potential effects on underground drinking water sources of hydraulic fracturing, including the effects of hydraulic

fracturing on underground drinking water sources on a nationwide basis, and within specific regions, States, or portions of States.

''(B) CONSULTATION.—In planning and conducting the study, the Administrator shall consult with the Secretary of the Interior, the Secretary of Energy, the Ground Water Protection Council, affected States, and, as appropriate, representatives of environmental, industry, academic, scientific, public health, and other relevant organizations. Such study may be accomplished in conjunction with other ongoing studies related to the effects of oil and gas production on groundwater resources.

''(C) STUDY ELEMENTS.—The study conducted under subparagraph (A) shall, at a minimum, examine and make findings as to whether—

''(i) such hydraulic fracturing has, or will, endanger (as defined under subsection (d)(2)) underground drinking water sources, including those sources within specific regions, States or portions of States;

''(ii) there are specific methods, practices, or hydrogeologic circumstances in

which hydraulic fracturing has, or will, endanger underground drinking water sources; and

"(iii) there are any precautionary actions that may reduce or eliminate any such endangerment.

"(2) INDEPENDENT SCIENTIFIC REVIEW.—

"(A) IN GENERAL.— Not later than 2 months after the study under paragraph (1) is completed, the Administrator shall enter into an appropriate agreement with the National Academy of Sciences to have the Academy review the conclusions of the study.

"(B) REPORT—Not later than 9 months after entering into an appropriate agreement with the Administrator, the National Academy of Sciences shall report to the Administrator, the Committee on Energy and Commerce of the House of Representatives, and the Committee on Environment and Public Works of the Senate, on the—

"(i) findings related to the study conducted by the Administrator under paragraph (1); and

''(ii) recommendations, if any, for modifying the findings of the study.

''(3) REGULATORY DETERMINATION.—

''(A) IN GENERAL.—Not later than 6 months after receiving the National Academy of Sciences report under paragraph (2), the Administrator shall determine, after informal public hearings and public notice and opportunity for comment, and based on information developed or accumulated in connection with the study required under paragraph (1) and the National Academy of Sciences report under paragraph (2), either:

''(i) that regulation of hydraulic fracturing under this part is necessary to ensure that underground sources of drinking water will not be endangered on a nationwide basis, or within a specific region, State or portions of a State; or

''(ii) that regulation described under clause (i) is unnecessary.

''(B) PUBLICATION OF DETERMINATION.—The Administrator shall publish the determination in the Federal Register, accompanied by an explanation and the reasons for it.

"(4) PROMULGATION OF REGULATIONS.—

"(A) REGULATION NECESSARY.—If the Administrator determines under paragraph (3) that regulation of hydraulic fracturing under this part is necessary to ensure that hydraulic fracturing does not endanger underground drinking water sources on a nationwide basis, or within a specific region, State or portions of a State, the Administrator shall, within 6 months after the issuance of that determination, and after public notice and opportunity for comment, promulgate regulations under section 1421 (42 U.S.C. 300h) to ensure that hydraulic fracturing will not endanger such underground sources of drinking water.

"(B) REGULATION UNNECESSARY.—The Administrator shall not promulgate regulations for hydraulic fracturing under this part unless the Administrator determines under paragraph (3) that such regulations are necessary.

"(C) EXISTING REGULATIONS.—A determination by the Administrator under paragraph (3) that regulation is unnecessary will relieve States from any further obligation to regulate

hydraulic fracturing as an underground injection under this part.

''(5) DEFINITION OF HYDRAULIC FRACTURING.—For purposes of this subsection, the term 'hydraulic fracturing' means the process of creating a fracture in a reservoir rock, and injecting fluids and propping agents, for the purposes of reservoir stimulation related to oil and gas production activities.

''(6) SAVINGS.—Nothing in this subsection shall in any way limit the authorities of the Administrator under section 1431 (42 U.S.C. 300i).''.

SEC. 605. ORPHANED WELLS ON FEDERAL LAND.

(a) ESTABLISHMENT.—The Secretary of the Interior, in cooperation with the Secretary of Agriculture, shall establish a program to ensure within three years after the date of enactment remediation, reclamation, and closure of orphaned oil and gas wells located on lands administered by the land management agencies within the Department of the Interior and the U.S. Forest Service. The program shall include a means of ranking critical sites for priority in remediation based on potential environmental harm, other land use priorities, and public health and safety. The program shall provide that responsible parties be identified wherever possible and that the costs of remedi-

ation be recovered. In carrying out the program, the Secretary of the Interior shall work cooperatively with the Secretary of Agriculture and the states within which the federal lands are located, and shall consult with the Secretary of Energy, and the Interstate Oil and Gas Compact Commission.

(b) PLAN.—Within six months from the date of enactment of this section, the Secretary of the Interior, in cooperation with the Secretary of Agriculture, shall prepare a plan for carrying out the program established under subsection (a). Copies of the plan shall be transmitted to the Committee on Energy and Natural Resources of the Senate and the Committee on Resources of the House of Representatives.

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary of the Interior $5,000,000 for each of fiscal years 2003 through 2005 to carry out the activities provided for in this section.

SEC. 606. ORPHANED AND ABANDONED OIL AND GAS WELL PROGRAM.

(a) ESTABLISHMENT.—The Secretary of Energy shall establish a program to provide technical assistance to the various oil and gas producing states to facilitate state efforts over a ten-year period to ensure a practical

and economical remedy for environmental problems caused by orphaned and abandoned exploration or production well sites on state and private lands. The Secretary shall work with the states, through the Interstate Oil and Gas Compact Commission, to assist the states in quantifying and mitigating environmental risks of onshore abandoned and orphaned wells on state and private lands.

(b) PROGRAM ELEMENTS.—The program should include—

(1) mechanisms to facilitate identification of responsible parties wherever possible;

(2) criteria for ranking critical sites based on factors such as other land use priorities, potential environmental harm and public visibility; and

(3) information and training programs on best practices for remediation of different types of sites.

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary of Energy for the activities under this section $5,000,000 for each of fiscal years 2003 through 2005 to carry out the provisions of this section.

SEC. 607. OFFSHORE DEVELOPMENT.

Section 5 of the Outer Continental Shelf Lands Act of 1953 (43 U.S.C. 1334) is amended by adding at the end the following:

''(k) SUSPENSION OF OPERATIONS FOR SUBSALT EXPLORATION.—Notwithstanding any other provision of law or regulation, the Secretary may grant a request for a suspension of operations under any lease to allow the lessee to reprocess or reinterpret geologic or geophysical data beneath allocthonous salt sheets, when in the Secretary's judgment such suspension is necessary to prevent waste caused by the drilling of unnecessary wells, and to maximize ultimate recovery of hydrocarbon resources under the lease. Such suspension shall be limited to the minimum period of time the Secretary determines is necessary to achieve the objectives of this subsection.''.

SEC. 608. COALBED METHANE STUDY.

(a) STUDY.—The Secretary of the Interior, in consultation with the Administrator of the Environmental Protection Agency, and the Secretaries of Energy and Agriculture, shall conduct a study on the effects of coalbed methane production on surface and water resources.

(b) DATA ANALYSIS.—The study shall analyze available hydrogeologic and water quality data, along with other pertinent environmental or other information to determine—

(1) adverse effects associated with surface or subsurface disposal of waters produced during extraction of coalbed methane;

(2) depletion of groundwater aquifers or drinking water sources associated with production of coalbed methane;

(3) any other significant adverse impacts to surface or water resources associated with production of coalbed methane; and

''(4) production techniques or other factors that can mitigate adverse impacts from coalbed methane development.

(c) RECOMMENDATIONS.—The study shall analyze existing Federal and State laws and regulations, and make recommendations as to changes, if any, to Federal law necessary to address adverse impacts to surface or water resources attributable to coalbed methane development.

(d) REPORT TO CONGRESS.—The Secretary of the Interior shall report to Congress on the findings and recommendations of this study within 18 months following enactment of this Act.

SEC. 609. FISCAL POLICIES TO MAXIMIZE RECOVERY OF DOMESTIC OIL AND GAS RESOURCES.

(a) EVALUATION.—The Secretary of Energy, in coordination with the Secretaries of the Interior, Commerce, and Treasury, Indian tribes and the Interstate Oil and Gas Compact Commission, shall evaluate the impact of existing Federal and State tax and royalty policies on the

development of domestic oil and gas resources and on revenues to Federal, State, local and tribal governments.

(b) SCOPE.—The evaluation under subsection (a) shall—

(1) analyze the impact of fiscal policies on oil and natural gas exploration, development drilling, and production under different price scenarios, including the impact of the individual and corporate Alternative Minimum Tax, state and local production taxes and fixed royalty rates during low price periods;

(2) assess the effect of existing federal and state fiscal policies on investment under different geological and developmental circumstances, including but not limited to deepwater environments, subsalt formations, deep and deviated wells, coalbed methane and other unconventional oil and gas formations;

(3) assess the extent to which federal and state fiscal policies negatively impact the ultimate recovery of resources from existing fields and smaller accumulations in offshore waters, especially in water depths less than 800 meters, of the Gulf of Mexico;

(4) compare existing federal and state policies with tax and royalty regimes in other countries with

particular emphasis on similar geological, developmental and infrastructure conditions; and

(5) evaluate how alternative tax and royalty policies, including counter-cyclical measures, could increase recovery of domestic oil and natural gas resources and revenues to Federal, State, local and tribal governments.

(c) POLICY RECOMMENDATIONS.—Based upon the findings of the evaluation under subsection (a), a report describing the findings and recommendations for policy changes shall be provided to the President, the Congress, the Governors of the member states of the Interstate Oil and Gas Compact Commission, and Indian tribes having an oil and gas lease approved by the Secretary of the Interior. The recommendations should ensure that the public interest in receiving the economic benefits of tax and royalty revenues is balanced with the broader national security and economic interests in maximizing recovery of domestic resources. The report should include recommendations regarding actions to—

(1) ensure stable development drilling during periods of low oil and/or natural gas prices to maintain reserve replacement and deliverability;

(2) minimize the negative impact of a volatile investment climate on the oil and gas service indus-

try and domestic oil and gas exploration and production;

(3) ensure a consistent level of domestic activity to encourage the education and retention of a technical workforce; and

(4) maintain production capability during periods of low oil and/or natural gas prices.

(d) ROYALTY GUIDELINES.—The recommendations required under (c) should include guidelines for private resource holders as to the appropriate level of royalties given geology, development cost, and the national interest in maximizing recovery of oil and gas resources.

(e) REPORT.—The study under subsection (a) shall be completed not later than 18 months after the date of enactment of this section. The report and recommendations required in (c) shall be transmitted to the President, the Congress, Indian tribes, and the Governors of the member States of the Interstate Oil and Gas Compact Commission.

SEC. 610. STRATEGIC PETROLEUM RESERVE.

(a) FULL CAPACITY.—The President shall—

(1) fill the Strategic Petroleum Reserve established pursuant to part B of title I of the Energy Policy and Conservation Act (42 U.S.C. 6231 et seq.) to full capacity as soon as practicable;

(2) acquire petroleum for the Strategic Petroleum Reserve by the most practicable and cost-effective means, including the acquisition of crude oil the United States is entitled to receive in kind as royalties from production on Federal lands; and

(3) ensure that the fill rate minimizes impacts on petroleum markets.

(b) RECOMMENDATIONS.—Not later than 180 days after the date of enactment of this Act, the Secretary of Energy shall submit to Congress a plan to—

(1) eliminate any infrastructure impediments that may limit maximum drawdown capability; and

(2) determine whether the capacity of the Strategic Petroleum Reserve on the date of enactment of this section is adequate in light of the increasing consumption of petroleum and the reliance on imported petroleum.

TITLE VII—NATURAL GAS PIPELINES

Subtitle A—Alaska Natural Gas Pipeline

SEC. 701. SHORT TITLE.

This subtitle may be cited as the ''Alaska Natural Gas Pipeline Act of 2002''.

SEC. 702. PURPOSES.

The purposes of this subtitle are:

(1) to expedite the approval, construction, and initial operation of one or more transportation systems for the delivery of Alaska natural gas to the contiguous United States;

(2) to ensure access to such transportation systems on an equal and nondiscriminatory basis and to promote competition in the exploration, development and production of Alaska Natural Gas;

(3) to provide federal financial assistance to any transportation system for the transport of Alaska natural gas to the contiguous United States, for which an application for a certificate of public convenience and necessity is filed with the Commission not later than six months after the date of enactment of this title.

SEC. 703. ISSUANCE OF CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY.

(a) AUTHORITY OF THE COMMISSION.—Notwithstanding the provisions of the Alaska Natural Gas Transportation Act of 1976 (15 U.S.C. 719–719*o*), the Commission shall consider and act on an application for the issuance of a certificate of public convenience and necessity authorizing the construction and operation of an Alas-

ka natural gas transportation project under section 7(c) of the Natural Gas Act (15 U.S.C. 717f(c)).

(b) ISSUANCE OF CERTIFICATE.—

(1) PROJECTS IN ALASKA.—The Commission shall issue a certificate of public convenience and necessity authorizing the construction and operation of an Alaska natural gas transportation project within the State of Alaska if the applicant has—

(A) entered into a contract to transport Alaska natural gas through the proposed Alaska natural gas transportation project for use in the contiguous United States; and

(B) satisfied the requirements of section 7(e) of the Natural Gas Act (15 U.S.C. 717f(e)) with respect to—

(i) rates, charges, and terms and conditions of such transportation services; and

(ii) all environmental laws applicable to the proposed facilities.

(2) PROJECTS IN THE CONTIGUOUS UNITED STATES.—The Commission may issue a certificate of public convenience and necessity authorizing the construction and operation of an Alaska natural gas transportation project in the contiguous United States if the applicant satisfies the requirements of

section 7(e) of the Natural Gas Act (15 U.S.C. 717f(e)).

(c) COMPETITIVE EFFECTS.—In carrying out its responsibilities under this section, the Commission shall take into account the effect on competition in the exploration, development and production of natural gas in Alaska, and shall ensure that any Alaska natural gas transportation project provides open and nondiscriminatory access to all shippers.

(d) EXPEDITED APPROVAL PROCESS.—The Commission shall issue a final order granting or denying any application for a certificate of public and convenience and necessity under section 7(c) of the Natural Gas Act (15 U.S.C. 717f(c)) and this section not more than 60 days after the issuance of the final environmental impact statement for that project pursuant to section 704.

(e) REVIEWS AND ACTIONS OF OTHER FEDERAL AGENCIES.—All reviews conducted and actions taken by any federal officer or agency relating to an Alaska natural gas transportation project shall be expedited, in a manner consistent with completion of the necessary reviews and approvals by the deadlines set forth in this subtitle.

SEC. 704. ENVIRONMENTAL REVIEWS.

(a) COMPLIANCE WITH NEPA.—The issuance of a certificate of public convenience and necessity authorizing

the construction and operation of any Alaska natural gas transportation project shall be treated as a major federal action significantly affecting the quality of the human environment within the meaning of section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)).

(b) DESIGNATION OF LEAD AGENCY.—The Commission shall be the lead agency for purposes of complying with the National Environmental Policy Act of 1969, and shall be responsible for preparing the statement required by section 102(2)(c) of that Act (42 U.S.C. 4332(2)(c)) with respect to the project. The Commission shall prepare a single environmental statement under this section, which shall consolidate the environmental reviews of all Federal agencies considering any aspect of the project.

(c) OTHER AGENCIES.—All Federal agencies considering aspects of the construction and operation of the Alaska natural gas transportation project shall cooperate with the Commission, and shall comply with deadlines established by the Commission in the preparation of the statement under this section. The statement prepared under this section shall be used by all such agencies to satisfy their responsibilities under section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)) with respect to such project.

(d) EXPEDITED PROCESS.—The Commission shall issue a draft statement under this section not later than 12 months after the Commission determines the application to be complete and shall issue the final statement not later than 6 months after the Commission issues the draft statement, unless the Commission for good cause finds that additional time is needed.

SEC. 705. FEDERAL COORDINATOR.

(a) ESTABLISHMENT.—There is established as an independent establishment in the executive branch, the Office of the Federal Coordinator for Alaska Natural Gas Transportation Projects.

(b) THE FEDERAL COORDINATOR.—The Office shall be headed by a Federal Coordinator for Alaska Natural Gas Transportation Projects (the ''Federal Coordinator''), who shall—

(1) be appointed by the President, by and with the advice of the Senate,

(2) hold office at the pleasure of the President, and

(3) be compensated at the rate prescribed for level III of the Executive Schedule (5 U.S.C. 5314).

(c) DUTIES.—The Federal Coordinator shall be responsible for—

(1) coordinating the expeditious discharge of all activities by federal agencies with respect to an Alaska natural gas transportation project; and

(2) ensuring the compliance of Federal agencies with the provisions of this subtitle.

SEC. 706. JUDICIAL REVIEW.

(a) EXCLUSIVE JURISDICTION.—The United States Court of Appeals for the District of Columbia Circuit shall have exclusive jurisdiction to determine—

(1) the validity of any final order or action (including a failure to act) of the Commission under this subtitle;

(2) the constitutionality of any provision of this subtitle, or any decision made or action taken thereunder; or

(3) the adequacy of any environmental impact statement prepared under the National Environmental Policy Act of 1969 with respect to any action under this subtitle.

(b) DEADLINE FOR FILING CLAIM.—Claims arising under this subtitle may be brought not later than 60 days after the date of the decision or action giving rise to the claim.

SEC. 707. LOAN GUARANTEE.

(a) AUTHORITY.—The Secretary of Energy may guarantee not more than 80 percent of the principal of any loan made to the holder of a certificate of public convenience and necessity issued under section 701(b)(1) of this Act or section 9 of the Alaska Natural Gas Transportation Act of 1976 (15 U.S.C. 719g) for the purpose of constructing a natural gas pipeline system for transporting natural gas from the North Slope of Alaska to the border between Alaska and Canada.

(b) CONDITIONS.—

(1) The Secretary of Energy may not guarantee a loan under this section unless the guarantee has filed an application for a certificate of public convenience and necessity under section 701(b)(1) of this Act or for an amended certificate under section 9 of the Alaska Natural Gas Transportation Act of 1976 (15 U.S.C. 719g) with the Federal Energy Regulatory Commission not later than six months after the date of enactment of this title.

(2) A loan guaranteed under this section shall be made by a financial institution subject to the examination of the Secretary.

(3) Loan requirements, including term, maximum size, collateral requirements and other features shall be determined by the Secretary.

(c) LIMITATION ON AMOUNT.—Commitments to guarantee loans may be made by the Secretary of Energy only to the extent that the total loan principal, any part of which is guaranteed, will not exceed $10,000,000,000.

(d) REGULATIONS.—The Secretary of Energy may issue regulations to carry out the provisions of this section.

(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary such sums as may be necessary to cover the cost of loan guarantees, as defined by section 502(5) of the Federal Credit Reform Act of 1990 (2 U.S.C. 661a(5)).

SEC. 708. DEFINITIONS.

For purposes of this subtitle:

(1) the term ''Alaska natural gas'' means natural gas derived from the area of the State of Alaska generally known as the North Slope of Alaska, including the Continental Shelf thereof;

(2) the term ''Alaska natural gas transportation project'' means—

(A) any natural gas pipeline system that carries Alaska natural gas—

(i) from the North Slope of Alaska to the border between Alaska and Canada, or

(ii) from the border between Canada and the contiguous United States to a natural gas pipeline system in the contiguous United States in operation on the date of enactment of this subtitle, and

(B) facilities subjected to the jurisdiction of the Commission that are related to such pipeline systems;

(3) the term ''Commission'' means the Federal Energy Regulatory Commission.

(4) the term ''natural gas company'' means a person engaged in the transportation of natural gas in interstate commerce or the sale in interstate commerce of such gas for resale.

SEC. 709. SAVINGS CLAUSE.

Nothing in this title affects the decisions made pursuant to the Alaska Natural Gas Transportation Act (15 U.S.C. 719–719o, as amended) regarding the selection, designation and description of the Alaska Natural Gas Transportation System, or the obligations and authorities of Federal officers and agencies under that Act, to grant or issue all certificate, rights-of-way, leases, permits and other authorizations necessary for the construction and authorization of the Alaska Natural Gas Transportation System, to expedite and give priority to any applications

or requests for, and to modify any terms and conditions of such certificates, rights-of-way, leases, permits and other authorizations.

SEC. 710. SENSE OF THE SENATE.

It is the sense of the Senate that an Alaska natural gas transportation project will provide significant economic benefits to the United States and Canada. In order to maximize those benefits, the Senate urges the sponsors of the pipeline project to make every effort to use steel that is manufactured or produced in North America and to negotiate a project labor agreement to expedite construction of the pipeline.

Subtitle B—Operating Pipelines

SEC. 711. APPLICATION OF HISTORIC PRESERVATION ACT TO OPERATING PIPELINES.

Section 7 of the Natural Gas Act (15 U.S.C. 717(f)) is amended by adding at the end the following:

''(i)(1) Notwithstanding the National Historic Preservation Act (16 U.S.C. 470 et seq.), a transportation facility shall not be eligible for inclusion on the National Register of Historic Places unless—

''(A) the Commission has permitted the abandonment of the transportation facility pursuant to subsection (b), or

''(B) the owner of the facility has given written consent to such eligibility.

''(2) Any transportation facility considered eligible for inclusion on the National Register of Historic Places prior to the date of enactment of this subsection shall no longer be eligible unless the owner of the facility gives written consent to such eligibility.''.

SEC. 712. ENVIRONMENTAL REVIEW AND PERMITTING OF NATURAL GAS PIPELINE PROJECTS.

(a) INTERAGENCY REVIEW.—The Chairman of the Council on Environmental Quality, in coordination with the Federal Energy Regulatory Commission, shall establish an interagency task force to develop an interagency memorandum of understanding to expedite the environmental review and permitting of natural gas pipeline projects.

(b) MEMBERSHIP OF INTERAGENCY TASK FORCE.—The task force shall consist of—

(1) the Chairman of the Council on Environmental Quality, who shall serve as the Chairman of the interagency task force,

(2) the Chairman of the Federal Energy Regulatory Commission,

(3) the Director of the Bureau of Land Management,

(4) the Director of the U.S. Fish and Wildlife Service,

(5) the Commanding General, U.S. Army Corps of Engineers,

(6) the Chief of the Forest Service,

(7) the Administrator of the Environmental Protection Agency,

(8) the Chairman of the Advisory Council on Historic Preservation, and

(9) the heads of such other agencies as the Chairman of the Council on Environmental Quality and the Chairman of the Federal Energy Regulatory Commission deem appropriate.

(c) MEMORANDUM OF UNDERSTANDING.—The agencies represented by the members of the interagency task force shall enter into the memorandum of understanding not later than one year after the date of the enactment of this section.

DIVISION C—DIVERSIFYING ENERGY DEMAND AND IMPROVING EFFICIENCY

TITLE VIII—FUELS AND VEHICLES

Subtitle A—Increased Vehicle Fuel Efficiency

SEC. 801. INCREASED VEHICLE FUEL EFFICIENCY.

[Reserved.]

SEC. 802. FUEL ECONOMY OF THE FEDERAL FLEET OF AUTOMOBILES.

Section 32917 of title 49, United States Code, is amended to read as follows:

"§32917. Standards for executive agency automobiles

"(a) BASELINE AVERAGE FUEL ECONOMY.—The head of each executive agency shall determine, for all automobiles in the agency's fleet of automobiles that were leased or bought as a new vehicle in fiscal year 1999, the average fuel economy for such automobiles. For the purposes of this section, the average fuel economy so determined shall be the baseline average fuel economy for the agency's fleet of automobiles.

"(b) INCREASE OF AVERAGE FUEL ECONOMY.—The head of an executive agency shall manage the procurement of automobiles for that agency in such a manner that—

''(1) not later than September 30, 2003, the average fuel economy of the new automobiles in the agency's fleet of automobiles is not less than 1 mile per gallon higher than the baseline average fuel economy determined under subsection (a) for that fleet; and

''(2) not later than September 30, 2005, the average fuel economy of the new automobiles in the agency's fleet of automobiles is not less than 3 miles per gallon higher than the baseline average fuel economy determined under subsection (a) for that fleet.

''(c) CALCULATION OF AVERAGE FUEL ECONOMY.—Average fuel economy shall be calculated for the purposes of this section in accordance with guidance which the Secretary of Transportation shall prescribe for the implementation of this section.

''(d) DEFINITIONS.—In this section:

''(1) The term 'automobile' does not include any vehicle designed for combat-related missions, law enforcement work, or emergency rescue work.

''(2) The term 'executive agency' has the meaning given that term in section 105 of title 5.

''(3) The term 'new automobile', with respect to the fleet of automobiles of an executive agency,

means an automobile that is leased for at least 60 consecutive days or bought, by or for the agency, after September 30, 1999.''.

SEC. 803. ASSISTANCE FOR STATE PROGRAMS TO RETIRE FUEL-INEFFICIENT MOTOR VEHICLES.

(a) ESTABLISHMENT.—The Secretary shall establish a program, to be known as the ''National Motor Vehicle Efficiency Improvement Program,'' under which the Secretary shall provide grants to States to operate programs to offer owners of passenger automobiles and light-duty trucks manufactured in model years more than 15 years prior to the fiscal year in which appropriations are made under subsection (d) to provide financial incentives to scrap such automobiles and to replace them with automobiles with higher fuel efficiency.

(b) STATE PLAN.—Not later than 180 days after the date of enactment of an appropriations act containing funds authorized under subsection (d), to be eligible to receive funds under the program, the Governor of a State shall submit to the Secretary a plan to carry out a program under this subtitle in that State.

(c) ELIGIBILITY CRITERIA.—The Secretary shall approve a State plan and provide the funds under subsection (d), if the State plan—

(1) requires that all passenger automobiles and light-duty trucks turned in be scrapped;

(2) requires that all passenger automobiles and light-duty trucks turned in be currently registered in the State in order to be eligible;

(3) requires that all passenger automobiles and light-duty trucks turned in be operational at the time that they are turned in;

(4) restricts automobile owners (except not-for-profit organizations) from turning in more than one passenger automobile and one light-duty truck in a 12–month period;

(5) provides an appropriate payment to the person recycling the scrapped passenger automobile or light-duty truck for each turned-in passenger automobile or light-duty truck;

(6) provides a minimum payment to the automobile owner for each passenger automobile and light-duty truck turned in; and

(7) provides, in addition to the payment under paragraph (6), an additional credit that may be redeemed by the owner of the turned-in passenger automobile or light-duty truck at the time of purchase of new fuel-efficient automobile.

(d) AUTHORIZATION OF APPROPRIATIONS.—There are hereby authorized to be appropriated to the Secretary to carry out this section such sums as may be necessary, to remain available until expended.

(e) ALLOCATION FORMULA.—The amounts appropriated pursuant to subsection (d) shall be allocated among the States on the basis of the population of the States as contained in the most recent reliable census data available from the Bureau of the Census, Department of Commerce, for all States at the time that the Secretary needs to compute shares under this subsection.

(f) DEFINITIONS.—In this section:

(1) AUTOMOBILE.—The term ''automobile'' has the meaning given such term in section 32901(3) of title 49, United States Code.

(2) FUEL-EFFICIENT AUTOMOBILE.—

(A) The term ''fuel-efficient automobile'' means a passenger automobile or a light-duty truck that has an average fuel economy greater than the average fuel economy standard prescribed pursuant to section 32902 of title 49, United States Code, or other law, applicable to such passenger automobile or light-duty truck.

(B) The term ''average fuel economy'' has the meaning given such term in section 32901(5) of title 49, United States Code.

(C) The term ''average fuel economy standard'' has the meaning given such term in section 32901(6) of title 49, United States Code.

(D) The term ''fuel economy'' has the meaning given such term in section 32901(10) of title 49, United States Code.

(3) LIGHT-DUTY TRUCK.—The term ''light-duty truck'' means an automobile that is not a passenger automobile. Such term shall include a pickup truck, a van, or a four-wheel-drive general utility vehicle, as those terms are defined in section 600.002–85 of title 40, Code of Federal Regulations.

(4) PASSENGER AUTOMOBILE.—The term ''passenger automobile'' has the meaning given such term by section 32901(16) of title 49, United States Code.

(5) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

(6) STATE.—The term ''State'' means any of the several States and the District of Columbia.

Subtitle B—Alternative and Renewable Fuels

SEC. 811. INCREASED USE OF ALTERNATIVE FUELS BY FEDERAL FLEETS.

(a) REQUIREMENT TO USE ALTERNATIVE FUELS.—Section 400AA(a)(3)(E) of the Energy Policy and Conservation Act (42 U.S.C. 6374(a)(3)(E)) is amended to read as follows:

''(E) Dual fueled vehicles acquired pursuant to this section shall be operated on alternative fuels. If the Secretary determines that all dual fueled vehicles acquired pursuant to this section cannot operate on alternative fuels at all times, he may waive the requirement in part, but only to the extent that:

''(i) not later than September 30, 2003, not less than 50 percent of the total annual volume of fuel used in such dual fueled vehicles shall be from alternative fuels; and

''(ii) not later than September 30, 2005, not less than 75 percent of the total annual volume of fuel used in such dual fueled vehicles shall be from alternative fuels.''.

(b) DEFINITION OF ''DEDICATED VEHICLE''.—Section 400AA(g)(4)(B) of the Energy Policy and Conservation Act (42 U.S.C. 6374(g)(4)(B)) is amended by inserting after ''solely on alternative fuel'' the following: '', including a three-wheeled enclosed electric vehicle having a vehicle identification number''.

SEC. 812. EXCEPTION TO HOV PASSENGER REQUIREMENTS FOR ALTERNATIVE FUEL VEHICLES.

Section 102(a)(1) of title 23, United States Code, is amended by inserting after ''required'' the following: ''(unless, in the discretion of the State transportation department, the vehicle is being operated on, or is being fueled by, an alternative fuel (as defined in section 301(2) of the Energy Policy Act of 1992 (42 U.S.C. 13211(2)))''.

SEC. 813. DATA COLLECTION.

Section 205 of the Department of Energy Organization Act (42 U.S.C. 7135) is amended by adding at the end the following:

''(m) In order to improve the ability to evaluate the effectiveness of the Nation's renewable fuels mandate, the Administrator shall conduct and publish the results of a survey of renewable fuels consumption in the motor vehicle fuels market in the United States monthly, and in a manner designed to protect the confidentiality of individual responses. In conducting the survey, the Administrator shall

collect information both on a national basis and a regional basis, including—

(1) the quantity of renewable fuels produced;

(2) the cost of production;

(3) the cost of blending and marketing;

(4) the quantity of renewable fuels consumed;

(5) the quantity of renewable fuels imported; and

(6) market price data.

SEC. 814. GREEN SCHOOL BUS PILOT PROGRAM.

(a) ESTABLISHMENT.—The Secretary of Energy and the Secretary of Transportation shall jointly establish a pilot program for awarding grants on a competitive basis to eligible entities for the demonstration and commercial application of alternative fuel school buses and ultra-low sulfur diesel school buses.

(b) REQUIREMENTS.—Not later than 3 months after the date of the enactment of this Act, the Secretary shall establish and publish in the Federal register grant requirements on eligibility for assistance, and on implementation of the program established under subsection (a), including certification requirements to ensure compliance with this subtitle.

(c) SOLICITATION.—Not later than 6 months after the date of the enactment of this Act, the Secretary shall solicit proposals for grants under this section.

(d) ELIGIBLE RECIPIENTS.—A grant shall be awarded under this section only—

(1) to a local governmental entity responsible for providing school bus service for one or more public school systems; or

(2) jointly to an entity described in paragraph (1) and a contracting entity that provides school bus service to the public school system or systems.

(e) TYPES OF GRANTS.—

(1) IN GENERAL.—Grants under this section shall be for the demonstration and commercial application of technologies to facilitate the use of alternative fuel school buses and ultra-low sulfur diesel school buses instead of buses manufactured before model year 1977 and diesel-powered buses manufactured before model year 1991.

(2) NO ECONOMIC BENEFIT.—Other than the receipt of the grant, a recipient of a grant under this section may not receive any economic benefit in connection with the receipt of the grant.

(3) PRIORITY OF GRANT APPLICATIONS.—The Secretary shall give priority to awarding grants to

applicants who can demonstrate the use of alternative fuel buses and ultra-low sulfur diesel school buses instead of buses manufactured before model year 1977.

(f) CONDITIONS OF GRANT.—A grant provided under this section shall include the following conditions:

(1) All buses acquired with funds provided under the grant shall be operated as part of the school bus fleet for which the grant was made for a minimum of 5 years.

(2) Funds provided under the grant may only be used—

(A) to pay the cost, except as provided in paragraph (3), of new alternative fuel school buses or ultra-low sulfur diesel school buses, including State taxes and contract fees; and

(B) to provide—

(i) up to 10 percent of the price of the alternative fuel buses acquired, for necessary alternative fuel infrastructure if the infrastructure will only be available to the grant recipient; and

(ii) up to 15 percent of the price of the alternative fuel buses acquired, for necessary alternative fuel infrastructure if the

infrastructure will be available to the grant recipient and to other bus fleets.

(3) The grant recipient shall be required to provide at least the lesser of 15 percent of the total cost of each bus received or $15,000 per bus.

(4) In the case of a grant recipient receiving a grant to demonstrate ultra-low sulfur diesel school buses, the grant recipient shall be required to provide documentation to the satisfaction of the Secretary that diesel fuel containing sulfur at not more than 15 parts per million is available for carrying out the purposes of the grant, and a commitment by the applicant to use such fuel in carrying out the purposes of the grant.

(g) BUSES.—Funding under a grant made under this section may be used to demonstrate the use only of new alternative fuel school buses or ultra-low sulfur diesel school buses—

(1) with a gross vehicle weight of greater than 14,000 pounds;

(2) that are powered by a heavy duty engine;

(3) that, in the case of alternative fuel school buses, emit not more than—

(A) for buses manufactured in model year 2002, 2.5 grams per brake horsepower-hour of

nonmethane hydrocarbons and oxides of nitrogen and .01 grams per brake horsepower-hour of particulate matter; and

(B) for buses manufactured in model years 2003 through 2006, 1.8 grams per brake horsepower-hour of nonmethane hydrocarbons and oxides of nitrogen and .01 grams per brake horsepower-hour of particulate matter; and

(4) that, in the case of ultra-low sulfur diesel school buses, emit not more than—

(A) for buses manufactured in model year 2002 or 2003, 3.0 grams per brake horsepower-hour of nonmethane hydrocarbons and oxides of nitrogen and .01 grams per brake horsepower-hour of particulate matter; and

(B) for buses manufactured in model years 2004 through 2006, 2.5 grams per brake horsepower-hour of nonmethane hydrocarbons and oxides of nitrogen and .01 grams per brake horsepower-hour of particulate matter, except that under no circumstances shall buses be acquired under this section that emit nonmethane hydrocarbons, oxides of nitrogen, or particulate matter at a rate greater than the best performing technology of ultra-low sulfur diesel

school buses commercially available at the time the grant is made.

(h) DEPLOYMENT AND DISTRIBUTION.—The Secretary shall seek to the maximum extent practicable to achieve nationwide deployment of alternative fuel school buses through the program under this section, and shall ensure a broad geographic distribution of grant awards, with a goal of no State receiving more than 10 percent of the grant funding made available under this section for a fiscal year.

(i) LIMIT ON FUNDING.—The Secretary shall provide not less than 20 percent and not more than 25 percent of the grant funding made available under this section for any fiscal year for the acquisition of ultra-low sulfur diesel school buses.

(j) DEFINITIONS.—For purposes of this section—

(1) the term ''alternative fuel school bus'' means a bus powered substantially by electricity (including electricity supplied by a fuel cell), or by liquefied natural gas, compressed natural gas, liquefied petroleum gas, hydrogen, propane, or methanol or ethanol at no less than 85 percent by volume; and

(2) the term ''ultra-low sulfur diesel school bus'' means a school bus powered by diesel fuel

which contains sulfur at not more than 15 parts per million.

SEC. 815. FUEL CELL BUS DEVELOPMENT AND DEMONSTRATION PROGRAM.

(a) ESTABLISHMENT OF PROGRAM.—The Secretary shall establish a program for entering into cooperative agreements with private sector fuel cell bus developers for the development of fuel cell-powered school buses, and subsequently with not less than 2 units of local government using natural gas-powered school buses and such private sector fuel cell bus developers to demonstrate the use of fuel cell-powered school buses.

(b) COST SHARING.—The non-Federal contribution for activities funded under this section shall be not less than—

(1) 20 percent for fuel infrastructure development activities; and

(2) 50 percent for demonstration activities and for development activities not described in paragraph (1).

(c) FUNDING.—No more than $25,000,000 of the amounts authorized under section 815 may be used for carrying out this section for the period encompassing fiscal years 2003 through 2006.

(d) REPORTS TO CONGRESS.—Not later than 3 years after the date of the enactment of this Act, and not later than October 1, 2006, the Secretary shall transmit to the appropriate congressional committees a report that—

(1) evaluates the process of converting natural gas infrastructure to accommodate fuel cell-powered school buses; and

(2) assesses the results of the development and demonstration program under this section.

SEC. 816. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Secretary of Energy for carrying out sections 814 and 815, to remain available until expended—

(1) $50,000,000 for fiscal year 2003;

(2) $60,000,000 for fiscal year 2004;

(3) $70,000,000 for fiscal year 2005; and

(4) $80,000,000 for fiscal year 2006.

SEC. 817. BIODIESEL FUEL USE CREDIT.

Section 312(c) of the Energy Policy Act of 1992 (42 U.S.C. 13220(c)) is amended—

(1) by striking ''NOT'' in the subsection heading; and

(2) by striking ''not''.

SEC. 818. RENEWABLE CONTENT OF MOTOR VEHICLE FUEL.

(a) IN GENERAL.—Section 211 of the Clean Air Act (42 U.S.C. 7545) is amended—

(1) by redesignating subsection (o) as subsection (q); and

(2) by inserting after subsection (n) the following:

''(o) RENEWABLE FUEL PROGRAM.—

''(1) DEFINITIONS.—In this section:

''(A) CELLULOSIC BIOMASS ETHANOL.—The term 'cellulosic biomass ethanol' means ethanol derived from any lignocellulosic or hemicellulosic matter that is available on a renewable or recurring basis, including—

''(i) dedicated energy crops and trees;

''(ii) wood and wood residues;

''(iii) plants;

''(iv) grasses;

''(v) agricultural commodities and residues;

''(vi) fibers;

''(vii) animal wastes and other waste materials; and

''(viii) municipal solid waste.

''(B) RENEWABLE FUEL.—

"(i) IN GENERAL.—The term 'renewable fuel' means motor vehicle fuel that—

"(I)(aa) is produced from grain, starch, oilseeds, or other biomass; or

"(bb) is natural gas produced from a biogas source, including a landfill, sewage waste treatment plant, feedlot, or other place where decaying organic material is found; and

"(II) is used to replace or reduce the quantity of fossil fuel present in a fuel mixture used to operate a motor vehicle.

"(ii) INCLUSION.—The term 'renewable fuel' includes cellulosic biomass ethanol and biodiesel (as defined in section 312(f)(1) of the Energy Policy Act of 1992 (42 U.S.C. 13220(f)(1)).

"(C) SMALL REFINERY.—The term 'small refinery' means a refinery for which average aggregate daily crude oil throughput for the calendar year (as determined by dividing the aggregate throughput for the calendar year by the number of days in the calendar year) do not exceed 65,000 barrels.

''(2) RENEWABLE FUEL PROGRAM.—

''(A) IN GENERAL.—Except as provided in subparagraph (B)(i)(II), the motor vehicle fuel sold or introduced into commerce in the United States in calendar year 2003 or any calendar year thereafter by a refiner, blender, or importer shall contain, on a 6–month average basis, a quantity of renewable fuel, measured in gallons, that is not less than the applicable volume determined under subparagraph (B).

''(B) APPLICABLE VOLUME.—

''(i) CALENDAR YEAR 2003.—For calendar year 2003—

''(I) for the purpose of subparagraph (A), the applicable volume shall be 2,000,000,000 gallons; and

''(II) subparagraph (A) shall apply only to a refiner, blender, or importer located in Petroleum Administration for Defense District II, III, or IV.

''(ii) CALENDAR YEARS 2004 THROUGH 2012.—For the purpose of subparagraph (A), the applicable volume for any of calendar years 2004 through 2012 shall be

determined in accordance with the following table:

"Calendar year:	Applicable volume of renewable fuel: (in billions of gallons)
2004	2.3
2005	2.6
2006	2.9
2007	3.2
2008	3.5
2009	3.9
2010	4.3
2011	4.7
2012	5.0.

''(iii) CALENDAR YEAR 2013 AND THEREAFTER.—For the purpose of subparagraph (A), the applicable volume for calendar year 2013 and each calendar year thereafter shall be equal to the product obtained by multiplying—

''(I) the number of gallons of motor vehicle fuel that the Administrator estimates will be sold or introduced into commerce in the calendar year; and

''(II) the ratio that—

''(aa) the number of gallons of motor vehicle fuel sold or introduced into commerce in calendar year 2012 that consists of renewable fuel; bears to

''(bb) the number of gallons of motor vehicle fuel sold or introduced into commerce in calendar year 2012.

''(3) CELLULOSIC BIOMASS ETHANOL.—For the purpose of paragraph (2), 1 gallon of cellulosic biomass ethanol shall be considered to be the equivalent of 1.5 gallons of renewable fuel.

''(4) CREDIT PROGRAM.—

''(A) IN GENERAL.—The regulations promulgated to carry out this subsection shall provide for the generation of an appropriate amount of credits by a person that refines, blends, or imports motor vehicle fuel that contains, on a 6-month average basis, a quantity of renewable fuel that is greater than the quantity required for that 6-month period under paragraph (2).

''(B) USE OF CREDITS.—A person that generates credits under subparagraph (A) may use the credits, or transfer all or a portion of the credits to another person, for the purpose of complying with paragraph (2).

''(C) EXPIRATION OF CREDITS.—A credit generated under this paragraph shall expire 1

year after the date on which the credit was generated.

''(5) WAIVERS.—

''(A) IN GENERAL.—The Administrator, in consultation with the Secretary of Agriculture and the Secretary of Energy, may waive the requirement of paragraph (2) in whole or in part on petition by 1 or more States by reducing the national quantity of renewable fuel required under this subsection—

''(i) based on a determination by the Administrator, after public notice and opportunity for comment, that implementation of the requirement would severely harm the economy or environment of a State, a region, or the United States; or

''(ii) based on a determination by the Administrator, after public notice and opportunity for comment, that there is an inadequate domestic supply or distribution capacity to meet the requirement.

''(B) PETITIONS FOR WAIVERS.—The Administrator, in consultation with the Secretary of Agriculture and the Secretary of Energy—

''(i) shall approve or deny a State petition for a waiver of the requirement of paragraph (2) within 180 days after the date on which the petition is received; but

''(ii) may extend that period for up to 60 additional days to provide for public notice and opportunity for comment and for consideration of the comments submitted.

''(C) TERMINATION OF WAIVERS.—A waiver granted under subparagraph (A) shall terminate after 1 year, but may be renewed by the Administrator after consultation with the Secretary of Agriculture and the Secretary of Energy.

''(6) SMALL REFINERS.—The requirement of paragraph (2) shall not apply to a small refinery.

''(7) REGULATIONS.—Not later than 270 days after the date of enactment of this paragraph, the Administrator shall promulgate regulations to carry out this subsection.''.

(b) DISTILLATION INDEX.—Section 211 of the Clean Air Act (42 U.S.C. 7545) is amended by inserting before subsection (q) (as redesignated by subsection (a)(1)) the following:

''(p) DISTILLATION INDEX.—Effective January 1, 2004, no person shall manufacture, sell, supply, offer for sale, or supply, dispense, transport, or introduce into commerce gasoline that has a distillation index that exceeds 1,200.''.

(c) PENALTIES AND ENFORCEMENT.—Section 211(d) of the Clean Air Act (42 U.S.C. 7545(d)) is amended—

(1) in paragraph (1)—

(A) in the first sentence, by striking ''or (n)'' each place it appears and inserting ''(n), (o), or (p)''; and

(B) in the second sentence, by striking ''or (m)'' and inserting ''(m), (o), or (p)''; and

(2) in the first sentence of paragraph (2), by striking ''and (n)'' each place it appears and inserting ''(n), (o), and (p)''.

(d) ELIMINATION OF ETHANOL WAIVER.—Section 211(h)(4) of the Clean Air Act (42 U.S.C. 7545(h)(4)) is amended by striking ''For'' and inserting ''In the case of a State that is not located east of the Mississippi River, for''.

SEC. 819. NEIGHBORHOOD ELECTRIC VEHICLES.

Section 301 of the Energy Policy Act of 1992 (42 U.S.C. 13211) is amended—

(1) by striking ''or a dual fueled vehicle'' and inserting '', a dual fueled vehicle, or a neighborhood electric vehicle'';

(2) by striking ''and'' at the end of paragraph (13);

(3) by striking the period at the end of subparagraph (14) and inserting ''; and''; and

(4) by adding at the end the following:

''(15) the term 'neighborhood electric vehicle' means a motor vehicle that qualifies as both—

''(A) a low-speed vehicle, as such term is defined in section 571.3(b) of title 49, Code of Federal Regulations; and

''(B) a zero-emission vehicle, as such term is defined in section 86.1703–99 of title 40, Code of Federal Regulations.''.

Subtitle C—Federal Reformulated Fuels

SEC. 821. SHORT TITLE.

This subtitle may be cited as the ''Federal Reformulated Fuels Act of 2002''.

SEC. 822. LEAKING UNDERGROUND STORAGE TANKS.

(a) USE OF LUST FUNDS FOR REMEDIATION OF MTBE CONTAMINATION.—Section 9003(h) of the Solid Waste Disposal Act (42 U.S.C. 6991b(h)) is amended—

(1) in paragraph (7)(A)—

(A) by striking ''paragraphs (1) and (2) of this subsection'' and inserting ''paragraphs (1), (2), and (12)''; and

(B) by inserting ''and section 9010'' before ''if''; and

(2) by adding at the end the following:

''(12) REMEDIATION OF MTBE CONTAMINATION.—

''(A) IN GENERAL.—The Administrator and the States may use funds made available under section 9011(1) to carry out corrective actions with respect to a release of methyl tertiary butyl ether that presents a threat to human health, welfare, or the environment.

''(B) APPLICABLE AUTHORITY.—Subparagraph (A) shall be carried out—

''(i) in accordance with paragraph (2); and

''(ii) in the case of a State, in accordance with a cooperative agreement entered into by the Administrator and the State under paragraph (7).''.

(b) RELEASE PREVENTION AND COMPLIANCE.—Subtitle I of the Solid Waste Disposal Act (42 U.S.C. 6991

et seq.) is amended by striking section 9010 and inserting the following:

"SEC. 9010. RELEASE PREVENTION AND COMPLIANCE.

"Funds made available under section 9011(2) from the Leaking Underground Storage Tank Trust Fund may be used for conducting inspections, or for issuing orders or bringing actions under this subtitle—

"(1) by a State (pursuant to section 9003(h)(7)) acting under—

"(A) a program approved under section 9004; or

"(B) State requirements regulating underground storage tanks that are similar or identical to this subtitle; and

"(2) by the Administrator, acting under this subtitle or a State program approved under section 9004.

"SEC. 9011. AUTHORIZATION OF APPROPRIATIONS.

"In addition to amounts made available under section 2007(f), there are authorized to be appropriated from the Leaking Underground Storage Tank Trust Fund—

"(1) to carry out section 9003(h)(12), $200,000,000 for fiscal year 2002, to remain available until expended; and

"(2) to carry out section 9010—

''(A) $50,000,000 for fiscal year 2002; and

''(B) $30,000,000 for each of fiscal years 2003 through 2007.''.

(c) TECHNICAL AMENDMENTS.—

(1) Section 1001 of the Solid Waste Disposal Act (42 U.S.C. prec. 6901) is amended by striking the item relating to section 9010 and inserting the following:

''Sec. 9010. Release prevention and compliance.
''Sec. 9011. Authorization of appropriations.''.

(2) Section 9001(3)(A) of the Solid Waste Disposal Act (42 U.S.C. 6991(3)(A)) is amended by striking ''sustances'' and inserting ''substances''.

(3) Section 9003(f)(1) of the Solid Waste Disposal Act (42 U.S.C. 6991b(f)(1)) is amended by striking ''subsection (c) and (d) of this section'' and inserting ''subsections (c) and (d)''.

(4) Section 9004(a) of the Solid Waste Disposal Act (42 U.S.C. 6991c(a)) is amended in the second sentence by striking ''referred to'' and all that follows and inserting ''referred to in subparagraph (A) or (B), or both, of section 9001(2).''.

(5) Section 9005 of the Solid Waste Disposal Act (42 U.S.C. 6991d) is amended—

(A) in subsection (a), by striking ''study taking'' and inserting ''study, taking'';

(B) in subsection (b)(1), by striking ''relevent'' and inserting ''relevant''; and

(C) in subsection (b)(4), by striking ''Environmental'' and inserting ''Environmental''.

SEC. 823. AUTHORITY FOR WATER QUALITY PROTECTION FROM FUELS.

(a) IN GENERAL.—Section 211(c) of the Clean Air Act (42 U.S.C. 7545(c)) is amended—

(1) in paragraph (1)(A)—

(A) by inserting ''fuel or fuel additive or'' after ''Administrator any''; and

(B) by striking ''air pollution which'' and inserting ''air pollution, or water pollution, that'';

(2) in paragraph (4)(B), by inserting ''or water quality protection,'' after ''emission control,''; and

(3) by adding at the end the following:

''(5) BAN ON THE USE OF MTBE.—Not later than 4 years after the date of enactment of this paragraph, the Administrator shall ban use of methyl tertiary butyl ether in motor vehicle fuel.''.

(b) NO EFFECT ON LAW REGARDING STATE AUTHORITY.—The amendments made by subsection (a) have no effect on the law in effect on the day before the date

of enactment of this Act regarding the authority of States to limit the use of methyl tertiary butyl ether in gasoline.

SEC. 824. WAIVER OF OXYGEN CONTENT REQUIREMENT FOR REFORMULATED GASOLINE.

Section 211(k)(1) of the Clean Air Act (42 U.S.C. 7545(k)(1)) is amended—

(1) by striking ''Within 1 year after the enactment of the Clean Air Act Amendments of 1990,'' and inserting the following:

''(A) IN GENERAL.—Not later than November 15, 1991,''; and

(2) by adding at the end the following:

''(B) WAIVER OF OXYGEN CONTENT REQUIREMENT.—

''(i) AUTHORITY OF THE GOVERNOR.—

''(I) IN GENERAL.—Notwithstanding any other provision of this subsection, a Governor of a State, upon notification by the Governor to the Administrator during the 90-day period beginning on the date of enactment of this subparagraph, or during the 90-day period beginning on the date on which an area in the State be-

comes a covered area by operation of the second sentence of paragraph (10)(D), may waive the application of paragraphs (2)(B) and (3)(A)(v) to gasoline sold or dispensed in the State.

''(II) OPT-IN AREAS.—A Governor of a State that submits an application under paragraph (6) may, as part of that application, waive the application of paragraphs (2)(B) and (3)(A)(v) to gasoline sold or dispensed in the State.

''(ii) TREATMENT AS REFORMULATED GASOLINE.—In the case of a State for which the Governor invokes the waiver described in clause (i), gasoline that complies with all provisions of this subsection other than paragraphs (2)(B) and (3)(A)(v) shall be considered to be reformulated gasoline for the purposes of this subsection.

''(iii) EFFECTIVE DATE OF WAIVER.—A waiver under clause (i) shall take effect on the earlier of—

"(I) the date on which the performance standards under subparagraph (C) take effect; or

"(II) the date that is 270 days after the date of enactment of this subparagraph.

"(C) MAINTENANCE OF TOXIC AIR POLLUTANT EMISSION REDUCTIONS.—

"(i) IN GENERAL.—As soon as practicable after the date of enactment of this subparagraph, the Administrator shall—

"(I) promulgate regulations consistent with subparagraph (A) and paragraph (3)(B)(ii) to ensure that reductions of toxic air pollutant emissions achieved under the reformulated gasoline program under this section before the date of enactment of this subparagraph are maintained in States for which the Governor waives the oxygenate requirement under subparagraph (B)(i); or

"(II) determine that the requirement described in clause (iv)—

''(aa) is consistent with the bases for performance standards described in clause (ii); and

''(bb) shall be deemed to be the performance standards under clause (ii) and shall be applied in accordance with clause (iii).

''(ii) PADD PERFORMANCE STANDARDS.—The Administrator, in regulations promulgated under clause (i)(I), shall establish annual average performance standards for each Petroleum Administration for Defense District (referred to in this subparagraph as a ''PADD'') based on—

''(I) the average of the annual aggregate reductions in emissions of toxic air pollutants achieved under the reformulated gasoline program in each PADD during calendar years 1999 and 2000, determined on the basis of the 1999 and 2000 Reformulated Gasoline Survey Data, as collected by the Administrator; and

''(II) such other information as the Administrator determines to be appropriate.

''(iii) APPLICABILITY.—

''(I) IN GENERAL.—The performance standards under this subparagraph shall be applied on an annual average importer or refinery-by-refinery basis to reformulated gasoline that is sold or introduced into commerce in a State for which the Governor waives the oxygenate requirement under subparagraph (B)(i).

''(II) MORE STRINGENT REQUIREMENTS.—The performance standards under this subparagraph shall not apply to the extent that any requirement under section 202(l) is more stringent than the performance standards.

''(III) STATE STANDARDS.—The performance standards under this subparagraph shall not apply in any State that has received a waiver under section 209(b).

"(IV) CREDIT PROGRAM.—The Administrator shall provide for the granting of credits for exceeding the performance standards under this subparagraph in the same manner as provided in paragraph (7).

"(iv) STATUTORY PERFORMANCE STANDARDS.—

"(I) IN GENERAL.—Subject to subclause (IV), if the regulations under clause (i)(I) have not been promulgated by the date that is 270 days after the date of enactment of this subparagraph, the requirement described in subclause (III) shall be deemed to be the performance standards under clause (ii) and shall be applied in accordance with clause (iii).

"(II) PUBLICATION IN FEDERAL REGISTER.—Not later than 30 days after the date of enactment of this subparagraph, the Administrator shall publish in the Federal Register, for each PADD, the percentage equal to the average of the annual aggregate

reductions in the PADD described in clause (ii)(I).

"(III) TOXIC AIR POLLUTANT EMISSIONS.—The annual aggregate emissions of toxic air pollutants from baseline vehicles when using reformulated gasoline in each PADD shall be not greater than—

"(aa) the aggregate emissions of toxic air pollutants from baseline vehicles when using baseline gasoline in the PADD; reduced by

"(bb) the quantity obtained by multiplying the aggregate emissions described in item (aa) for the PADD by the percentage published under subclause (II) for the PADD.

"(IV) SUBSEQUENT REGULATIONS.—Through promulgation of regulations under clause (i)(I), the Administrator may modify the performance standards established under subclause (I) to require each PADD

to achieve a greater percentage reduction than the percentage published under subclause (II) for the PADD.''.

SEC. 825. PUBLIC HEALTH AND ENVIRONMENTAL IMPACTS OF FUELS AND FUEL ADDITIVES.

Section 211(b) of the Clean Air Act (42 U.S.C. 7545(b)) is amended—

(1) in paragraph (2)—

(A) by striking ''may also'' and inserting ''shall, on a regular basis,''; and

(B) by striking subparagraph (A) and inserting the following:

''(A) to conduct tests to determine potential public health and environmental effects of the fuel or additive (including carcinogenic, teratogenic, or mutagenic effects); and''; and

(2) by adding at the end the following:

''(4) ETHYL TERTIARY BUTYL ETHER.—

''(A) IN GENERAL.—Not later than 2 years after the date of enactment of this paragraph, the Administrator shall—

''(i) conduct a study on the effects on public health, air quality, and water resources of increased use of, and the feasi-

bility of using as substitutes for methyl tertiary butyl ether in gasoline—

"(I) ethyl tertiary butyl ether; and

"(II) other ethers, as determined by the Administrator; and

"(ii) submit to the Committee on Energy and Commerce of the House of Representatives and the Committee on Environment and Public Works of the Senate a report describing the results of the study.

"(B) CONTRACTS FOR STUDY.—In carrying out this paragraph, the Administrator may enter into 1 or more contracts with nongovernmental entities.".

SEC. 826. ANALYSES OF MOTOR VEHICLE FUEL CHANGES.

Section 211 of the Clean Air Act (42 U.S.C. 7545) is amended—

(1) by redesignating subsection (o) as subsection (p); and

(2) by inserting after subsection (n) the following:

"(o) ANALYSES OF MOTOR VEHICLE FUEL CHANGES AND EMISSIONS MODEL.—

"(1) ANTI-BACKSLIDING ANALYSIS.—

''(A) DRAFT ANALYSIS.—Not later than 4 years after the date of enactment of this subsection, the Administrator shall publish for public comment a draft analysis of the changes in emissions of air pollutants and air quality due to the use of motor vehicle fuel and fuel additives resulting from implementation of the amendments made by the Federal Reformulated Fuels Act of 2002.

''(B) FINAL ANALYSIS.—After providing a reasonable opportunity for comment but not later than 5 years after the date of enactment of this subsection, the Administrator shall publish the analysis in final form.

''(2) EMISSIONS MODEL.—For the purposes of this subsection, as soon as the necessary data are available, the Administrator shall develop and finalize an emissions model that reasonably reflects the effects of fuel characteristics or components on emissions from vehicles in the motor vehicle fleet during calendar year 2005.''.

SEC. 827. ADDITIONAL OPT-IN AREAS UNDER REFORMULATED GASOLINE PROGRAM.

Section 211(k)(6) of the Clean Air Act (42 U.S.C. 7545(k)(6)) is amended—

(1) by striking ''(6) OPT-IN AREAS.—(A) Upon'' and inserting the following:

''(6) OPT-IN AREAS.—

''(A) CLASSIFIED AREAS.—

''(i) IN GENERAL.—Upon'';

(2) in subparagraph (B), by striking ''(B) If'' and inserting the following:

''(ii) EFFECT OF INSUFFICIENT DOMESTIC CAPACITY TO PRODUCE REFORMULATED GASOLINE.—If'';

(3) in subparagraph (A)(ii) (as so redesignated)—

(A) in the first sentence, by striking ''subparagraph (A)'' and inserting ''clause (i)''; and

(B) in the second sentence, by striking ''this paragraph'' and inserting ''this subparagraph''; and

(4) by adding at the end the following:

''(B) NONCLASSIFIED AREAS.—

''(i) IN GENERAL.—In accordance with section 110, a State may submit to the Administrator, and the Administrator may approve, a State implementation plan revision that provides for application of the prohibition specified in paragraph (5) in

any portion of the State that is not a covered area or an area referred to in subparagraph (A)(i).

''(ii) PERIOD OF EFFECTIVENESS.—Under clause (i), the State implementation plan shall establish a period of effectiveness for applying the prohibition specified in paragraph (5) to a portion of a State that—

''(I) commences not later than 1 year after the date of approval by the Administrator of the State implementation plan; and

''(II) ends not earlier than 4 years after the date of commencement under subclause (I).''.

SEC. 828. MTBE MERCHANT PRODUCER CONVERSION ASSISTANCE.

Section 211(c) of the Clean Air Act (42 U.S.C. 7545(c)) (as amended by section 823(a)(3)) is amended by adding at the end the following:

''(6) MTBE MERCHANT PRODUCER CONVERSION ASSISTANCE.—

''(A) IN GENERAL.—The Administrator may make grants to merchant producers of

methyl tertiary butyl ether in the United States to assist the producers in the conversion of eligible production facilities described in subparagraph (B) to the production of other fuel additives that—

"(i) will be consumed in nonattainment areas;

"(ii) will assist the nonattainment areas in achieving attainment with a national primary ambient air quality standard;

"(iii) will not degrade air quality or surface or ground water quality or resources; and

"(iv) have been registered and tested in accordance with the requirements of this section.

"(B) ELIGIBLE PRODUCTION FACILITIES.—A production facility shall be eligible to receive a grant under this paragraph if the production facility—

"(i) is located in the United States; and

''(ii) produced methyl tertiary butyl ether for consumption in nonattainment areas during the period—

''(I) beginning on the date of enactment of this paragraph; and

''(II) ending on the effective date of the ban on the use of methyl tertiary butyl ether under paragraph (5).

''(C) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this paragraph $250,000,000 for each of fiscal years 2002 through 2004.''.

TITLE IX—ENERGY EFFICIENCY AND ASSISTANCE TO LOW INCOME CONSUMERS

Subtitle A—Low Income Assistance and State Energy Programs

SEC. 901. INCREASED FUNDING FOR LIHEAP, WEATHERIZATION ASSISTANCE, AND STATE ENERGY GRANTS.

(a) LIHEAP.—(1) Section 2602(b) of the Low-Income Home Energy Assistance Act of 1981 (42 U.S.C. 8621(b)) is amended by striking the first sentence and inserting the following: ''There are authorized to be appropriated to carry out the provisions of this title (other than

section 2607A), $3,400,000,000 for each of fiscal years 2003 through 2005.''.

(2) Section 2602(e) of the Low-Income Home Energy Assistance Act of 1981 (42 U.S.C. 8621(e) is amended by striking ''$600,000,000'' and inserting ''$1,000,000,000''.

(3) Section 2609A(a) of the Low-Income Energy Assistance Act of 1981 (42 U.S.C. 8628a(a)) is amended by striking ''not more than $300,000'' and inserting: ''not more than $750,000''.

(b) WEATHERIZATION ASSISTANCE.—Section 422 of the Energy Conservation and Production Act (42 U.S.C. 6872) is amended by striking ''for fiscal years 1999 through 2003 such sums as may be necessary.'' and inserting: ''$325,000,000 for fiscal year 2003, $400,000,000 for fiscal year 2004, and $500,000,000 for fiscal year 2005.''.

SEC. 902. STATE ENERGY PROGRAMS.

(a) STATE ENERGY CONSERVATION PLANS.—Section 362 of the Energy Policy and Conservation Act (42 U.S.C. 6322)) is amended by adding at the end the following:

''(g) The Secretary shall, at least once every three years, invite the Governor of each State to review and, if necessary, revise the energy conservation plan of the State submitted under subsection (b) or (e). Such reviews

should consider the energy conservation plans of other States within the region, and identify opportunities and actions that may be carried out in pursuit of common energy conservation goals.''.

(b) STATE ENERGY CONSERVATION GOALS.—Section 364 of the Energy Policy and Conservation Act (42 U.S.C. 6324) is amended to read as follows:

''SEC. 364. Each State energy conservation plan with respect to which assistance is made available under this part on or after the date of enactment of the Energy Policy Act of 2002 shall contain a goal, consisting of an improvement of 25 percent or more in the efficiency of use of energy in the State concerned in calendar year 2010 as compared to calendar year 1990, and may contain interim goals.''.

(c) STATE ENERGY CONSERVATION GRANTS.—Section 365(f) of the Energy Policy and Conservation Act (42 U.S.C. 6325(f)) is amended by striking ''for fiscal years 1999 through 2003 such sums as may be necessary.'' and inserting: ''$100,000,000 for each of fiscal years 2003 and 2004; $125,000,000 for fiscal year 2005; and such sums as may be necessary for each fiscal year thereafter.''.

SEC. 903. ENERGY EFFICIENT SCHOOLS.

(a) ESTABLISHMENT.—There is established in the Department of Energy the High Performance Schools Program (in this section referred to as the ''Program'').

(b) GRANTS.—The Secretary of Energy may make grants to a State energy office—

(1) to assist school districts in the State to improve the energy efficiency of school buildings;

(2) to administer the Program; and

(3) to promote participation in the Program.

(c) GRANTS TO ASSIST SCHOOL DISTRICTS.—The Secretary shall condition grants under subsection (b)(1) on the State energy office using the grants to assist school districts that have demonstrated—

(1) a need for the grants to build additional school buildings to meet increasing elementary or secondary enrollments or to renovate existing school buildings; and

(2) a commitment to use the grant funds to develop high performance school buildings in accordance with a plan that the State energy office, in consultation with the State educational agency, has determined is feasible and appropriate to achieve the purposes for which the grant is made.

(d) GRANTS FOR ADMINISTRATION.—Grants under subsection (b)(2) shall be used to—

(1) evaluate compliance by school districts with requirements of this section;

(2) distribute information and materials to clearly define and promote the development of high performance school buildings for both new and existing facilities;

(3) organize and conduct programs for school board members, school personnel, architects, engineers, and others to advance the concepts of high performance school buildings;

(4) obtain technical services and assistance in planning and designing high performance school buildings; or

(5) collect and monitor data and information pertaining to the high performance school building projects.

(e) GRANTS TO PROMOTE PARTICIPATION.—Grants under subsection (b)(3) shall be used for promotional and marketing activities, including facilitating private and public financing, promoting the use of energy savings performance contracts, working with school administrations, students, and communities, and coordinating public benefit programs.

(f) SUPPLEMENTING GRANT FUNDS.—The State energy office shall encourage qualifying school districts to

supplement funds awarded pursuant to this section with funds from other sources in the implementation of their plans.

(g) ALLOCATIONS.—Except as provided in subsection (h), funds appropriated to carry out this section shall be allocated as follows:

(1) 70 percent shall be used to make grants under subsection (b)(1);

(2) 15 percent shall be used to make grants under subsection (b)(2); and

(3) 15 percent shall be used to make grants under subsection (b)(3).

(h) OTHER FUNDS.—The Secretary of Energy may retain an amount, not to exceed $300,000 per year, to assist State energy offices in coordinating and implementing the Program. Such funds may be used to develop reference materials to further define the principles and criteria to achieve high performance school buildings.

(i) AUTHORIZATION OF APPROPRIATIONS.—For grants under subsection (b) there are authorized to be appropriated—

(1) $200,000,000 for fiscal year 2003;

(2) $210,000,000 for fiscal year 2004;

(3) $220,000,000 for fiscal year 2005;

(4) $230,000,000 for fiscal year 2006; and

(5) such sums as may be necessary for fiscal year 2007 and each fiscal year thereafter through fiscal year 2012.

(j) DEFINITIONS.—For purposes of this section:

(1) HIGH PERFORMANCE SCHOOL BUILDING.—The term ''high performance school building'' means a school building that, in its design, construction, operation, and maintenance—

(A) maximizes use of renewable energy and energy-efficient technologies and systems;

(B) is cost-effective on a life-cycle basis;

(C) uses affordable, environmentally preferable, and durable materials;

(D) enhances indoor environmental quality;

(E) protects and conserves water; and

(F) optimizes site potential.

(2) RENEWABLE ENERGY.—The term ''renewable energy'' means energy produced by solar, wind, biomass, ocean, geothermal, or hydroelectric power.

(3) SCHOOL.—The term ''school'' means—

(A) an ''elementary school'' as that term is defined in section 14101(14) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 8801(14)),

(B) a ''secondary school'' as that term is defined in section 14101(25) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 8801(25)), or

(C) an elementary or secondary Indian school funded by the Bureau of Indian Affairs.

(4) STATE EDUCATIONAL AGENCY.—The term ''State educational agency'' has the same meaning given such term in section 14101(28) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 8801(28)).

(5) STATE ENERGY OFFICE.—The term ''State energy office'' means the State agency responsible for developing State energy conservation plans under section 362 of the Energy Policy and Conservation Act (42 U.S.C. 6322), or, if no such agency exists, a State agency designated by the Governor of the State.

SEC. 904. LOW INCOME COMMUNITY ENERGY EFFICIENCY PILOT PROGRAM.

(a) GRANTS.—The Secretary of Energy is authorized to make grants to private, non-profit community development organizations to improve energy efficiency, identify and develop alternative renewable and distributed energy

supplies, and increase energy conservation in low income rural and urban communities.

(b) PURPOSE OF GRANTS.—The Secretary may make grants on a competitive basis to a community development organization for—

(1) investments that develop alternative renewable and distributed energy supplies;

(2) energy efficiency projects and energy conservation programs;

(3) studies and other activities that improve energy efficiency in low income rural and urban communities;

(4) planning and development assistance for increasing the energy efficiency of buildings and facilities; and

(5) technical and financial assistance to local government and private entities on developing new renewable and distributed sources of power or combined heat and power generation.

(c) AUTHORIZATION OF APPROPRIATIONS.—For the purposes of this section there are authorized to be appropriated to the Secretary of Energy an amount not to exceed $10 million for fiscal year 2003 and each fiscal year thereafter through fiscal year 2005.

Subtitle B—Federal Energy Efficiency

SEC. 911. ENERGY MANAGEMENT REQUIREMENTS.

(a) ENERGY REDUCTION GOALS.—Section 543(a)(1) of the National Energy Conservation Policy Act (42 U.S.C. 8253(a)(1)) is amended to read as follows:

''(1) Subject to paragraph (2), each agency shall apply energy conservation measures to, and shall improve the design for the construction of, the Federal buildings of the agency (including each industrial or laboratory facility) so that the energy consumption per gross square foot of the Federal buildings of the agency in calendar years 2002 through 2011 is reduced, as compared with the energy consumption per gross square foot of the Federal buildings of the agency in calendar year 2000, by the percentage specified in the following table:

Calendar Year	Percentage reduction
2002	2
2003	4
2004	6
2005	8
2006	10
2007	12
2008	14
2009	16
2010	18
2011	20

(b) REVIEW AND REVISION OF ENERGY PERFORMANCE REQUIREMENT.—Section 543(a) of the National

Energy Conservation Policy Act (42 U.S.C. 8253(a)) is further amended by adding at the end the following:

''(3) Not later than December 31, 2010, the Secretary shall review the results of the implementation of the energy performance requirement established under paragraph (1) and submit to Congress recommendations concerning energy performance requirements for calendar years 2012 through 2021.''.

(c) EXCLUSIONS.—Section 543(c)(1) of the National Energy Conservation Policy Act (42 U.S.C. 8253(c)(1)) is amended to read as follows:

''(1)(A) An agency may exclude, from the energy performance requirement for a calendar year established under subsection (a) and the energy management requirement established under subsection (b), any Federal building or collection of Federal buildings, if the head of the agency finds that—

''(i) compliance with those requirements would be impracticable;

''(ii) the agency has completed and submitted all federally required energy management reports;

''(iii) the agency has achieved compliance with the energy efficiency requirements of this

Act, the Energy Policy Act of 1992, Executives Orders, and other federal law; and

''(iv) the agency has implemented all practicable, life-cycle cost-effective projects with respect to the Federal building or collection of Federal buildings to be excluded.

''(B) A finding of impracticability under subparagraph (A)(i) shall be based on—

''(i) the energy intensiveness of activities carried out in the Federal building or collection of Federal buildings; or

''(ii) the fact that the Federal building or collection of Federal buildings is used in the performance of a national security function.''.

(d) REVIEW BY SECRETARY.—Section 543(c)(2) of the National Energy Conservation Policy Act (42 U.S.C. 8253(c)(2)) is amended—

(1) by striking ''impracticability standards'' and inserting ''standards for exclusion''; and

(2) by striking ''a finding of impracticability'' and inserting ''the exclusion''.

(e) CRITERIA.—Section 543(c) of the National Energy Conservation Policy Act (42 U.S.C. 8253(c)) is further amended by adding at the end the following:

''(3) Not later than 180 days after the date of enactment of this paragraph, the Secretary shall issue guidelines that establish criteria for exclusions under paragraph (1).''.

(f) REPORTS.—Section 548(b) of the National Energy Conservation Policy Act (42 U.S.C. 8258(b)) is amended—

(1) in the subsection heading, by inserting ''THE PRESIDENT AND'' before ''CONGRESS''; and

(2) by inserting ''President and'' before ''Congress''.

(g) CONFORMING AMENDMENT.—Section 550(d) of the National Energy Conservation Policy Act (42 U.S.C. 8258b(d)) is amended in the second sentence by striking ''the 20 percent reduction goal established under section 543(a) of the National Energy Conservation Policy Act (42 U.S.C. 8253(a)).'' and inserting ''each of the energy reduction goals established under section 543(a).''.

SEC. 912. ENERGY USE MEASUREMENT AND ACCOUNTABILITY.

Section 543 of the National Energy Conservation Policy Act (42 U.S.C. 8253) is further amended by adding at the end the following:

''(e) METERING OF ENERGY USE.—

''(1) DEADLINE.—By October 1, 2004, all Federal buildings shall be metered or submetered in accordance with guidelines established by the Secretary under paragraph (2).

''(2) GUIDELINES.—

''(A) IN GENERAL.—Not later than 180 days after the date of enactment of this subsection, the Secretary, in consultation with the Department of Defense, the General Service Administration and representatives from the metering industry, energy services industry, national laboratories, universities and federal facility energy managers, shall establish guidelines for agencies to carry out paragraph (1).

''(B) REQUIREMENTS FOR GUIDELINES.—The guidelines shall—

''(i) take into consideration—

''(I) the cost of metering and submetering and the reduced cost of operation and maintenance expected to result from metering and submetering;

''(II) the extent to which metering and submetering are expected to result in increased potential for en-

ergy management, increased potential for energy savings and energy efficiency improvement, and cost and energy savings due to utility contract aggregation; and

"(III) the measurement and verification protocols of the Department of Energy;

"(ii) include recommendations concerning the amount of funds and the number of trained personnel necessary to gather and use the metering information to track and reduce energy use;

"(iii) establish 1 or more dates, not later than 1 year after the date of issuance of the guidelines, on which the requirement specified in paragraph (1) shall take effect; and

"(iv) establish exclusions from the requirement specified in paragraph (1) based on the de minimus quantity of energy use of a Federal building, industrial process, or structure.

"(f) USE OF ENERGY CONSUMPTION DATA IN FEDERAL BUILDINGS.—

''(1) IN GENERAL.—Beginning not later than January 1, 2003, each agency shall use, to the maximum extent practicable, for the purposes of efficient use of energy and reduction in the cost of electricity used in the Federal buildings of the agency, interval consumption data that measure on a real-time or daily basis consumption of electricity in the Federal buildings of the agency.

''(2) PLAN.—As soon as practicable after the date of enactment of this subsection, in a report submitted by the agency under section 548(a), each agency shall submit to the Secretary a plan describing how the agency will implement the requirement of paragraph (1), including how the agency will designate personnel primarily responsible for achieving the requirement.''.

SEC. 913. FEDERAL BUILDING PERFORMANCE STANDARDS.

(a) REVISED STANDARDS.—Section 305(a) of the Energy Conservation and Production Act (42 U.S.C. 6834(a)) is amended—

(1) in paragraph (2)(A), by striking ''CABO Model Energy Code, 1992'' and inserting ''the 2000 International Energy Conservation Code''; and

(2) by adding at the end the following:

''(3) REVISED FEDERAL BUILDING ENERGY EFFICIENCY PERFORMANCE STANDARDS.—

''(A) IN GENERAL.—Not later than 1 year after the date of enactment of this paragraph, the Secretary of Energy shall establish, by rule, revised Federal building energy efficiency performance standards that require that—

''(i) new commercial buildings and multifamily high rise residential buildings be constructed so as to exceed, if cost-effective, the applicable Energy Star criteria or the most recent ASHRAE Standard 90.1, by not less than 10 percent;

''(ii) new residential buildings (other than those described in clause (i)) be constructed so as to exceed, if cost-effective, the level of energy efficiency required under the applicable Energy Star criteria or the most recent version of the 2000 International Energy Conservation Code by not less than 10 percent; and

''(iii) sustainable design principles are applied to the siting, design, and construction of all new and replacement buildings.

"(B) ADDITIONAL REVISIONS.—Not later than 1 year after the date of approval of amendments to ASHRAE Standard 90.1 or the 2000 International Energy Conservation Code, the Secretary of Energy shall determine, based on the cost-effectiveness of the requirements under the amendments, whether the revised standards established under this paragraph should be updated to reflect the amendments.

"(C) STATEMENT ON COMPLIANCE OF NEW BUILDINGS.—In the budget request of the Federal agency for each fiscal year and each report submitted by the Federal agency under section 548(a) of the National Energy Conservation Policy Act (42 U.S.C. 8258(a)), the head of each Federal agency shall include—

"(i) a list of all new Federal buildings of the Federal agency; and

"(ii) a statement concerning whether the Federal buildings meet or exceed the revised standards established under this paragraph, including a metering and commissioning component that is in compliance with the measurement and

verification protocols of the Department of Energy.

''(D) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as are necessary to carry out this paragraph and to implement the revised standards established under this paragraph.''.

(b) ENERGY LABELING PROGRAM.—Section 305(a) of the Energy Conservation and Production Act (42 U.S.C. 6834(a)) is further amended by adding at the end the following:

''(e) ENERGY LABELING PROGRAM.—The Secretary of Energy, in cooperation with the Administrator of the Environmental Protection Agency, shall develop an energy labeling program for new Federal buildings that exceed the revised standards established under subsection (a)(3) by 15 percent or more.''.

SEC. 914. PROCUREMENT OF ENERGY EFFICIENT PRODUCTS.

(a) REQUIREMENTS.—Part 3 of title V of the National Energy Conservation Policy Act is amended by adding at the end the following:

''SEC. 552. FEDERAL PROCUREMENT OF ENERGY EFFICIENT PRODUCTS.

''(a) DEFINITIONS.—In this section:

''(1) ENERGY STAR PRODUCT.—The term 'Energy Star product' means a product that is rated for energy efficiency under an Energy Star program.

''(2) ENERGY STAR PROGRAM.—The term 'Energy Star program' means the program established by section 324A of the Energy Policy and Conservation Act.

''(3) EXECUTIVE AGENCY.—The term 'executive agency' has the meaning given the term in section 4 of the Office of Federal Procurement Policy Act (41 U.S.C. 403).

''(4) FEMP DESIGNATED PRODUCT.—The term 'FEMP designated product' means a product that is designated under the Federal Energy Management Program of the Department of Energy as being among the highest 25 percent of equivalent products for energy efficiency.

''(b) PROCUREMENT OF ENERGY EFFICIENT PRODUCTS.—

''(1) REQUIREMENT.—To meet the requirements of an executive agency for an energy consuming product, the head of the executive agency shall, except as provided in paragraph (2), procure—

''(A) an Energy Star product; or

''(B) a FEMP designated product.

''(2) EXCEPTIONS.—The head of an executive agency is not required to procure an Energy Star product or FEMP designated product under paragraph (1) if—

''(A) an Energy Star product or FEMP designated product is not cost effective over the life cycle of the product; or

''(B) no Energy Star product or FEMP designated product is reasonably available that meets the requirements of the executive agency.

''(3) PROCUREMENT PLANNING.—The head of an executive agency shall incorporate into the specifications for all procurements involving energy consuming products and systems, and into the factors for the evaluation of offers received for the procurement, criteria for energy efficiency that are consistent with the criteria used for rating Energy Star products and for rating FEMP designated products.

''(c) LISTING OF ENERGY EFFICIENT PRODUCTS IN FEDERAL CATALOGS.—Energy Star and FEMP designated products shall be clearly identified and prominently displayed in any inventory or listing of products by the General Services Administration or the Defense Logistics Agency.

(b) CONFORMING AMENDMENT.—The table of contents in section 1(b) of the National Energy Conservation Policy Act (42 U.S.C. 8201 note) is amended by inserting after the item relating to section 551 the following:

"Sec. 552. Federal Government procurement of energy efficient products."

(c) REGULATIONS.—Not later than 180 days after the effective date specified in subsection (f), the Secretary of Energy shall issue guidelines to carry out section 552 of the National Energy Conservation Policy Act (as added by subsection (a)).

(d) DESIGNATION OF ENERGY STAR PRODUCTS.—The Administrator of the Environmental Protection Agency and the Secretary of Energy shall expedite the process of designating products as Energy Star products (as defined in section 552 of the National Energy Conservation Policy Act (as added by subsection (a)).

(e) DESIGNATION OF ELECTRIC MOTORS.—In the case of electric motors of 1 to 500 horsepower, agencies shall select only premium efficient motors that meet a standard designated by the Secretary. The Secretary shall designate such a standard within 120 days of the enactment of this paragraph, after considering the recommendations of associated electric motor manufacturers and energy efficiency groups.

(f) EFFECTIVE DATE.—Subsection (a) and the amendment made by that subsection take effect on the

date that is 180 days after the date of enactment of this Act.

SEC. 915. COST SAVINGS FROM REPLACEMENT FACILITIES.

Section 801(a) of the National Energy Conservation Policy Act (42 U.S.C. 8287(a)) is amended by adding at the end the following:

''(3)(A) In the case of an energy savings contract or energy savings performance contract providing for energy savings through the construction and operation of one or more buildings or facilities to replace one or more existing buildings or facilities, benefits ancillary to the purpose of such contract under paragraph (1) may include savings resulting from reduced costs of operation and maintenance at such replacement buildings or facilities when compared with costs of operation and maintenance at the buildings or facilities being replaced.

''(B) Notwithstanding paragraph (2)(B), aggregate annual payments by an agency under an energy savings contract or energy savings performance contract referred to in subparagraph (A) may take into account (through the procedures developed pursuant to this section) savings resulting from reduced costs of operation and maintenance as described in subparagraph (A).''.

SEC. 916. REPEAL OF ENERGY SAVINGS PERFORMANCE CONTRACT SUNSET.

Section 801(c) of the National Energy Conservation Policy Act (42 U.S.C. 8287(c)) is repealed.

SEC. 917. ENERGY SAVINGS PERFORMANCE CONTRACT DEFINITIONS.

(a) ENERGY SAVINGS.—Section 804(2) of the National Energy Conservation Policy Act (42 U.S.C. 8287c(2)) is amended to read as follows:

''(2) The term 'energy savings' means a reduction in the cost of energy or water, from a base cost established through a methodology set forth in the contract, used in either—

''(A) an existing federally owned building or buildings or other federally owned facilities as a result of—

''(i) the lease or purchase of operating equipment, improvements, altered operation and maintenance, or technical services;

''(ii) the increased efficient use of existing energy sources by cogeneration or heat recovery, excluding any cogeneration process for other than a federally owned building or buildings or other federally owned facilities; or

"(iii) the increased efficient use of existing water sources; or

"(B) a replacement facility under section 801(a)(3).".

(b) ENERGY SAVINGS CONTRACT.—Section 804(3) of the National Energy Conservation Policy Act (42 U.S.C. 8287c(3)) is amended to read as follows:

"(3) The terms 'energy savings contract' and 'energy savings performance contract' mean a contract which provides for—

"(A) the performance of services for the design, acquisition, installation, testing, operation, and, where appropriate, maintenance and repair, of an identified energy or water conservation measure or series of measures at one or more locations; or

"(B) energy savings through the construction and operation of one or more buildings or facilities to replace one or more existing buildings or facilities.".

(c) ENERGY OR WATER CONSERVATION MEASURE.—Section 804(4) of the National Energy Conservation Policy Act (42 U.S.C. 8287c(4)) is amended to read as follows:

''(4) The term 'energy or water conservation measure' means—

''(A) an energy conservation measure, as defined in section 551(4) (42 U.S.C. 8259(4)); or

''(B) a water conservation measure that improves water efficiency, is life cycle cost effective, and involves water conservation, water recycling or reuse, more efficient treatment of wastewater or stormwater, improvements in operation or maintenance efficiencies, retrofit activities or other related activities, not at a Federal hydroelectric facility.''.

SEC. 918. REVIEW OF ENERGY SAVINGS PERFORMANCE CONTRACT PROGRAM.

Within 180 days after the date of the enactment of this Act, the Secretary of Energy shall complete a review of the Energy Savings Performance Contract program to identify statutory, regulatory, and administrative obstacles that prevent Federal agencies from fully utilizing the program. In addition, this review shall identify all areas for increasing program flexibility and effectiveness, including audit and measurement verification requirements, accounting for energy use in determining savings, contracting requirements, and energy efficiency services cov-

ered. The Secretary shall report these findings to the Committee on Energy and Commerce of the House of Representatives and the Committee on Energy and Natural Resources of the Senate, and shall implement identified administrative and regulatory changes to increase program flexibility and effectiveness to the extent that such changes are consistent with statutory authority.

SEC. 919. FEDERAL ENERGY BANK.

Part 3 of title V of the National Energy Conservation Policy Act is amended by adding at the end the following:

"SEC. 553. FEDERAL ENERGY BANK.

''(a) DEFINITIONS.—In this section:

''(1) BANK.—The term 'Bank' means the Federal Energy Bank established by subsection (b).

''(2) ENERGY OR WATER EFFICIENCY PROJECT.—The term 'energy or water efficiency project' means a project that assists a Federal agency in meeting or exceeding the energy or water efficiency requirements of—

''(A) this part;

''(B) title VIII;

''(C) subtitle F of title I of the Energy Policy Act of 1992 (42 U.S.C. 8262 et seq.); or

''(D) any applicable Executive order, including Executive Order No. 13123.

''(3) FEDERAL AGENCY.—The term 'Federal agency' means—

''(A) an Executive agency (as defined in section 105 of title 5, United States Code);

''(B) the United States Postal Service;

''(C) Congress and any other entity in the legislative branch; and

''(D) a Federal court and any other entity in the judicial branch.

''(b) ESTABLISHMENT OF BANK.—

''(1) IN GENERAL.—There is established in the Treasury of the United States a fund to be known as the 'Federal Energy Bank', consisting of—

''(A) such amounts as are deposited in the Bank under paragraph (2);

''(B) such amounts as are repaid to the Bank under subsection (c)(2)(D); and

''(C) any interest earned on investment of amounts in the Bank under paragraph (3).

''(2) DEPOSITS IN BANK.—

''(A) IN GENERAL.—Subject to the availability of appropriations and to subparagraph (B), the Secretary of the Treasury shall deposit in the Bank an amount equal to $250,000,000

in fiscal year 2003 and in each fiscal year thereafter.

''(B) MAXIMUM AMOUNT IN BANK.—Deposits under subparagraph (A) shall cease beginning with the fiscal year following the fiscal year in which the amounts in the Bank (including amounts on loan from the Bank) become equal to or exceed $1,000,000,000.

''(3) INVESTMENT OF AMOUNTS.—The Secretary of the Treasury shall invest such portion of the Bank as is not, in the judgment of the Secretary, required to meet current withdrawals. Investments may be made only in interest-bearing obligations of the United States.

''(c) LOANS FROM THE BANK.—

''(1) IN GENERAL.—The Secretary of the Treasury shall transfer from the Bank to the Secretary such amounts as are appropriated to carry out the loan program under paragraph (2).

''(2) LOAN PROGRAM.—

''(A) ESTABLISHMENT.—

''(i) IN GENERAL.—In accordance with subsection (d), the Secretary, in consultation with the Secretary of Defense, the Administrator of General Services, and

the Director of the Office of Management and Budget, shall establish a program to make loans of amounts in the Bank to any Federal agency that submits an application satisfactory to the Secretary in order to pay the costs of a project described in subparagraph (C).

''(ii) COMMENCEMENT OF OPERATIONS.—The Secretary may begin—

''(I) accepting applications for loans from the Bank in fiscal year 2002; and

''(II) making loans from the Bank in fiscal year 2003.

''(B) ENERGY SAVINGS PERFORMANCE CONTRACTING FUNDING.—To the extent practicable, an agency shall not submit a project for which energy performance contracting funding is available and is acceptable to the Federal agency under title VIII.

''(C) PURPOSES OF LOAN.—

''(i) IN GENERAL.—A loan from the Bank may be used to pay—

''(I) the costs of an energy or water efficiency project, or a renew-

able or alternative energy project, for a new or existing Federal building (including selection and design of the project);

''(II) the costs of an energy metering plan and metering equipment installed pursuant to section 543(e) or for the purpose of verification of the energy savings under an energy savings performance contract under title VIII; or

''(III) at the time of contracting, the costs of cofunding of an energy savings performance contract (including a utility energy service agreement) in order to shorten the payback period of the project that is the subject of the energy savings performance contract.

''(ii) LIMITATION.—A Federal agency may use not more than 10 percent of the amount of a loan under subclause (I) or (II) of clause (i) to pay the costs of administration and proposal development (including data collection and energy surveys).

''(iii) RENEWABLE AND ALTERNATIVE ENERGY PROJECTS.—Not more than 25 percent of the amount on loan from the Bank at any time may be loaned for renewable energy and alternative energy projects (as defined by the Secretary in accordance with applicable law (including Executive Orders)).

''(D) REPAYMENTS.—

''(i) IN GENERAL.—Subject to clauses (ii) through (iv), a Federal agency shall repay to the Bank the principal amount of a loan plus interest at a rate determined by the President, in consultation with the Secretary and the Secretary of the Treasury.

''(ii) WAIVER OR REDUCTION OF INTEREST.—The Secretary may waive or reduce the rate of interest required to be paid under clause (i) if the Secretary determines that payment of interest by a Federal agency at the rate determined under that clause is not required to fund the operations of the Bank.

''(iii) DETERMINATION OF INTEREST RATE.—The interest rate determined under clause (i) shall be at a rate that is sufficient to ensure that, beginning not later than October 1, 2007, interest payments will be sufficient to fully fund the operations of the Bank.

''(iv) INSUFFICIENCY OF APPROPRIATIONS.—

''(I) REQUEST FOR APPROPRIATIONS.—As part of the budget request of the Federal agency for each fiscal year, the head of each Federal agency shall submit to the President a request for such amounts as are necessary to make such repayments as are expected to become due in the fiscal year under this subparagraph.

''(II) SUSPENSION OF REPAYMENT REQUIREMENT.—If, for any fiscal year, sufficient appropriations are not made available to a Federal agency to make repayments under this subparagraph, the Bank shall suspend the requirement of repayment under

this subparagraph until such appropriations are made available.

"(E) FEDERAL AGENCY ENERGY BUDGETS.—Until a loan is repaid, a Federal agency budget submitted by the President to Congress for a fiscal year shall not be reduced by the value of energy savings accrued as a result of any energy conservation measure implemented using amounts from the Bank.

"(F) NO RESCISSION OR REPROGRAMMING.—A Federal agency shall not rescind or reprogram loan amounts made available from the Bank except as permitted under guidelines issued under subparagraph (G).

"(G) GUIDELINES.—The Secretary shall issue guidelines for implementation of the loan program under this paragraph, including selection criteria, maximum loan amounts, and loan repayment terms.

"(d) SELECTION CRITERIA.—

"(1) IN GENERAL.—The Secretary shall establish criteria for the selection of projects to be awarded loans in accordance with paragraph (2).

"(2) SELECTION CRITERIA.—

"(A) IN GENERAL.—The Secretary may make loans from the Bank only for a project that—

"(i) is technically feasible;

"(ii) is determined to be cost-effective using life cycle cost methods established by the Secretary;

"(iii) includes a measurement and management component, based on the measurement and verification protocols of the Department of Energy, to—

"(I) commission energy savings for new and existing Federal facilities;

"(II) monitor and improve energy efficiency management at existing Federal facilities; and

"(III) verify the energy savings under an energy savings performance contract under title VIII;

and

"(iv)(I) in the case of renewable energy or alternative energy project, has a simple payback period of not more than 15 years; and

''(II) in the case of any other project, has a simple payback period of not more than 10 years.

''(B) PRIORITY.—In selecting projects, the Secretary shall give priority to projects that—

''(i) are a component of a comprehensive energy management project for a Federal facility; and

''(ii) are designed to significantly reduce the energy use of the Federal facility.

''(e) REPORTS AND AUDITS.—

''(1) REPORTS TO THE SECRETARY.—Not later than 1 year after the completion of installation of a project that has a cost of more than $1,000,000, and annually thereafter, a Federal agency shall submit to the Secretary a report that—

''(A) states whether the project meets or fails to meet the energy savings projections for the project; and

''(B) for each project that fails to meet the energy savings projections, states the reasons for the failure and describes proposed remedies.

''(2) AUDITS.—The Secretary may audit, or require a Federal agency that receives a loan from the Bank to audit, any project financed with amounts

from the Bank to assess the performance of the project.

''(3) REPORTS TO CONGRESS.—At the end of each fiscal year, the Secretary shall submit to Congress a report on the operations of the Bank, including a statement of—

''(A) the total receipts by the Bank;

''(B) the total amount of loans from the Bank to each Federal agency; and

''(C) the estimated cost and energy savings resulting from projects funded with loans from the Bank.

''(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to such sums as are necessary to carry out this section.''

SEC. 920. ENERGY AND WATER SAVING MEASURES IN CONGRESSIONAL BUILDINGS.

(a) IN GENERAL.—Part 3 of title V of the National Energy Conservation Policy Act is amended by adding at the end:

''SEC. 554. ENERGY AND WATER SAVINGS MEASURES IN CONGRESSIONAL BUILDINGS.

''(a) IN GENERAL.—The Architect of the Capitol—

''(1) shall develop, update, and implement a cost-effective energy conservation and management

plan (referred to in this section as the ''plan'') for all facilities administered by the Congress (referred to in this section as 'congressional buildings') to meet the energy performance requirements for Federal buildings established under section 543(a)(1).

''(2) shall submit the plan to Congress, not later than 180 days after the date of enactment of this section.

''(b) PLAN REQUIREMENTS.—The plan shall include—

''(1) a description of the life-cycle cost analysis used to determine the cost-effectiveness of proposed energy efficiency projects;

''(2) a schedule of energy surveys to ensure complete surveys of all congressional buildings every five years to determine the cost and payback period of energy and water conservation measures;

''(3) a strategy for installation of life cycle cost effective energy and water conservation measures;

''(4) the results of a study of the costs and benefits of installation of submetering in congressional buildings; and

''(5) information packages and 'how-to' guides for each Member and employing authority of Con-

gress that detail simple, cost-effective methods to save energy and taxpayer dollars in the workplace.

''(c) CONTRACTING AUTHORITY.—The Architect—

''(1) may contract with nongovernmental entities and use private sector capital to finance energy conservation projects and meet energy performance requirements; and

''(2) may use innovative contracting methods that will attract private sector funding for the installation of energy efficient and renewable energy technology, such as energy savings performance contracts described in title VIII.

''(d) CAPITOL VISITOR CENTER.—The Architect—

''(1) shall ensure that state-of-the-art energy efficiency and renewable energy technologies are used in the construction and design of the Visitor Center; and

''(2) shall include in the Visitor Center an exhibit on the energy efficiency and renewable energy measures used in congressional buildings.

''(e) ANNUAL REPORT.—The Architect shall submit to Congress annually a report on congressional energy management and conservation programs required under this section that describes in detail—

''(1) energy expenditures and savings estimates for each facility;

''(2) energy management and conservation projects; and

''(3) future priorities to ensure compliance with this section.''.

(b) REPEAL.—Section 310 of the Legislative Branch Appropriations Act, 1999 (40 U.S.C. 166i), is repealed.

Subtitle C—Industrial Efficiency and Consumer Products

SEC. 921. VOLUNTARY COMMITMENTS TO REDUCE INDUSTRIAL ENERGY INTENSITY.

(a) VOLUNTARY AGREEMENTS.—The Secretary of Energy shall enter into voluntary agreements with one or more persons in industrial sectors that consume significant amounts of primary energy per unit of physical output to reduce the energy intensity of their production activities.

(b) GOAL.—Voluntary agreements under this section shall have a goal of reducing energy intensity by not less than 2.5 percent each year from 2002 through 2012.

(c) RECOGNITION.—The Secretary of Energy, in cooperation with the Administrator of the Environmental Protection Agency and other appropriate federal agencies, shall develop mechanisms to recognize and publicize the

achievements of participants in voluntary agreements under this section.

(d) DEFINITION.—In this section, the term ''energy intensity'' means the primary energy consumed per unit of physical output in an industrial process.

(e) TECHNICAL ASSISTANCE.—An entity that enters into an agreement under this section and continues to make a good faith effort to achieve the energy efficiency goals specified in the agreement shall be eligible to receive from the Secretary a grant or technical assistance as appropriate to assist in the achievement of those goals.

(f) REPORT.—Not later than June 30, 2008 and June 30, 2012, the Secretary shall submit to Congress a report that evaluates the success of the voluntary agreements, with independent verification of a sample of the energy savings estimates provided by participating firms.

SEC. 922. AUTHORITY TO SET STANDARDS FOR COMMERCIAL PRODUCTS.

Part B of title III of the Energy Policy and Conservation Act (42 U.S.C. 6291 et seq.) is amended as follows:

(1) In the heading for such part, by inserting ''AND COMMERCIAL'' after ''CONSUMER''.

(2) In section 321(2), by inserting ''or commercial'' after ''consumer''.

(3) In paragraphs (4), (5), and (15) of section 321, by striking ''consumer'' each place it appears and inserting ''covered''.

(4) In section 322(a), by inserting ''or commercial'' after ''consumer'' the first place it appears in the material preceding paragraph (1).

(5) In section 322(b), by inserting ''or commercial'' after ''consumer'' each place it appears.

(6) In section 322 (b)(1)(B) and (b)(2)(A), by inserting ''or per-business in the case of a commercial product'' after ''per-household'' each place it appears.

(7) In section 322 (b)(2)(A), by inserting ''or businesses in the case of commercial products'' after ''households'' each place it appears.

(8) In section 322 (B)(2)(C)—

(A) by striking ''term'' and inserting ''terms''; and

(B) by inserting ''and 'business' '' after '' 'household' ''.

(9) In section 323 (b)(1) (B) by inserting ''or commercial'' after ''consumer''.

SEC. 923. ADDITIONAL DEFINITIONS.

Section 321 of the Energy Policy and Conservation Act (42 U.S.C. 6291) is amended by adding at the end the following:

''(32) The term 'battery charger' means a device that charges batteries for consumer products.

''(33) The term 'commercial refrigerator, freezer and refrigerator-freezer' means a refrigerator, freezer or refrigerator-freezer that—

''(A) is not a consumer product regulated under this Act; and

''(B) incorporates most components involved in the vapor-compression cycle and the refrigerated compartment in a single package.

''(34) The term 'external power supply' means an external power supply circuit that is used to convert household electric current into either DC current or lower-voltage AC current to operate a consumer product.

''(35) The term 'illuminated exit sign' means a sign that—

''(A) is designed to be permanently fixed in place to identify an exit; and

''(B) consists of—

"(i) an electrically powered integral light source that illuminates the legend 'EXIT' and any directional indicators; and

"(ii) provides contrast between the legend, any directional indicators, and the background.

"(36)(A) Except as provided in subsection (B), the term 'low-voltage dry-type transformer' means a transformer that—

"(i) has an input voltage of 600 volts or less;

"(ii) is air-cooled;

"(iii) does not use oil as a coolant; and

"(iv) is rated for operation at a frequency of 60 Hertz.

"(B) The term 'low-voltage dry-type transformer' does not include—

"(i) transformers with multiple voltage taps, with the highest voltage tap equaling at least 20 percent more than the lowest voltage tap;

"(ii) transformers that are not used in general purpose applications, including transformers commonly known as drive transformers, rectifier transformers, autotransformers,

Uninterruptible Power System transformers, impedance transformers, harmonic transformers, regulating transformers, sealed and nonventilating transformers, machine tool transformers, welding transformers, grounding transformers, or testing transformers; or

''(iii) any transformer excluded by the Secretary by rule because such transformer is designed for special applications and the application of standards to such transformer would not result in significant energy savings.

''(37) The term 'standby mode' means the lowest amount of electric power used by a household appliance when not performing its active functions, as defined on an individual product basis by the Secretary.

''(38) The term 'torchiere' means a portable electric lamp with a reflector bowl that directs light upward so as to give indirect illumination.

''(39) The term 'transformer' means a device consisting of 2 or more coils of insulated wire that transfers alternating current by electromagnetic induction from one coil to another to change the original voltage or current value.

''(40) The term 'unit heater' means a self-contained fan-type heater designed to be installed within the heated space, except that such term does not include a warm air furnace.''

SEC. 924. ADDITIONAL TEST PROCEDURES.

(a) EXIT SIGNS.—Section 323(b) of the Energy Policy and Conservation Act (42 U.S.C. 6293) is amended by adding at the end the following:

''(9) Test procedures for illuminated exit signs shall be the test method used under the Energy Star program of the Environmental Protection Agency for illuminated exit signs, as in effect on the date of enactment of this paragraph.

''(10) Test procedures for low voltage dry-type distribution transformers shall be based on the 'Standard Test Method for Measuring the Energy Consumption of Distribution Transformers' prescribed by the National Electrical Manufacturers Association (NEMA TP 2–1998). The Secretary may review and revise this test procedure based on future revisions to such standard test method.''

(b) ADDITIONAL CONSUMER AND COMMERCIAL PRODUCTS.—Section 323 of the Energy Policy and Conservation Act (42 U.S.C. 6293) is further amended by adding at the end the following:

''(f) ADDITIONAL CONSUMER AND COMMERCIAL PRODUCTS.—The Secretary shall within 24 months after the date of enactment of this subsection prescribe testing requirements for suspended ceiling fans, refrigerated bottled or canned beverage vending machines, commercial unit heaters, and commercial refrigerators, freezers and refrigerator-freezers. Such testing requirements shall be based on existing test procedures used in industry to the extent practical and reasonable. In the case of suspended ceiling fans, such test procedures shall include efficiency at both maximum output and at an output no more than 50 percent of the maximum output.''.

SEC. 925. ENERGY LABELING.

(a) RULEMAKING ON EFFECTIVENESS OF CONSUMER PRODUCT LABELING.—Paragraph (2) of section 324(a) of the Energy Policy and Conservation Act (42 U.S.C. 6294(a)(2)) is amended by adding at the end the following:

''(F) Not later than three months after the date of enactment of this subparagraph, the Commission shall initiate a rulemaking to consider the effectiveness of the current consumer products labeling program in assisting consumers in making purchasing decisions and improving energy efficiency and to consider

changes to the labeling rules that would improve the effectiveness of consumer product labels. Such rulemaking shall be completed within 15 months of the date of enactment of this subparagraph.''.

(b) RULEMAKING ON LABELING FOR ADDITIONAL PRODUCTS.—Section 324(a) of the Energy Policy and Conservation Act (42 U.S.C. 6294(a)) is further amended by adding at the end the following:

''(5) The Secretary shall within 6 months after the date on which energy conservation standards are prescribed by the Secretary for covered products referred to in subsections (u) and (v) of section 325, and within 18 months of enactment of this paragraph for products referred to in subsections (w) through (y) of section 325, prescribe, by rule, labeling requirements for such products. Labeling requirements adopted under this paragraph shall take effect on the same date as the standards set pursuant to sections 325(v) through (y).

SEC. 926. ENERGY STAR PROGRAM.

The Energy Policy and Conservation Act (42 U.S.C. 6201 and following) is amended by inserting after section 324 the following:

''ENERGY STAR PROGRAM.

''SEC. 324A. (a) IN GENERAL.—There is established at the Department of Energy and the Environmental Protection Agency a program to identify and promote energy-efficient products and buildings in order to reduce energy consumption, improve energy security, and reduce pollution through labeling of products and buildings that meet the highest energy efficiency standards. Responsibilities under the program shall be divided between the Department of Energy and the Environmental Protection Agency consistent with the terms of agreements between the two agencies. The Administrator and the Secretary shall—

''(1) promote Energy Star compliant technologies as the preferred technologies in the markeplace for achieving energy efficiency and to reduce pollution;

''(2) work to enhance public awareness of the Energy Star label;

''(3) preserve the integrity of the Energy Star label; and

''(4) solicit the comments of interested parties in establishing a new Energy Star product category or in revising a product category, and upon adoption of a new or revised product category provide an ex-

planation of the decision that responds to significant public comments.''.

SEC. 927. ENERGY CONSERVATION STANDARDS FOR CENTRAL AIR CONDITIONERS AND HEAT PUMPS.

Section 325(d) of the Energy Policy and Conservation Act (42 U.S.C. 6295(d)) is amended to read as follows:

''(1) The seasonal energy efficiency ratio of central air conditioners and central air conditioning heat pumps manufactured on or after January 23, 2006 shall be no less than 13.0.

''(2) The heating seasonal performance factor of central air conditioning heat pumps manufactured on or after January 23, 2006 shall be no less than 7.7.

''(3) This subsection shall not apply to a central air conditioner or heat pump that—

''(A) has a rated cooling capacity equal to or less than 30,000 Btu per hour;

''(B) has an outdoor or indoor unit having at least two overall exterior dimensions or an overall displacement that—

''(i) is substantially smaller than those of other units that are currently installed

in site-built single family homes, and of a similar cooling or heating capacity, and

''(ii) if increased would result in a significant increase in the cost of installation or would result in a significant loss in the utility of the product to the consumer; and

''(3) is of a product type that was available for purchase in the United States as of December 1, 2000.''.

SEC. 928. ENERGY CONSERVATION STANDARDS FOR ADDITIONAL CONSUMER AND COMMERCIAL PRODUCTS.

Section 325 of the Energy Policy and Conservation Act (42 U.S.C. 6295) is amended by adding at the end the following:

''(u) STANDBY MODE ELECTRIC ENERGY CONSUMPTION.—

''(1) INITIAL RULEMAKING.—

''(A) The Secretary shall, within 18 months after the date of enactment of this subsection, prescribe by notice and comment, definitions of standby mode and test procedures for the standby mode power use of battery chargers and external power supplies. In establishing these test procedures, the Secretary shall con-

sider, among other factors, existing test procedures used for measuring energy consumption in standby mode and assess the current and projected future market for battery chargers and external power supplies. This assessment shall include estimates of the significance of potential energy savings from technical improvements to these products and suggested product classes for standards. Prior to the end of this time period, the Secretary shall hold a scoping workshop to discuss and receive comments on plans for developing energy conservation standards for standby mode energy use for these products.

''(B) The Secretary shall, within 3 years after the date of enactment of this subsection, issue a final rule that determines whether energy conservation standards shall be promulgated for battery chargers and external power supplies or classes thereof. For each product class, any such standards shall be set at the lowest level of standby energy use that—

(i) meets the criteria of subsections (o), (p), (q), (r), (s) and (t); and

(ii) will result in significant overall annual energy savings, considering both standby mode and other operating modes.

"(2) DESIGNATION OF ADDITIONAL COVERED PRODUCTS.—

"(A) Not later than 180 days after the date of enactment of this subsection, the Secretary shall publish for public comment and public hearing a notice to determine whether any noncovered products should be designated as covered products for the purpose of instituting a rulemaking under this section to determine whether an energy conservation standard restricting standby mode energy consumption, should be promulgated; providing that any restriction on standby mode energy consumption shall be limited to major sources of such consumption.

"(B) In making the determinations pursuant to subparagraph (A) of whether to designate new covered products and institute rulemakings, the Secretary shall, among other relevant factors and in addition to the criteria in section 322(b), consider—

"(i) standby mode power consumption compared to overall product energy consumption; and

"(ii) the priority and energy savings potential of standards which may be promulgated under this subsection compared to other required rulemakings under this section and the available resources of the Department to conduct such rulemakings.

"(C) Not later than one year after the date of enactment of this subsection, the Secretary shall issue a determination of any new covered products for which he intends to institute rulemakings on standby mode pursuant to this section and he shall state the dates by which he intends to initiate those rulemakings.

"(3) REVIEW OF STANDBY ENERGY USE IN COVERED PRODUCTS.—In determining pursuant to section 323 whether test procedures and energy conservation standards pursuant to section 325 should be revised, the Secretary shall consider for covered products which are major sources of standby mode energy consumption whether to incorporate standby mode into such test procedures and energy conservation standards, taking into account, among other

relevant factors, the criteria for non-covered products in subparagraph (B) of this subsection.

''(4) RULEMAKING FOR STANDBY MODE.—

''(A) Any rulemaking instituted under this subsection or for covered products under this section which restricts standby mode power consumption shall be subject to the criteria and procedures for issuing energy conservation standards set forth in section 325 and the criteria set forth in paragraph 2(B) of this subsection.

''(B) No standard can be proposed for new covered products or covered products in a standby mode unless the Secretary has promulgated applicable test procedures for each product pursuant to section 323.

''(C) The provisions of section 327 shall apply to new covered products which are subject to the rulemakings for standby mode after a final rule has been issued.

(5) EFFECTIVE DATE.—Any standard promulgated under this subsection shall be applicable to products manufactured or imported three years after the date of promulgation.

(6) VOLUNTARY PROGRAMS TO REDUCE STANDBY MODE ENERGY USE.—The Secretary and the Administrator shall collaborate and develop programs, including programs pursuant to section 324A and other voluntary industry agreements or codes of conduct, which are designed to reduce standby mode energy use.

''(v) SUSPENDED CEILING FANS, VENDING MACHINES, UNIT HEATERS, AND COMMERCIAL REFRIGERATORS, FREEZERS AND REFRIGERATOR-FREEZERS.—The Secretary shall within 24 months after the date on which testing requirements are prescribed by the Secretary pursuant to section 323(f), prescribe, by rule, energy conservation standards for suspended ceiling fans, refrigerated bottled or canned beverage vending machines, unit heaters, and commercial refrigerators, freezers and refrigerator-freezers. In establishing standards under this subsection, the Secretary shall use the criteria and procedures contained in subsections (l) and (m). Any standard prescribed under this subsection shall apply to products manufactured 3 years after the date of publication of a final rule establishing such standard.

''(w) ILLUMINATED EXIT SIGNS.—Within 18 months after the date of enactment of this subsection, the Secretary shall prescribe energy conservation standards for

illuminated exit signs in accordance with subsections (l) and (m) and the Energy Star Program requirements for exit signs prescribed by the Environmental Protection Agency as in effect on the date of enactment of this subsection.

''(x) TORCHIERES.—Torchieres manufactured on or after January 1, 2005—

''(1) shall consume not more than 190 watts of power; and

''(2) shall not be capable of operating with lamps that total more than 190 watts.

''(y) LOW VOLTAGE DRY-TYPE TRANSFORMERS.—The efficiency of low voltage dry-type transformers manufactured on or after January 1, 2005 shall be the Class I Efficiency Levels for low voltage dry-type transformers specified in Table 4–2 of the 'Guide for Determining Energy Efficiency for Distribution Transformers' published by the National Electrical Manufacturers Association (NEMA TP–1–1996), as in effect on the date of enactment of this subsection.

SEC. 929. CONSUMER EDUCATION ON ENERGY EFFICIENCY BENEFITS OF AIR CONDITIONING, HEATING, AND VENTILATION MAINTENANCE.

Section 337 of the Energy Policy and Conservation Act (42 U.S.C. 6307) is amended by adding at the end the following:

''(c) HVAC MAINTENANCE.—(1) For the purpose of ensuring that installed air conditioning and heating systems operate at their maximum rated efficiency levels, the Secretary shall, within 180 days of the date of enactment of this subsection, carry out a program to educate homeowners and small business owners concerning the energy savings resulting from properly conducted maintenance of air conditioning, heating, and ventilating systems.

''(2) The Secretary may carry out the program in cooperation with industry trade associations, industry members, and energy efficiency organizations.''.

Subtitle D—Housing Efficiency

SEC. 931. CAPACITY BUILDING FOR ENERGY EFFICIENT, AFFORDABLE HOUSING.

Section 4(b) of the HUD Demonstration Act of 1993 (42 U.S.C. 9816 note) is amended—

(1) in paragraph (1), by inserting before the semicolon at the end the following: '', including capabilities regarding the provision of energy efficient,

affordable housing and residential energy conservation measures''; and

(2) in paragraph (2), by inserting before the semicolon the following: '', including such activities relating to the provision of energy efficient, affordable housing and residential energy conservation measures that benefit low-income families''.

SEC. 932. INCREASE OF CDBG PUBLIC SERVICES CAP FOR ENERGY CONSERVATION AND EFFICIENCY ACTIVITIES.

Section 105(a)(8) of the Housing and Community Development Act of 1974 (42 U.S.C. 5305(a)(8)) is amended—

(1) by inserting ''or efficiency'' after ''energy conservation'';

(2) by striking '', and except that'' and inserting ''; except that''; and

(3) by inserting before the period at the end the following: ''; and except that each percentage limitation under this paragraph on the amount of assistance provided under this title that may be used for the provision of public services is hereby increased by 10 percent, but such percentage increase may be used only for the provision of public services concerning energy conservation or efficiency''.

SEC. 933. FHA MORTGAGE INSURANCE INCENTIVES FOR ENERGY EFFICIENT HOUSING.

(a) SINGLE FAMILY HOUSING MORTGAGE INSURANCE.—Section 203(b)(2) of the National Housing Act (12 U.S.C. 1709(b)(2)) is amended, in the first undesignated paragraph beginning after subparagraph (B)(iii) (relating to solar energy systems)—

(1) by inserting ''or paragraph (10)''; and

(2) by striking ''20 percent'' and inserting ''30 percent''.

(b) MULTIFAMILY HOUSING MORTGAGE INSURANCE.—Section 207(c) of the National Housing Act (12 U.S.C. 1713(c)) is amended, in the second undesignated paragraph beginning after paragraph (3) (relating to solar energy systems and residential energy conservation measures), by striking ''20 percent'' and inserting ''30 percent''.

(c) COOPERATIVE HOUSING MORTGAGE INSURANCE.—Section 213(p) of the National Housing Act (12 U.S.C. 1715e(p)) is amended by striking ''20 per centum'' and inserting ''30 percent''.

(d) REHABILITATION AND NEIGHBORHOOD CONSERVATION HOUSING MORTGAGE INSURANCE.—Section 220(d)(3)(B)(iii) of the National Housing Act (12 U.S.C. 1715k(d)(3)(B)(iii)) is amended by striking ''20 per centum'' and inserting ''30 percent''.

(e) LOW-INCOME MULTIFAMILY HOUSING MORTGAGE INSURANCE.—Section 221(k) of the National Housing Act (12 U.S.C. 1715l(k)) is amended by striking ''20 per centum'' and inserting ''30 percent''.

(f) ELDERLY HOUSING MORTGAGE INSURANCE.—The proviso at the end of section 213(c)(2) of the National Housing Act (12 U.S.C. 1715v(c)(2)) is amended by striking ''20 per centum'' and inserting ''30 percent''.

(g) CONDOMINIUM HOUSING MORTGAGE INSURANCE.—Section 234(j) of the National Housing Act (12 U.S.C. 1715y(j)) is amended by striking ''20 per centum'' and inserting ''30 percent''.

SEC. 934. PUBLIC HOUSING CAPITAL FUND.

Section 9(d)(1) of the United States Housing Act of 1937 (42 U.S.C. 1437g(d)(1)) is amended—

(1) in subparagraph (I), by striking ''and'' at the end;

(2) in subparagraph (K), by striking the period at the end and inserting ''; and''; and

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

''(L) improvement of energy and water-use efficiency by installing fixtures and fittings that conform to the American Society of Mechanical Engineers/American National Standards Insti-

tute standards A112.19.2–1998 and A112.18.1–2000, or any revision thereto, applicable at the time of installation, and by increasing energy efficiency and water conservation by such other means as the Secretary determines are appropriate.''.

SEC. 935. GRANTS FOR ENERGY-CONSERVING IMPROVEMENTS FOR ASSISTED HOUSING.

Section 251(b)(1) of the National Energy Conservation Policy Act (42 U.S.C. 8231(1)) is amended—

(1) by striking ''financed with loans'' and inserting ''assisted'';

(2) by inserting after ''1959,'' the following: ''which are eligible multifamily housing projects (as such term is defined in section 512 of the Multifamily Assisted Housing Reform and Affordability Act of 1997 (42 U.S.C. 1437f note) and are subject to a mortgage restructuring and rental assistance sufficiency plans under such Act,''; and

(3) by inserting after the period at the end of the first sentence the following new sentence: ''Such improvements may also include the installation of energy and water conserving fixtures and fittings that conform to the American Society of Mechanical Engineers/American National Standards Institute

standards A112.19.2–1998 and A112.18.1–2000, or any revision thereto, applicable at the time of installation.''.

SEC. 936. NORTH AMERICAN DEVELOPMENT BANK.

Part 2 of subtitle D of title V of the North American Free Trade Agreement Implementation Act (22 U.S.C. 290m–290m–3) is amended by adding at the end the following:

''SEC. 545. SUPPORT FOR CERTAIN ENERGY POLICIES.

''Consistent with the focus of the Bank's Charter on environmental infrastructure projects, the Board members representing the United States should use their voice and vote to encourage the Bank to finance projects related to clean and efficient energy, including energy conservation, that prevent, control, or reduce environmental pollutants or contaminants.''.

DIVISION D—INTEGRATION OF ENERGY POLICY AND CLIMATE CHANGE POLICY

TITLE X—CLIMATE CHANGE POLICY FORMULATION

Subtitle A—Global Warming

SEC. 1001. SENSE OF CONGRESS ON GLOBAL WARMING.

(a) FINDINGS.—The Congress makes the following findings:

(1) Evidence continues to build that increases in atmospheric concentrations of man-made greenhouse gases are contributing to global climate change.

(2) The Intergovernmental Panel on Climate Change (IPCC) has concluded that ''there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities'' and that the Earth's average temperature can be expected to rise between 2.5 and 10.4 degrees Fahrenheit in this century.

(3) The National Academy of Sciences confirmed the findings of the IPCC, stating that ''the IPCC's conclusion that most of the observed warming of the last 50 years is likely to have been due to the increase of greenhouse gas concentrations accurately reflects the current thinking of the scientific community on this issue'' and that ''there is general agreement that the observed warming is real and particularly strong within the past twenty years''.

(4) The IPCC has stated that in the last 40 years, the global average sea level has risen, ocean heat content has increased, and snow cover and ice extent have decreased, which threatens to inundate

low-lying island nations and coastal regions throughout the world.

(5) The Environmental Protection Agency has found that global warming may harm the United States by altering crop yields, accelerating sea level rise, and increasing the spread of tropical infectious diseases.

(6) In 1992, the United States ratified the United Nations Framework Convention of Climate Change, done at New York on May 9, 1992, the ultimate objective of which is the ''stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'', and which stated in part ''the Parties to the Convention are to implement policies with the aim of returning . . . to their 1990 levels anthropogenic emissions of carbon dioxide and other greenhouse gases.''

(7) There is a shared international responsibility to address this problem, as industrial nations are the largest historic and current emitters of greenhouse gases and developing nations' emissions will significantly increase in the future.

(8) The United Nations Framework Convention on Climate Change further states that ''developed

country Parties should take the lead in combating climate change and the adverse effects thereof'', as these nations are the largest historic and current emitters of greenhouse gases.

(9) Senate Resolution 98 of July 1997, which expressed that developing nations, especially the largest emitters, must also be included in any future, binding climate change treaty and such a treaty must not result in serious harm to the United States economy, should not cause the United States to abandon its shared responsibility to help find a solution to the global climate change dilemma.

(10) American businesses need to know how governments worldwide will respond to the threat of global warming.

(11) The United States has benefitted and will continue to benefit from investments in the research, development and deployment of a range of clean energy and efficiency technologies that can mitigate global warming and that can make the United States economy more productive, bolster energy security, create jobs, and protect the environment.

(b) SENSE OF CONGRESS.—It is the sense of the United States Congress that the United States should demonstrate international leadership and responsibility in

mitigating the health, environmental, and economic threats posed by global warming by:

(1) taking responsible action to ensure significant and meaningful reductions in emissions of greenhouse gases from all sectors;

(2) creating flexible international and domestic mechanisms, including joint implementation, technology deployment, emissions trading and carbon sequestration projects that will reduce, avoid, and sequester greenhouse gas emissions; and

(3) participating in international negotiations, including putting forth a proposal at the next meeting of the Conference of the Parties, with the objective of securing United States' participation in a revised Kyoto Protocol or other future binding climate change agreements in a manner that is consistent with the environmental objectives of the Framework Convention on Climate Change, that protects the economic interests of the United States, and recognizes the shared international responsibility for addressing climate change, including developing country participation.

Subtitle B—Climate Change Strategy

SEC. 1011. SHORT TITLE.

This title may be cited as the ''Climate Change Strategy and Technology Innovation Act of 2002''.

SEC. 1012. FINDINGS.

Congress finds that—

(1) evidence continues to build that increases in atmospheric concentrations of greenhouse gases are contributing to global climate change;

(2) in 1992, the Senate ratified the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992, the ultimate objective of which is the ''stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'';

(3) although science currently cannot determine precisely what atmospheric concentrations are ''dangerous'', the current trajectory of greenhouse gas emissions will lead to a continued rise in greenhouse gas concentrations in the atmosphere, not stabilization;

(4) the remaining scientific uncertainties call for temperance of human actions, but not inaction;

(5) greenhouse gases are associated with a wide range of human activities, including energy production, transportation, agriculture, forestry, manufacturing, buildings, and other activities;

(6) the economic consequences of poorly designed climate change response strategies, or of inaction, may cost the global economy trillions of dollars;

(7) a large share of this economic burden would be borne by the United States;

(8) stabilization of greenhouse gas concentrations in the atmosphere will require transformational change in the global energy system and other emitting sectors at an almost unimaginable level—a veritable industrial revolution is required;

(9) such a revolution can occur only if the revolution is preceded by research and development that leads to bold technological breakthroughs;

(10) over the decade preceding the date of enactment of this Act—

(A) energy research and development budgets in the public and private sectors have declined precipitously and have not been focused on the climate change response challenge; and

(B) the investments that have been made have not been guided by a comprehensive strategy;

(11) the negative trends in research and development funding described in paragraph (10) must be reversed with a focus on not only traditional energy research and development, but also bolder, breakthrough research;

(12) much more progress could be made on the issue of climate change if the United States were to adopt a new approach for addressing climate change that included, as an ultimate long-term goal—

(A) stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system; and

(B) a response strategy with 4 key elements consisting of—

(i) definition of interim emission mitigation targets coupled with specific mitigation approaches that cumulatively yield stabilized atmospheric greenhouse gas concentrations;

(ii) a national commitment—

(I) to double energy research and development by the United States public and private sectors; and

(II) in carrying out such research and development, to provide a high degree of emphasis on bold, breakthrough technologies that will make possible a profound transformation of the energy, transportation, industrial, agricultural, and building sectors of the United States;

(iii) climate adaptation research that focuses on response actions necessary to adapt to climate change that may have occurred or may occur under any future climate change scenario; and

(iv) continued research, building on the substantial scientific understanding of climate change that exists as of the date of enactment of this Act, that focuses on resolving the remaining scientific, technical, and economic uncertainties, to aid in the development of sound response strategies; and

(13) inherent in each of the 4 key elements of the response strategy is consideration of the international nature of the challenge, which will require—

(A) establishment of joint climate response strategies and joint research programs;

(B) assistance to developing countries and countries in transition for building technical and institutional capacities and incentives for addressing the challenge; and

(C) promotion of public awareness of the issue.

SEC. 1013. PURPOSE.

The purpose of this title is to implement the new approach described in section 1012(12) by developing a national focal point for climate change response through—

(1) the establishment of the National Office of Climate Change Response within the Executive Office of the President to develop the United States Climate Change Response Strategy that—

(A) incorporates the 4 key elements of that new approach;

(B) is supportive of and integrated in the overall energy, transportation, industrial, agri-

cultural, forestry, and environmental policies of the United States;

(C) takes into account—

(i) the diversity of energy sources and technologies;

(ii) supply-side and demand-side solutions; and

(iii) national infrastructure, energy distribution, and transportation systems;

(D) provides for the inclusion and equitable participation of Federal, State, tribal, and local government agencies, nongovernmental organizations, academia, scientific bodies, industry, the public, and other interested parties;

(E) incorporates new models of Federal-State cooperation;

(F) defines a comprehensive energy technology research and development program that—

(i) recognizes the important contributions that research and development programs in existence on the date of enactment of this title make toward addressing the climate change response challenge; and

(ii) includes an additional research and development agenda that focuses on the bold, breakthrough technologies that are critical to the long-term stabilization of greenhouse gas concentrations in the atmosphere;

(G) includes consideration of other efforts to address critical environmental and health concerns, including clean air, clean water, and responsible land use policies; and

(H) incorporates initiatives to promote the deployment of clean energy technologies developed in the United States and abroad;

(2) the establishment of the Interagency Task Force, chaired by the Director of the White House Office, to serve as the primary mechanism through which the heads of Federal agencies work together to develop and implement the Strategy;

(3) the establishment of the Office of Climate Change Technology within the Department of Energy—

(A) to manage, as its primary responsibility, an innovative research and development program that focuses on the bold, breakthrough technologies that are critical to the long-term

stabilization of greenhouse gas concentrations in the atmosphere; and

(B) to provide analytical support and data to the White House Office, other agencies, and the public;

(4) the establishment of an independent review board—

(A) to review the Strategy and annually assess United States and international progress toward the goal of stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system; and

(B) to assess—

(i) the performance of each Federal agency that has responsibilities under the Strategy; and

(ii) the adequacy of the budget of each such Federal agency to fulfill the responsibilities of the Federal agency under the Strategy; and

(5) the establishment of offices in, or the carrying out of activities by, the Department of Agriculture, the Department of Transportation, the Department of Commerce, the Environmental Protec-

tion Agency, and other Federal agencies as necessary to carry out this title.

SEC. 1014. DEFINITIONS.

In this title:

(1) CLIMATE-FRIENDLY TECHNOLOGY.—The term ''climate-friendly technology'' means any energy supply or end-use technology that, over the life of the technology and compared to similar technology in commercial use as of the date of enactment of this Act—

(A) results in reduced emissions of greenhouse gases;

(B) may substantially lower emissions of other pollutants; and

(C) may generate substantially smaller or less hazardous quantities of solid or liquid waste.

(2) DEPARTMENT.—The term ''Department'' means the Department of Energy.

(3) DEPARTMENT OFFICE.—The term ''Department Office'' means the Office of Climate Change Technology of the Department established by section 1017(a).

(4) FEDERAL AGENCY.—The term ''Federal agency'' has the meaning given the term ''agency'' in section 551 of title 5, United States Code.

(5) GREENHOUSE GAS.—The term ''greenhouse gas'' means—

(A) an anthropogenic gaseous constituent of the atmosphere (including carbon dioxide, methane, nitrous oxide, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and tropospheric ozone) that absorbs and re-emits infrared radiation and influences climate; and

(B) an anthropogenic aerosol (such as black soot) that absorbs solar radiation and influences climate.

(6) INTERAGENCY TASK FORCE.—The term ''Interagency Task Force'' means the United States Climate Change Response Interagency Task Force established under section 1016(d).

(7) KEY ELEMENT.—The term ''key element'', with respect to the Strategy, means—

(A) definition of interim emission mitigation targets coupled with specific mitigation approaches that cumulatively result in stabilization of greenhouse gas concentrations;

(B) a national commitment—

(i) to double energy research and development by the United States public and private sectors; and

(ii) in carrying out such research and development, to provide a high degree of emphasis on bold, breakthrough technologies that will make possible a profound transformation of the energy, transportation, industrial, agricultural, and building sectors of the United States;

(C) climate adaptation research that focuses on response actions necessary to adapt to climate change that may have occurred or may occur under any future climate change scenario; and

(D) research that focuses on resolving the remaining scientific, technical, and economic uncertainties associated with climate change to the extent that those uncertainties bear on strategies to achieve the long-term goal of stabilization of greenhouse gas concentrations.

(8) QUALIFIED INDIVIDUAL.—

(A) IN GENERAL.—The term ''qualified individual'' means an individual who has dem-

onstrated expertise and leadership skills to draw on other experts in diverse fields of knowledge that are relevant to addressing the climate change response challenge.

(B) FIELDS OF KNOWLEDGE.—The fields of knowledge referred to in subparagraph (A) are—

(i) the science of primary and secondary climate change impacts;

(ii) energy and environmental economics;

(iii) technology transfer and diffusion;

(iv) the social dimensions of climate change;

(v) climate change adaptation strategies;

(vi) fossil, nuclear, and renewable energy technology;

(vii) energy efficiency and energy conservation;

(viii) energy systems integration;

(ix) engineered and terrestrial carbon sequestration;

(x) transportation, industrial, and building sector concerns;

(xi) regulatory and market-based mechanisms for addressing climate change;

(xii) risk and decision analysis;

(xiii) strategic planning; and

(xiv) the international implications of climate change response strategies.

(9) REVIEW BOARD.—The term ''Review Board'' means the United States Climate Change Response Strategy Review Board established by section 1019.

(10) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

(11) STABILIZATION OF GREENHOUSE GAS CONCENTRATIONS.—The term ''stabilization of greenhouse gas concentrations'' means the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, as contemplated by the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992.

(12) STRATEGY.—The term ''Strategy'' means the United States Climate Change Response Strategy developed under section 1015.

(13) WHITE HOUSE OFFICE.—The term ''White House Office'' means the National Office of Climate Change Response of the Executive Office of the President established by section 1016(a).

SEC. 1015. UNITED STATES CLIMATE CHANGE RESPONSE STRATEGY.

(a) IN GENERAL.—The Director of the White House Office shall develop the United States Climate Change Response Strategy, which shall—

(1) have the long-term goal of stabilization of greenhouse gas concentrations;

(2) build on the 4 key elements;

(3) be developed on the basis of an examination of a broad range of emission reduction targets and implementation dates (including those contemplated by the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992) that culminate in the stabilization of greenhouse gas concentrations;

(4) incorporate mitigation approaches to reduce, avoid, and sequester greenhouse gas emissions;

(5) include an evaluation of whether and how each emission reduction target and implementation date achieves the emission reductions in an economically and environmentally sound manner;

(6) be consistent with the goals of energy, transportation, industrial, agricultural, forestry, environmental, and other relevant policies of the United States;

(7) have a scope that considers the totality of United States public, private, and public-private sector actions that bear on the long-term goal;

(8) be based on an evaluation of a wide range of approaches for achieving the long-term goal, including evaluation of—

(A) a variety of cost-effective Federal and State policies, programs, standards, and incentives;

(B) policies that integrate and promote innovative, market-based solutions in the United States and in foreign countries; and

(C) participation in other international institutions, or in the support of international activities, that are established or conducted to facilitate stabilization of greenhouse gas concentrations;

(9) in the final recommendations of the Strategy, emphasize response strategies that achieve the long-term goal and provide specific recommendations concerning—

(A) measures determined to be appropriate for short-term implementation, giving preference to cost-effective and technologically feasible measures that will—

(i) produce measurable net reductions in United States emissions that lead toward achievement of the long-term goal; and

(ii) minimize any adverse short-term and long-term economic and social impacts on the United States;

(B) the development of technologies that have the potential for long-term implementation—

(i) giving preference to technologies that have the potential to reduce significantly the overall cost of stabilization of greenhouse gas concentrations; and

(ii) considering a full range of energy sources, energy conversion and use technologies, and efficiency options;

(C) such changes in institutional and technology systems as are necessary to adapt to climate change in the short-term and the long-term;

(D) such review, modification, and enhancement of the scientific, technical, and economic research efforts of the United States, and improvements to the data resulting from research, as are appropriate to improve the accuracy of predictions concerning climate change and the economic and social costs and opportunities relating to climate change; and

(E) changes that should be made to project and grant evaluation criteria under other Federal research and development programs so that those criteria do not inhibit development of climate-friendly technologies;

(10) be developed in a manner that provides for meaningful participation by, and consultation among, Federal, State, tribal, and local government agencies, nongovernmental organizations, academia, scientific bodies, industry, the public, and other interested parties in accordance with subsections (b)(4)(C)(iv)(II) and (d)(3)(B)(iii) of section 1016;

(11) address how the United States should engage State, tribal, and local governments in developing and carrying out a response to climate change;

(12) promote, to the maximum extent practicable, public awareness, outreach, and information-

sharing to further the understanding of the full range of climate change-related issues;

(13) provide a detailed explanation of how the measures recommended by the Strategy will ensure that they do not result in serious harm to the economy of the United States;

(14) provide a detailed explanation of how the measures recommended by the Strategy will achieve the long-term goal of stabilization of greenhouse gas concentrations;

(15) include any recommendations for legislative and administrative actions necessary to implement the Strategy;

(16) serve as a framework for climate change response actions by all Federal agencies;

(17) recommend which Federal agencies are, or should be, responsible for the various aspects of implementation of the Strategy and any budgetary implications;

(18) address how the United States should engage foreign governments in developing an international response to climate change; and

(19) be subject to review by an independent review board in accordance with section 1019.

(b) SUBMISSION TO CONGRESS.—Not later than 1 year after the date of enactment of this title, the President shall submit to Congress the Strategy.

(c) UPDATING.—Not later than 2 years after the date of submission of the Strategy to Congress under subsection (b), and at the end of each 2–year period thereafter, the President shall submit to Congress an updated version of the Strategy.

(d) PROGRESS REPORTS.—Not later than 1 year after the date of submission of the Strategy to Congress under subsection (b), and at the end of each 1-year period thereafter, the President shall submit to Congress a report that—

(1) describes the progress on implementation of the Strategy; and

(2) provides recommendations for improvement of the Strategy and the implementation of the Strategy.

(e) ALIGNMENT WITH ENERGY, TRANSPORTATION, INDUSTRIAL, AGRICULTURAL, FORESTRY, AND OTHER POLICIES.—The President, the Director of the White House Office, the Secretary, and the other members of the Interagency Task Force shall work together to align the actions carried out under the Strategy and actions associated with the energy, transportation, industrial, agri-

cultural, forestry, and other relevant policies of the United States so that the objectives of both the Strategy and the policies are met without compromising the climate change-related goals of the Strategy or the goals of the policies.

SEC. 1016. NATIONAL OFFICE OF CLIMATE CHANGE RESPONSE OF THE EXECUTIVE OFFICE OF THE PRESIDENT.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—There is established, within the Executive Office of the President, the National Office of Climate Change Response.

(2) FOCUS.—The White House Office shall have the focus of achieving the long-term goal of stabilization of greenhouse gas concentrations while minimizing adverse short-term and long-term economic and social impacts.

(3) DUTIES.—Consistent with paragraph (2), the White House Office shall—

(A) establish policies, objectives, and priorities for the Strategy;

(B) in accordance with subsection (d), establish the Interagency Task Force to serve as the primary mechanism through which the heads of Federal agencies shall assist the Direc-

tor of the White House Office in developing and implementing the Strategy;

(C) to the maximum extent practicable, ensure that the Strategy is based on objective, quantitative analysis, drawing on the analytical capabilities of Federal and State agencies, especially the Center;

(D) advise the President concerning necessary changes in organization, management, budgeting, and personnel allocation of Federal agencies involved in climate change response activities; and

(E) advise the President and notify a Federal agency if the policies and discretionary programs of the agency are not well aligned with, or are not contributing effectively to, the long-term goal of stabilization of greenhouse gas concentrations.

(b) DIRECTOR OF THE WHITE HOUSE OFFICE.—

(1) IN GENERAL.—The White House Office shall be headed by a Director, who shall report directly to the President.

(2) APPOINTMENT.—The Director of the White House Office shall be a qualified individual ap-

pointed by the President, by and with the advice and consent of the Senate.

(3) DUTIES OF THE DIRECTOR OF THE WHITE HOUSE OFFICE.—

(A) STRATEGY.—In accordance with section 1015, the Director of the White House Office shall coordinate the development and updating of the Strategy.

(B) INTERAGENCY TASK FORCE.—The Director of the White House Office shall serve as Chairperson of the Interagency Task Force.

(C) ADVISORY DUTIES.—

(i) CLIMATE, ENERGY, TRANSPORTATION, INDUSTRIAL, AGRICULTURAL, BUILDING, FORESTRY, AND OTHER PROGRAMS.—The Director of the White House Office, using an integrated perspective considering the totality of actions in the United States, shall advise the President and the heads of Federal agencies on—

(I) the extent to which United States energy, transportation, industrial, agricultural, forestry, building, and other relevant programs are capable of producing progress on the long-

term goal of stabilization of greenhouse gas concentrations; and

(II) the extent to which proposed or newly created energy, transportation, industrial, agricultural, forestry, building, and other relevant programs positively or negatively affect the ability of the United States to achieve the long-term goal of stabilization of greenhouse gas concentrations.

(ii) TAX, TRADE, AND FOREIGN POLICIES.—The Director of the White House Office, using an integrated perspective considering the totality of actions in the United States, shall advise the President and the heads of Federal agencies on—

(I) the extent to which the United States tax policy, trade policy, and foreign policy are capable of producing progress on the long-term goal of stabilization of greenhouse gas concentrations; and

(II) the extent to which proposed or newly created tax policy, trade pol-

icy, and foreign policy positively or negatively affect the ability of the United States to achieve the long-term goal of stabilization of greenhouse gas concentrations.

(iii) INTERNATIONAL TREATIES.—The Secretary of State, acting in conjunction with the Interagency Task Force and using the analytical tools available to the White House Office, shall provide to the Director of the White House Office an opinion that—

(I) specifies, to the maximum extent practicable, the economic and environmental costs and benefits of any proposed international treaties or components of treaties that have an influence on greenhouse gas management; and

(II) assesses the extent to which the treaties advance the long-term goal of stabilization of greenhouse gas concentrations, while minimizing adverse short-term and long-term eco-

nomic and social impacts and considering other impacts.

(iv) CONSULTATION.—

(I) WITH MEMBERS OF INTERAGENCY TASK FORCE.—To the extent practicable and appropriate, the Director of the White House Office shall consult with all members of the Interagency Task Force and other interested parties before providing advice to the President.

(II) WITH OTHER INTERESTED PARTIES.—The Director of the White House Office shall establish a process for obtaining the meaningful participation of Federal, State, tribal, and local government agencies, nongovernmental organizations, academia, scientific bodies, industry, the public, and other interested parties in the formulation of advice to be provided to the President.

(D) PUBLIC EDUCATION, AWARENESS, OUTREACH, AND INFORMATION-SHARING.—The Director of the White House Office, to the max-

imum extent practicable, shall promote public awareness, outreach, and information-sharing to further the understanding of the full range of climate change-related issues.

(4) ANNUAL REPORTS.—The Director of the White House Office, in consultation with the Interagency Task Force and other interested parties, shall prepare an annual report for submission by the President to Congress that—

(A) assesses progress in implementation of the Strategy;

(B) assesses progress, in the United States and in foreign countries, toward the long-term goal of stabilization of greenhouse gas concentrations;

(C) assesses progress toward meeting climate change-related international obligations;

(D) makes recommendations for actions by the Federal Government designed to close any gap between progress-to-date and the measures that are necessary to achieve the long-term goal of stabilization of greenhouse gas concentrations; and

(E) addresses the totality of actions in the United States that relate to the 4 key elements.

(5) ANALYSIS.—During development of the Strategy, preparation of the annual reports submitted under paragraph (5), and provision of advice to the President and the heads of Federal agencies, the Director of the White House Office shall place significant emphasis on the use of objective, quantitative analysis, taking into consideration any uncertainties associated with the analysis.

(c) STAFF.—

(1) IN GENERAL.—The Director of the White House Office shall employ a professional staff of not more than 25 individuals to carry out the duties of the White House Office.

(2) INTERGOVERNMENTAL PERSONNEL AND FELLOWSHIPS.—The Director of the White House Office may use the authority provided by the Intergovernmental Personnel Act of 1970 (42 U.S.C. 4701 et seq.) and subchapter VI of chapter 33 of title 5, United States Code, and fellowships, to obtain staff from academia, scientific bodies, nonprofit organizations, and national laboratories, for appointments of a limited term.

(d) INTERAGENCY TASK FORCE.—

(1) IN GENERAL.—The Director of the White House Office shall establish the United States Climate Change Response Interagency Task Force.

(2) COMPOSITION.—The Interagency Task Force shall be composed of—

(A) the Director of the White House Office, who shall serve as Chairperson;

(B) the Secretary of State;

(C) the Secretary;

(D) the Secretary of Commerce;

(E) the Secretary of the Treasury;

(F) the Secretary of Transportation;

(G) the Secretary of Agriculture;

(H) the Administrator of the Environmental Protection Agency;

(I) the Administrator of the Agency for International Development;

(J) the United States Trade Representative;

(K) the National Security Advisor;

(L) the Chairman of the Council of Economic Advisers;

(M) the Chairman of the Council on Environmental Quality;

(N) the Director of the Office of Science and Technology Policy;

(O) the Chairperson of the Subcommittee on Global Change Research (which performs the functions of the Committee on Earth and Environmental Sciences established by section 102 of the Global Change Research Act of 1990 (15 U.S.C. 2932)); and

(P) the heads of such other Federal agencies as the Chairperson determines should be members of the Interagency Task Force.

(3) STRATEGY.—

(A) IN GENERAL.—The Interagency Task Force shall serve as the primary forum through which the Federal agencies represented on the Interagency Task Force jointly—

(i) assist the Director of the White House Office in developing and updating the Strategy; and

(ii) assist the Director of the White House Office in preparing annual reports under subsection (b)(5).

(B) REQUIRED ELEMENTS.—In carrying out subparagraph (A), the Interagency Task Force shall—

(i) take into account the long-term goal and other requirements of the Strategy specified in section 1015(a);

(ii) consult with State, tribal, and local government agencies, nongovernmental organizations, academia, scientific bodies, industry, the public, and other interested parties; and

(iii) build consensus around a Strategy that is based on strong scientific, technical, and economic analyses.

(4) WORKING GROUPS.—The Chairperson of the Interagency Task Force may establish such topical working groups as are necessary to carry out the duties of the Interagency Task Force.

(e) PROVISION OF SUPPORT STAFF.—In accordance with procedures established by the Chairperson of the Interagency Task Force, the Federal agencies represented on the Interagency Task Force shall provide staff from the agencies to support information, data collection, and analyses required by the Interagency Task Force.

(f) HEARINGS.—On request of the Chairperson, the Interagency Task Force may hold such hearings, meet and act at such times and places, take such testimony, and

receive such evidence as the Interagency Task Force considers to be appropriate.

SEC. 1017. TECHNOLOGY INNOVATION PROGRAM IMPLEMENTED THROUGH THE OFFICE OF CLIMATE CHANGE TECHNOLOGY OF THE DEPARTMENT OF ENERGY.

(a) ESTABLISHMENT OF OFFICE OF CLIMATE CHANGE TECHNOLOGY OF THE DEPARTMENT OF ENERGY.—

(1) IN GENERAL.—There is established, within the Department, the Office of Climate Change Technology.

(2) DUTIES.—The Department Office shall—

(A) manage an energy technology research and development program that directly supports the Strategy by—

(i) focusing on high-risk, bold, breakthrough technologies that—

(I) have significant promise of contributing to the national climate change policy of long-term stabilization of greenhouse gas concentrations by—

(aa) mitigating the emissions of greenhouse gases;

(bb) removing and sequestering greenhouse gases from emission streams; or

(cc) removing and sequestering greenhouse gases from the atmosphere;

(II) are not being addressed significantly by other Federal programs; and

(III) would represent a substantial advance beyond technology available on the date of enactment of this title;

(ii) forging fundamentally new research and development partnerships among various Department, other Federal, and State programs, particularly between basic science and energy technology programs, in cases in which such partnerships have significant potential to affect the ability of the United States to achieve stabilization of greenhouse gas concentrations at the lowest possible cost;

(iii) forging international research and development partnerships that are in the

interests of the United States and make progress on stabilization of greenhouse gas concentrations;

(iv) making available, through monitoring, experimentation, and analysis, data that are essential to proving the technical and economic viability of technology central to addressing climate change; and

(v) transitioning research and development programs to other program offices of the Department once such a research and development program crosses the threshold of high-risk research and moves into the realm of more conventional technology development;

(B) prepare annual reports in accordance with subsection (b)(6);

(C) identify the total contribution of all Department programs to climate change response;

(D) provide substantial analytical support to the White House Office, particularly support in the development of the Strategy and associated progress reporting; and

(E) advise the Secretary on climate change-related issues, including necessary changes in Department organization, management, budgeting, and personnel allocation in the programs involved in climate change response-related activities.

(b) DIRECTOR OF THE DEPARTMENT OFFICE.—

(1) IN GENERAL.—The Department Office shall be headed by a Director, who shall report directly to the Secretary.

(2) APPOINTMENT.—The Director of the Department Office shall be an employee of the Federal Government who is a qualified individual appointed by the President.

(3) TERM.—The Director of the Department Office shall be appointed for a term of 4 years.

(4) VACANCIES.—A vacancy in the position of the Director of the Department Office shall be filled in the same manner as the original appointment was made.

(5) DUTIES OF THE DIRECTOR OF THE DEPARTMENT OFFICE.—

(A) TECHNOLOGY DEVELOPMENT.—The Director of the Department Office shall manage

the energy technology research and development program described in subsection (a)(2)(A).

(B) STRATEGY.—The Director of the Department Office shall support development of the Strategy through the provision of staff and analytical support.

(C) INTERAGENCY TASK FORCE.—Through active participation in the Interagency Task Force, the Director of the Department Office shall—

(i) based on the analytical capabilities of the Department Office, share analyses of alternative climate change response strategies with other members of the Interagency Task Force to assist all members in understanding—

(I) the scale of the climate change response challenge; and

(II) how the actions of the Federal agencies of the members positively or negatively contribute to climate change solutions; and

(ii) determine how the energy technology research and development program described in subsection

(a)(2)(A) can be designed for maximum impact on the long-term goal of stabilization of greenhouse gas concentrations.

(D) TOOLS, DATA, AND CAPABILITIES.—The Director of the Department Office shall foster the development of tools, data, and capabilities to ensure that—

(i) the United States has a robust capability for evaluating alternative climate change response scenarios; and

(ii) the Department Office provides long-term analytical continuity during the terms of service of successive Presidents.

(E) ADVISORY DUTIES.—The Director of the Department Office shall advise the Secretary on all aspects of climate change response.

(6) ANNUAL REPORTS.—The Director of the Department Office shall prepare an annual report for submission by the Secretary to Congress and the White House Office that—

(A) assesses progress toward meeting the goals of the energy technology research and de-

velopment program described in subsection (a)(2)(A);

(B) assesses the activities of the Department Office;

(C) assesses the contributions of all energy technology research and development programs of the Department (including science programs) to the long-term goal and other requirements of the Strategy specified in section 1015(a); and

(D) makes recommendations for actions by the Department and other Federal agencies to address the components of technology development that are necessary to support the Strategy.

(7) ANALYSIS.—During development of the Strategy, annual reports submitted under paragraph (6), and advice to the Secretary, the Director of the Department Office shall place significant emphasis on the use of objective, quantitative analysis, taking into consideration any associated uncertainties.

(c) STAFF.—The Director of the Department Office shall employ a professional staff of not more than 25 individuals to carry out the duties of the Department Office.

(d) INTERGOVERNMENTAL PERSONNEL AND FELLOWSHIPS.—The Department Office may use the author-

ity provided by the Intergovernmental Personnel Act of 1970 (42 U.S.C. 4701 et seq.), subchapter VI of chapter 33 of title 5, United States Code, and other Departmental personnel authorities, to obtain staff from academia, scientific bodies, nonprofit organizations, industry, and national laboratories, for appointments of a limited term.

(e) RELATIONSHIP TO OTHER DEPARTMENT PROGRAMS.—Each project carried out by the Department Office shall be—

(1) initiated only after consultation with 1 or more other appropriate program offices of the Department that support research and development in areas relating to the project;

(2) managed by the Department Office; and

(3) in the case of a project that reaches a sufficient level of maturity, with the concurrence of the Department Office and an appropriate office described in paragraph (1), transferred to the appropriate office, along with the funds necessary to continue the project to the point at which non-Federal funding can provide substantial support for the project.

(f) ANALYSIS OF STRATEGIC CLIMATE CHANGE RESPONSE.—

(1) IN GENERAL.—

(A) GOAL.—The Department Office shall foster the development and application of advanced computational tools, data, and capabilities that, together with the capabilities of other federal agencies, support integrated assessment of alternative climate change response scenarios and implementation of the Strategy.

(B) PARTICIPATION AND SUPPORT.—Projects supported by the Department Office may include participation of, and be supported by, other Federal agencies that have a role in the development, commercialization, or transfer of energy, transportation, industrial, agricultural, forestry, or other climate change-related technology.

(2) PROGRAMS.—

(A) IN GENERAL.—The Department Office shall—

(i) develop and maintain core analytical competencies and complex, integrated computational modeling capabilities that, together with the capabilities of other federal agencies, are necessary to support the design and implementation of the Strategy; and

(ii) track United States and international progress toward the long-term goal of stabilization of greenhouse gas concentrations.

(B) INTERNATIONAL CARBON DIOXIDE SEQUESTRATION MONITORING AND DATA PROGRAM.—In consultation with Federal, State, academic, scientific, private sector, nongovernmental, tribal, and international carbon capture and sequestration technology programs, the Department Office shall design and carry out an international carbon dioxide sequestration monitoring and data program to collect, analyze, and make available the technical and economic data to ascertain—

(i) whether engineered sequestration and terrestrial sequestration will be acceptable technologies from regulatory, economic, and international perspectives;

(ii) whether carbon dioxide sequestered in geological formations or ocean systems is stable and has inconsequential leakage rates on a geologic time-scale; and

(iii) the extent to which forest, agricultural, and other terrestrial systems are suitable carbon sinks.

(3) AREAS OF EXPERTISE.—

(A) IN GENERAL.—The Department Office shall develop and maintain expertise in integrated assessment, modeling, and related capabilities necessary—

(i) to understand the relationship between natural, agricultural, industrial, energy, and economic systems;

(ii) to design effective research and development programs; and

(iii) to develop and implement the Strategy.

(B) TECHNOLOGY TRANSFER AND DIFFUSION.—The expertise described in clause (i) shall include knowledge of technology transfer and technology diffusion in United States markets and foreign markets.

(4) DISSEMINATION OF INFORMATION.—The Department Office shall ensure, to the maximum extent practicable, that technical and scientific knowledge relating to greenhouse gas emission reduction, avoidance, and sequestration is broadly disseminated

through publications, fellowships, and training programs.

(5) ASSESSMENTS.—In a manner consistent with the Strategy, the Department shall conduct assessments of deployment of climate-friendly technology.

(6) USE OF PRIVATE SECTOR FUNDING.—

(A) IN GENERAL.—The Department Office shall create an operating model that allows for collaboration, division of effort, and cost sharing with industry on individual climate change response projects.

(B) REQUIREMENTS.—Although cost sharing in some cases may be appropriate, the Department Office shall focus on long-term high-risk research and development and should not make industrial partnerships or cost sharing a requirement, if such a requirement would bias the activities of the Department Office toward incremental innovations.

(C) REEVALUATION ON TRANSITION.—At such time as any bold, breakthrough research and development program reaches a sufficient level of technological maturity such that the program is transitioned to a program office of

the Department other than the Department Office, the cost-sharing requirements and criteria applicable to the program should be reevaluated.

(D) PUBLICATION IN FEDERAL REGISTER.—Each cost-sharing agreement entered into under this subparagraph shall be published in the Federal Register.

SEC. 1018. ADDITIONAL OFFICES AND ACTIVITIES.

The Secretary of Agriculture, the Secretary of Transportation, the Secretary of Commerce, the Administrator of the Environmental Protection Agency, and the heads of other Federal agencies may establish such offices and carry out such activities, in addition to those established or authorized by this Act, as are necessary to carry out this Act.

SEC. 1019. UNITED STATES CLIMATE CHANGE RESPONSE STRATEGY REVIEW BOARD.

(a) ESTABLISHMENT.—There is established as an independent establishment within the executive branch the United States Climate Change Response Strategy Review Board.

(b) MEMBERSHIP.—

(1) COMPOSITION.—The Review Board shall consist of 11 members who shall be appointed, not

later than 90 days after the date of enactment of this Act, by the President by and with the advice and consent of the Senate, from among qualified individuals nominated by the National Academy of Sciences in accordance with paragraph (2).

(2) NOMINATIONS.—Not later than 60 days after the date of enactment of this Act, after taking into strong consideration the guidance and recommendations of a broad range of scientific and technical societies that have the capability of recommending qualified individuals, the National Academy of Sciences shall nominate for appointment to the Review Board not fewer than 22 individuals who—

(A) are—

(i) qualified individuals; or

(ii) experts in a field of knowledge specified in section 1014(9)(B); and

(B) as a group represent broad, balanced expertise.

(3) PROHIBITION ON FEDERAL GOVERNMENT EMPLOYMENT.—A member of the Review Board shall not be an employee of the Federal Government.

(4) TERMS; VACANCIES.—

(A) TERMS.—

(i) IN GENERAL.—Subject to clause (ii), each member of the Review Board shall be appointed for a term of 4 years.

(ii) INITIAL TERMS.—

(I) COMMENCEMENT DATE.—The term of each member initially appointed to the Review Board shall commence 120 days after the date of enactment of this title.

(II) TERMINATION DATE.—Of the 11 members initially appointed to the Review Board, 5 members shall be appointed for a term of 2 years and 6 members shall be appointed for a term of 4 years, to be designated by the President at the time of appointment.

(B) VACANCIES.—

(i) IN GENERAL.—A vacancy on the Review Board shall be filled in the manner described in this subparagraph.

(ii) NOMINATIONS BY THE NATIONAL ACADEMY OF SCIENCES.—Not later than 60 days after the date on which a vacancy

commences, the National Academy of Sciences shall—

(I) after taking into strong consideration the guidance and recommendations of a broad range of scientific and technical societies that have the capability of recommending qualified individuals, nominate, from among qualified individuals, not fewer than 2 individuals to fill the vacancy; and

(II) submit the names of the nominees to the President.

(iii) SELECTION.—Not later than 30 days after the date on which the nominations under clause (ii) are submitted to the President, the President shall select from among the nominees an individual to fill the vacancy.

(iv) SENATE CONFIRMATION.—An individual appointed to fill a vacancy on the Review Board shall be appointed by and with the advice and consent of the Senate.

(5) APPLICABILITY OF ETHICS IN GOVERNMENT ACT OF 1978.—A member of the Review Board shall

be deemed to be an individual subject to the Ethics in Government Act of 1978 (5 U.S.C. App.).

(6) CHAIRPERSON; VICE CHAIRPERSON.—The members of the Review Board shall select a Chairperson and a Vice Chairperson of the Review Board from among the members of the Review Board.

(c) DUTIES.—

(1) IN GENERAL.—Not later than 180 days after the date of submission of the initial Strategy under section 1015(b), each updated version of the Strategy under section 1015(c), and each progress report under section 1015(d), the Review Board shall submit to the President, Congress, and the heads of Federal agencies as appropriate a report assessing the adequacy of the Strategy or report.

(2) COMMENTS.—In reviewing the Strategy or a report under paragraph (1), the Review Board shall consider and comment on—

(A) the adequacy of effort and the appropriateness of focus of the totality of all public, private, and public-private sector actions of the United States with respect to the 4 key elements;

(B) the extent to which actions of the United States, with respect to climate change,

complement or leverage international research and other efforts designed to manage global emissions of greenhouse gases, to further the long-term goal of stabilization of greenhouse gas concentrations;

(C) the funding implications of any recommendations made by the Review Board; and

(D)(i) the effectiveness with which each Federal agency is carrying out the responsibilities of the Federal agency with respect to the short-term and long-term greenhouse gas management goals; and

(ii) the adequacy of the budget of each such Federal agency to carry out those responsibilities.

(3) ADDITIONAL RECOMMENDATIONS.—

(A) IN GENERAL.—Subject to subparagraph (B), the Review Board, at the request of the President or Congress, may provide recommendations on additional climate change-related topics.

(B) SECONDARY DUTY.—The provision of recommendations under subparagraph (A) shall be a secondary duty to the primary duty of the Review Board of providing independent review

of the Strategy and the reports under paragraphs (1) and (2).

(d) POWERS.—

(1) HEARINGS.—

(A) IN GENERAL.—On request of the Chairperson or a majority of the members of the Review Board, the Review Board may hold such hearings, meet and act at such times and places, take such testimony, and receive such evidence as the Review Board considers to be appropriate.

(B) ADMINISTRATION OF OATHS.—Any member of the Review Board may administer an oath or affirmation to any witness that appears before the Review Board.

(2) PRODUCTION OF DOCUMENTS.—

(A) IN GENERAL.—On request of the Chairperson or a majority of the members of the Review Board, and subject to applicable law, the Secretary or head of a Federal agency represented on the Interagency Task Force, or a contractor of such an agency, shall provide the Review Board with such records, files, papers, data, and information as are necessary to

respond to any inquiry of the Review Board under this Act.

(B) INCLUSION OF WORK IN PROGRESS.—Subject to applicable law, information obtainable under subparagraph (A)—

(i) shall not be limited to final work products; but

(ii) shall include draft work products and documentation of work in progress.

(3) POSTAL SERVICES.—The Review Board may use the United States mails in the same manner and under the same conditions as other agencies of the Federal Government.

(e) COMPENSATION OF MEMBERS.—A member of the Review Board shall be compensated at a rate equal to the daily equivalent of the annual rate of basic pay prescribed for level IV of the Executive Schedule under section 5315 of title 5, United States Code, for each day (including travel time) during which the member is engaged in the performance of the duties of the Review Board.

(f) TRAVEL EXPENSES.—A member of the Review Board shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for an employee of an agency under subchapter I of chapter 57 of title 5, United States Code, while away from the home or reg-

ular place of business of the member in the performance of the duties of the Review Board.

(g) STAFF.—

(1) IN GENERAL.—The Chairperson of the Review Board may, without regard to the provisions of title 5, United States Code, regarding appointments in the competitive service, appoint and terminate an executive director and such other additional personnel as are necessary to enable the Review Board to perform the duties of the Review Board.

(2) CONFIRMATION OF EXECUTIVE DIRECTOR.—The employment of an executive director shall be subject to confirmation by the Review Board.

(3) COMPENSATION.—

(A) IN GENERAL.—Except as provided in subparagraph (B), the Chairperson of the Review Board may fix the compensation of the executive director and other personnel without regard to the provisions of chapter 51 and subchapter III of chapter 53 of title 5, United States Code, relating to classification of positions and General Schedule pay rates.

(B) MAXIMUM RATE OF PAY.—The rate of pay for the executive director and other personnel shall not exceed the rate payable for

level V of the Executive Schedule under section 5316 of title 5, United States Code.

(h) PROCUREMENT OF TEMPORARY AND INTERMITTENT SERVICES.—The Chairperson of the Review Board may procure temporary and intermittent services in accordance with section 3109(b) of title 5, United States Code, at rates for individuals that do not exceed the daily equivalent of the annual rate of basic pay prescribed for level V of the Executive Schedule under section 5316 of that title.

SEC. 1020. AUTHORIZATION OF APPROPRIATIONS.

(a) WHITE HOUSE OFFICE.—

(1) USE OF AVAILABLE APPROPRIATIONS.—From funds made available to Federal agencies for the fiscal year in which this Title is enacted, the President shall provide such sums as are necessary to carry out the duties of the White House Office under this title until the date on which funds are made available under paragraph (2).

(2) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the White House Office to carry out the duties of the White House Office under this Title $5,000,000 for each of fiscal years 2003 through 2011, to remain available through September 30, 2011.

(b) DEPARTMENT OFFICE.—

(1) USE OF AVAILABLE APPROPRIATIONS.—From funds made available to Federal agencies for the fiscal year in which this title is enacted, the President shall provide such sums as are necessary to carry out the duties of the Department Office under this Title until the date on which funds are made available under paragraph (2).

(2) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Department Office to carry out the duties of the Department Office under this title $4,750,000,000 for the period of fiscal years 2003 through 2011, to remain available through September 30, 2011.

(c) REVIEW BOARD.—

(1) USE OF AVAILABLE APPROPRIATIONS.—From funds made available to Federal agencies for the fiscal year in which this title is enacted, the President shall provide such sums as are necessary to carry out the duties of the Review Board under this title until the date on which funds are made available under paragraph (2).

(2) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Review Board to carry out the duties of the Review Board

under this title $3,000,000 for each of fiscal years 2003 through 2011, to remain available until expended.

(d) ADDITIONAL AMOUNTS.—Amounts authorized to be appropriated under this section shall be in addition to—

(1) amounts made available to carry out the United States Global Change Research Program under the Global Change Research Act of 1990 (15 U.S.C. 2921 et seq.); and

(2) amounts made available under other provisions of law for energy research and development.

Subtitle C—Science and Technology Policy

SEC. 1031. GLOBAL CLIMATE CHANGE IN THE OFFICE OF SCIENCE AND TECHNOLOGY POLICY.

Section 101(b) of the National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. 6601(b)) is amended—

(1) by redesignating paragraphs (7) through (13) as paragraphs (8) through (14), respectively; and

(2) by inserting after paragraph (6) the following:

''(6) improving efforts to understand, assess, predict, mitigate, and respond to global climate change;''.

SEC. 1032. ESTABLISHMENT OF ASSOCIATE DIRECTOR FOR GLOBAL CLIMATE CHANGE.

Section 203 of the National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. 6612) is amended—

(1) by striking ''four'' in the second sentence and inserting ''five''; and

(2) by striking ''title.'' in the second sentence and inserting ''title, one of whom shall be responsible for global climate change science and technology under the Office of Science and Technology Policy.''.

Subtitle D—Miscellaneous Provisions

SEC. 1041. ADDITIONAL INFORMATION FOR REGULATORY REVIEW.

In each case that an agency prepares and submits a Statement of Energy Effects pursuant to Executive Order 13211 of May 18, 2001 (relating to actions concerning regulations that significantly affect energy supply, distribution, or use), or as part of compliance with Executive Order 12866 of September 30, 1993 (relating to regu-

latory planning and review) or its successor, the agency shall also submit an estimate of the change in net annual greenhouse gas emissions resulting from the proposed significant energy action. In the case in which there is an increase in net annual greenhouse gas emissions as a result of the proposed significant energy action, the agency shall indicate what policies or measures will be undertaken to mitigate or offset the increased emissions.

SEC. 1042. GREENHOUSE GAS EMISSIONS FROM FEDERAL FACILITIES.

(a) METHODOLOGY.—

(1) IN GENERAL.—Not later than one year after the date of enactment of this section, the Secretary of Energy, Secretary of Agriculture, Secretary of Commerce, and Administrator of the Environmental Protection Agency shall publish a jointly developed methodology for preparing estimates of annual net greenhouse gas emissions from all Federally owned, leased, or operated facilities and emission sources, including mobile sources.

(2) INDIRECT AND OTHER EMISSIONS.—The methodology under paragraph (1) shall include emissions resulting from any Federal procurement action with an annual Federal expenditure of greater than $100 million, indirect emissions associated with Fed-

eral electricity consumption, and other emissions resulting from Federal actions that the heads of the agencies under paragraph (1) may jointly decide to include in the estimates.

(b) PUBLICATION.—Not later than 18 months after the date of enactment of this section, and annually thereafter, the Secretary of Energy shall publish an estimate of annual net greenhouse gas emissions from all Federally owned, leased, or operated facilities and emission sources, using the methodology published under subsection (a).

TITLE XI—GREENHOUSE GAS DATABASE

SEC. 1101. DEFINITIONS.

In this title:

(1) CONSENSUS.—The term ''consensus'' has the meaning given that term in section 562(2) of title 5, United States Code.

(2) DATABASE.—The term ''database'' means the National Greenhouse Gas Database established under section 1102.

(3) ENTITY.—The term ''entity'' means—

(A) a person located in the United States; or

(B) a public or private entity, to the extent that the entity operates in the United States.

(4) FACILITY.—The term ''facility'' means all buildings, structures, or installations located on any one or more of contiguous or adjacent property or properties under common control of the same entity.

(5) GREENHOUSE GAS.—The term ''greenhouse gas'' means—

(A) carbon dioxide;

(B) methane;

(C) nitrous oxide;

(D) hydrofluororcarbons;

(E) perfluorocarbons; and

(F) sulfur hexafluoride.

(6) DIRECT EMISSIONS.—The term ''direct emissions'' means greenhouse gas emissions from a source that is owned or controlled by an entity.

(7) INDIRECT EMISSIONS.—The term ''indirect emissions'' means greenhouse gas emissions that are a consequence of the activities of an entity but that are emitted from sources owned or controlled by another entity.

(8) CARBON SEQUESTRATION.—The term ''sequestration'' means the capture, long-term separation, isolation, or removal of greenhouse gases from the atmosphere, including through a biological or

geologic method such as reforestation or an underground reservoir.

(9) INTERAGENCY TASK FORCE.—The term ''Interagency Task Force'' means the Interagency Task Force on Greenhouse Gas Database established under section 1103.

(10) SECRETARY.—The term ''Secretary'' means the Secretary of Commerce.

(11) NEGOTIATED RULEMAKING.—The term ''negotiated rulemaking'' has the meaning given that term in section 562(6) of title 5, United States Code.

(12) NEGOTIATED RULEMAKING COMMITTEE.—The term ''negotiated rulemaking committee'' has the meaning given that term in section 562(7) of title 5, United States Code.

SEC. 1102. NATIONAL GREENHOUSE GAS DATABASE.

(a) ESTABLISHMENT.—The Secretary, in consultation with the Interagency Task Force, shall establish, by rule, a database to be known as the National Greenhouse Gas Database to collect, verify, and analyze information on—

(1) greenhouse gas emissions by entities located in the United States; and

(2) greenhouse gas emission reductions by entities based in the United States.

(b) DATABASE COMPONENTS.—The database shall consist of an inventory of greenhouse gas emissions and a registry of greenhouse gas emission reductions.

(c) NEGOTIATED RULEMAKING.—

(1) STAKEHOLDER INVOLVEMENT IN DESIGNING DATABASE REQUIRED.—The Secretary shall carry out the responsibilities under this section through the use of a negotiated rulemaking under subchapter III of title 5, United States Code.

(2) USE OF CONSENSUS.—The Secretary shall use the consensus of the negotiated rulemaking committee with respect to the database as the basis for the rule proposed for notice and comment.

(3) DEADLINE.—If, on the date that is 1 year after the date of publication of the notice under section 564(a) of title 5, United States Code, with regard to the negotiated rulemaking, the negotiated rulemaking committee has not completed its work, the Secretary, in consultation with the Interagency Task Force, shall publish a notice of proposed rulemaking and issue a final rule without regard to this subsection.

(d) REQUIRED ELEMENTS OF RULE.—

(1) MANDATORY REPORTING.—(A) The rule under subsection (a) shall require each entity that exceeds the greenhouse gas emissions threshold in paragraph (2) to annually report to the Secretary, for inclusion in the inventory component of the database, the entity-wide emissions of greenhouse gases in the previous calendar year.

(B) Each report submitted pursuant to the rule shall include:

(i) direct emissions from stationary sources;

(ii) direct emissions from mobile sources owned or operated by a covered entity;

(iii) direct emissions from any land use activities that release significant quantities of greenhouse gases;

(iv) indirect emissions from outsourced activities, contract manufacturing, wastes transferred from the control of an entity, and other relevant instances, as determined to be practicable under the rule; and,

(v) indirect emissions from electricity, heat, and steam, purchased from another entity, as determined to be practicable under the rule.

(2) THRESHOLD FOR REPORTING.—An entity shall not be required to make a report under paragraph (1) unless the total greenhouse gas emissions of the entity in the calendar year for reporting exceeds 1,000 metric tons of carbon dioxide equivalent, or a greater level as determined by the rule.

(3) METHOD OF REPORTING.—The rule under subsection (a) shall require that entity-wide emissions shall be reported at the facility level.

(4) VERIFICATION.—The rule under subsection (a) shall provide for objective and independent assessment of whether a report submitted by an entity accurately reflects the greenhouse gas emissions or emission reductions of the entity.

(5) DATA QUALITY.—The rule under subsection (a) shall establish procedures and protocols needed to—

(A) prevent the reporting of some or all of the same greenhouse gas emissions or emission reductions by more than one reporting entity;

(B) provide for corrections to errors in data submitted to the database;

(C) provide for adjustment to data by reporting entities that have had a significant organizational change (including mergers, acquisi-

tions, and divestiture), in order to maintain comparability among data in the database over time;

(D) provide for adjustments to reflect new technologies or methods for measuring or calculating greenhouse gas emissions; and

(E) account for changes in registration of ownership of emissions reductions resulting from a voluntary private transaction between reporting entities.

(6) AVAILABILITY OF DATA.—The rule under subsection (a) shall require that information in the database be published and made available in electronic format on the Internet, except in cases where the chair determines that publishing or making available the information would reveal a trade secret or disclose information vital to national security.

(7) DATA INFRASTRUCTURE.—The rule under subsection (a) shall ensure that the database established by this Act shall utilize and be integrated with existing data collection and reporting systems to the maximum extent possible and avoid duplication of such systems.

(8) RULE REVISION.—The Secretary, in consultation with the Interagency Task Force, shall re-

view and revise the rule promulgated under subsection (a) every three years, to ensure that it is effective in covering as many sources of greenhouse gases as is practicable.

(e) ADDITIONAL ISSUES TO BE CONSIDERED.—In formulating its consensus with respect to the rule under subsection (a), the negotiated rulemaking committee shall consider the full range of additional issues involved in establishing an effective database, including the following:

(1) INDIRECT EMISSIONS.—The inclusion in the database of information on indirect greenhouse gas emissions, including types of emissions to be covered, types and levels of aggregation of emissions data by a reporting entity, and thresholds for reporting.

(2) UNITS FOR REPORTING.—The appropriate units for reporting each greenhouse gas, and whether to require reporting of emission efficiency rates (including emissions per kilowatt-hour for electricity generators) in addition to actual emissions of greenhouse gases.

(3) REPORTING OF EMISSION BY FEDERAL FACILITIES.—The inclusion in the database of emissions and emission reductions from facilities owned or operated by the United States.

(4) EMISSION REDUCTIONS AND SEQUESTRATION.—The inclusion in the registry portion of the database, on a voluntary basis, of information on greenhouse gas emissions that were reduced or avoided, and on carbon that was sequestered, through any measures, including—

(A) agricultural activities, including management of crop lands, grazing lands, grasslands, and dry lands;

(B) forestry activities that increase carbon sequestration stocks;

(C) improvement in efficiency of energy production, including use of combined heat and power;

(D) fuel switching or use of renewable sources in energy production;

(E) improvements in end-use energy efficiency, including improved vehicle fuel efficiency;

(F) carbon sequestration for long-term storage; and

(G) methane recovery.

(5) INCLUSION OF INTERNATIONAL EMISSION REDUCTIONS.—The inclusion in the registry portion of the database of emission reductions and seques-

tration projects carried out outside the United States by entities based in the United States.

(6) COORDINATION WITH OTHER DATABASES AND ENTITIES.—

(A) coordination and standardization between the database and other greenhouse gas registries at the State or regional level;

(B) approaches to reconciling data and reports under section 1605(b) of the Energy Policy Act of 1992 with the information in the database, including any verification that may be required; and

(C) use and integration of data and reports prepared by the Environmental Protection Agency under sections 103 and 821 of the Clean Air Act, and related programs.

(7) PARTICIPATION BY FARMERS AND SMALL BUSINESS.—Measures to facilitate the participation of farmers and small business in voluntary reporting of emission reductions to the registry.

(8) NON-FEDERAL OPERATION OF THE DATABASE.—The reliability, cost-effectiveness and overall potential for the operation of the database by a non-profit organization.

(f) ENFORCEMENT.—The Attorney General may, at the request of the Secretary, bring a civil action in United States District Court against an entity that fails to comply with a rule promulgated under this section, to impose a civil penalty of not more than $25,000 for each day that the failure to comply continues.

(g) ANNUAL REPORT.—The Secretary shall publish an annual report that—

(1) describes the total greenhouse gas emissions and emission reductions reported to the database; and

(2) provides entity-by-entity and sector-by-sector analyses of the emissions and emission reductions reported.

SEC. 1103. INTERAGENCY TASK FORCE ON GREENHOUSE GAS DATABASE.

(a) ESTABLISHMENT AND MEMBERSHIP.—There is established an Interagency Task Force on Greenhouse Gas Database, which shall be composed of—

(1) the Secretary of Energy;

(2) the Secretary of Agriculture;

(3) the Secretary of the Interior;

(4) the Secretary of Commerce;

(5) the Secretary of Transportation;

(6) the Administrator of the Environmental Protection Agency;

(7) the Director of the Office of Science and Technology Policy in the Executive Office of the President;

(8) the Director of the National Office of Climate Change Response in the Executive Office of the President; and

(9) the Chairman of the Council on Environmental Quality.

(b) CHAIR APPOINTMENT AND TERM.—

(1) INITIAL APPOINTMENT.—Not later than 60 days after the date of enactment of this title, the President shall designate a chair of the Interagency Task Force, who shall serve as Chair for not more than 2 consecutive years, from among the Secretary of Energy and the Administrator of the Environmental Protection Agency.

(2) SUBSEQUENT APPOINTMENTS.—The position of Chair shall alternate between the Secretary of Energy and the Administrator of the Environmental Protection Agency.

(c) DUTIES.—The Interagency Task Force shall regularly advise the Secretary and the Chair on the design, operation, and improvement of the Database.

SEC. 1104. MEASUREMENT AND VERIFICATION.

(a) IN GENERAL.—The Chair, in cooperation with the National Institute of Standards and Technology, shall develop and promulgate—

(1) technologies and methods for measurement and verification of greenhouse gas emissions and emission reductions; and

(2) accounting and reporting standards for reports under section 1102.

(b) BEST PRACTICES.—The technologies, methods, and standards developed under paragraph (1) shall conform, to the maximum extent practicable, to the best practices that have the greatest support of experts in the field.

DIVISION E—ENHANCING RESEARCH, DEVELOPMENT, AND TRAINING

TITLE XII—ENERGY RESEARCH AND DEVELOPMENT PROGRAMS

SEC. 1201. SHORT TITLE.

This division may be cited as the ''Energy Science and Technology Enhancement Act of 2002''.

SEC. 1202. FINDINGS.

The Congress finds the following:

(1) A coherent national energy strategy requires an energy research and development program that supports basic energy research and provides

mechanisms to develop, demonstrate, and deploy new energy technologies in partnership with industry.

(2) An aggressive national energy research, development, demonstration, and technology deployment program is an integral part of a national climate change strategy, because it can reduce—

(A) United States energy intensity by 1.9 percent per year from 1999 to 2020;

(B) United States energy consumption in 2020 by 8 quadrillion Btu from otherwise expected levels; and

(C) United States carbon dioxide emissions from expected levels by 166 million metric tons in carbon equivalent in 2020.

(3) An aggressive national energy research, development, demonstration, and technology deployment program can help maintain domestic United States production of energy, increase United States hydrocarbon reserves by 14 percent, and lower natural gas prices by 20 percent, compared to estimates for 2020.

(4) An aggressive national energy research, development, demonstration, and technology deployment program is needed if United States suppliers

and manufacturers are to compete in future markets for advanced energy technologies.

SEC. 1203. DEFINITIONS.

In this title:

(1) DEPARTMENT.—The term ''Department'' means the Department of Energy.

(2) DEPARTMENTAL MISSION.—The term ''departmental mission'' means any of the functions vested in the Secretary of Energy by the Department of Energy Organization Act (42 U.S.C. 7101 et seq.) or other law.

(3) INSTITUTION OF HIGHER EDUCATION.—The term ''institution of higher education'' has the meaning given that term in section 1201(a) of the Higher Education Act of 1965 (20 U.S.C. 1141(a));

(4) NATIONAL LABORATORY.—The term ''National Laboratory'' means any of the following multipurpose laboratories owned by the Department of Energy—

(A) Argonne National Laboratory;

(B) Brookhaven National Laboratory;

(C) Idaho National Engineering and Environmental Laboratory;

(D) Lawrence Berkeley National Laboratory;

(E) Lawrence Livermore National Laboratory;

(F) Los Alamos National Laboratory;

(G) National Energy Technology Laboratory;

(H) National Renewable Energy Laboratory;

(I) Oak Ridge National Laboratory;

(J) Pacific Northwest National Laboratory; or

(K) Sandia National Laboratory.

(5) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

(6) TECHNOLOGY DEPLOYMENT.—The term ''technology deployment'' means activities to promote acceptance and utilization of technologies in commercial application, including activities undertaken pursuant to section 7 of the Federal Nonnuclear Energy Research and Development Act of 1974 (42 U.S.C. 5906) or section 6 of the Renewable Energy and Energy Efficiency Technology Competitiveness Act of 1989 (42 U.S.C. 12007).

SEC. 1204. CONSTRUCTION WITH OTHER LAWS.

Except as otherwise provided in this title and title XIV, the Secretary shall carry out the research, develop-

ment, demonstration, and technology deployment programs authorized by this title in accordance with the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.), the Federal Nonnuclear Research and Development Act of 1974 (42 U.S.C. 5901 et seq.), the Energy Policy Act of 1992 (42 U.S.C. 13201 et seq.), or any other Act under which the Secretary is authorized to carry out such activities.

Subtitle A—Energy Efficiency

SEC. 1211. ENHANCED ENERGY EFFICIENCY RESEARCH AND DEVELOPMENT.

(a) PROGRAM DIRECTION.—The Secretary shall conduct balanced energy research, development, demonstration, and technology deployment programs to enhance energy efficiency in buildings, industry, power technologies, and transportation.

(b) PROGRAM GOALS.—

(1) ENERGY-EFFICIENT HOUSING.—The goal of the energy-efficient housing program shall be to develop, in partnership with industry, enabling technologies (including lighting technologies), designs, production methods, and supporting activities that will, by 2010—

(A) cut the energy use of new housing by 50 percent, and

(B) reduce energy use in existing homes by 30 percent.

(2) INDUSTRIAL ENERGY EFFICIENCY.—The goal of the industrial energy efficiency program shall be to develop, in partnership with industry, enabling technologies, designs, production methods, and supporting activities that will, by 2010, enable energy-intensive industries such as the following industries to reduce their energy intensity by at least 25 percent:

(A) the wood product manufacturing industry;

(B) the pulp and paper industry;

(C) the petroleum and coal products manufacturing industry;

(D) the mining industry;

(E) the chemical manufacturing industry;

(F) the glass and glass product manufacturing industry;

(G) the iron and steel mills and ferroalloy manufacturing industry;

(H) the primary aluminum production industry;

(I) the foundries industry; and

(J) U.S. agriculture.

(3) TRANSPORTATION ENERGY EFFICIENCY.—The goal of the transportation energy efficiency program shall be to develop, in partnership with industry, technologies that will enable the achievement—

(A) by 2010, passenger automobiles with a fuel economy of 80 miles per gallon;

(B) by 2010, light trucks (classes 1 and 2a) with a fuel economy of 60 miles per gallon;

(C) by 2010, medium trucks and buses (classes 2b through 6 and class 8 transit buses) with a fuel economy, in ton-miles per gallon, that is three times that of year 2000 equivalent vehicles; and

(D) by 2010, heavy trucks (classes 7 and 8) with a fuel economy, in ton-miles per gallon, that is two times that of year 2000 equivalent vehicles.

(4) ENERGY EFFICIENT DISTRIBUTED GENERATION.—The goals of the energy efficient on-site generation program shall be to help remove environmental and regulatory barriers to on-site, or distributed, generation and combined heat and power by developing technologies by 2015 that achieve—

(A) electricity generating efficiencies greater than 40 percent for on-site generation tech-

nologies based upon natural gas, including fuel cells, microturbines, reciprocating engines and industrial gas turbines;

(B) combined heat and power total (electric and thermal) efficiencies of more than 85 percent;

(C) fuel flexibility to include hydrogen, biofuels and natural gas;

(D) near zero emissions of pollutants that form smog and acid rain;

(E) reduction of carbon dioxide emissions by at least 40 percent;

(F) packaged system integration at end user facilities providing complete services in heating, cooling, electricity and air quality; and

(G) increased reliability for the consumer and greater stability for the national electricity grid.

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary for carrying out research, development, demonstration, and technology deployment activities under this subtitle—

(1) $700,000,000 for fiscal year 2003;

(2) $784,000,000 for fiscal year 2004;

(3) $878,000,000 for fiscal year 2005; and

(4) $983,000,000 for fiscal year 2006.

(d) LIMITATION ON USE OF FUNDS.—None of the funds authorized to be appropriated in subsection (c) may be used for the following programs of the Department—

(1) Weatherization Assistance Program;

(2) State Energy Program; or

(3) Federal Energy Management Program.

SEC. 1212. ENERGY EFFICIENCY SCIENCE INITIATIVE.

(a) ESTABLISHMENT AND AUTHORIZATION OF APPROPRIATIONS.—From amounts authorized under section 1211(c), there are authorized to be appropriated not more than $50,000,000 in any fiscal year, for an Energy Efficiency Science Initiative to be managed by the Assistant Secretary in the Department with responsibility for energy conservation under section 203(a)(9) of the Department of Energy Organization Act (42 U.S.C. 7133(a)(9)), in consultation with the Director of the Office of Science, for grants to be competitively awarded and subject to peer review for research relating to energy efficiency.

(b) REPORT.—The Secretary of Energy shall submit to the Committee on Science and the Committee on Appropriations of the United States House of Representatives, and to the Committee on Energy and Natural Resources and the Committee on Appropriations of the United States Senate, an annual report on the activities

of the Energy Efficiency Science Initiative, including a description of the process used to award the funds and an explanation of how the research relates to energy efficiency.

SEC. 1213. NEXT GENERATION LIGHTING INITIATIVE.

(a) ESTABLISHMENT.—There is established in the Department a Next Generation Lighting Initiative to research, develop, and conduct demonstration activities on advanced solid-state lighting technologies based on white light emitting diodes.

(b) OBJECTIVES.—

(1) IN GENERAL.—The objectives of the initiative shall be to develop, by 2011, advanced solid-state lighting technologies based on white light emitting diodes that, compared to incandescent and fluorescent lighting technologies, are—

(A) longer lasting;

(B) more energy-efficient; and

(C) cost-competitive.

(2) INORGANIC WHITE LIGHT EMITTING DIODE.—The objective of the initiative with respect to inorganic white light emitting diodes shall be to develop an inorganic white light emitting diode that has an efficiency of 160 lumens per watt and a 10–year lifetime.

(3) ORGANIC WHITE LIGHT EMITTING DIODE.—The objective of the initiative with respect to organic white light emitting diodes shall be to develop an organic white light emitting diode with an efficiency of 100 lumens per watt with a 5-year lifetime that—

(A) illuminates over a full color spectrum;

(B) covers large areas over flexible surfaces; and

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

(c) CONSORTIUM.—

(1) IN GENERAL.—The Secretary shall initiate and manage basic and manufacturing-related research on advanced solid-state lighting technologies based on white light emitting diodes for the initiative, in cooperation with the Next Generation Lighting Initiative Consortium.

(2) COMPOSITION.—The consortium shall be composed of firms, national laboratories, and other entities so that the consortium is representative of the United States solid state lighting research, development, and manufacturing expertise as a whole.

(3) FUNDING.—The consortium shall be funded by—

(A) participation fees; and

(B) grants provided under subsection (e)(1).

(4) ELIGIBILITY.—To be eligible to receive a grant under subsection (e)(1), the consortium shall—

(A) enter into a consortium participation agreement that—

(i) is agreed to by all participants; and

(ii) describes the responsibilities of participants, participation fees, and the scope of research activities; and

(B) develop an annual program plan.

(5) INTELLECTUAL PROPERTY.—Participants in the consortium shall have royalty-free nonexclusive rights to use intellectual property derived from consortium research conducted under subsection (e)(1).

(d) PLANNING BOARD.—

(1) IN GENERAL.—Not later than 90 days after the establishment of the consortium, the Secretary shall establish and appoint the members of a planning board, to be known as the ''Next Generation Lighting Initiative Planning Board'', to assist the Secretary in carrying out this section.

(2) COMPOSITION.—The planning board shall be composed of—

(A) 4 members from universities, national laboratories, and other individuals with expertise in advanced solid-state lighting and technologies based on white light emitting diodes; and

(B) 3 members from a list of not less than 6 nominees from industry submitted by the consortium.

(3) STUDY.—

(A) IN GENERAL.—Not later than 90 days after the date on which the Secretary appoints members to the planning board, the planning board shall complete a study on strategies for the development and implementation of advanced solid-state lighting technologies based on white light emitting diodes.

(B) REQUIREMENTS.—The study shall develop a comprehensive strategy to implement, through the initiative, the use of white light emitting diodes to increase energy efficiency and enhance United States competitiveness.

(C) IMPLEMENTATION.—As soon as practicable after the study is submitted to the Sec-

retary, the Secretary shall implement the initiative in accordance with the recommendations of the planning board.

(4) TERMINATION.—The planning board shall terminate upon completion of the study under paragraph (3).

(e) GRANTS.—

(1) FUNDAMENTAL RESEARCH.—The Secretary, through the consortium, shall make grants to conduct basic and manufacturing-related research related to advanced solid-state lighting technologies based on white light emitting diode technologies.

(2) TECHNOLOGY DEVELOPMENT AND DEMONSTRATION.—The Secretary shall enter into grants, contracts, and cooperative agreements to conduct or promote technology research, development, or demonstration activities. In providing funding under this paragraph, the Secretary shall give preference to participants in the consortium.

(3) CONTINUING ASSESSMENT.—The consortium, in collaboration with the Secretary, shall formulate annual operating and performance objectives, develop technology roadmaps, and recommend research and development priorities for the initiative. The Secretary may also establish or utilize advisory

committees, or enter into appropriate arrangements with the National Academy of Sciences, to conduct periodic reviews of the initiative. The Secretary shall consider the results of such assessment and review activities in making funding decisions under paragraphs (1) and (2) of this subsection.

(4) TECHNICAL ASSISTANCE.—The National Laboratories shall cooperate with and provide technical assistance to persons carrying out projects under the initiative.

(5) AUDITS.—

(A) IN GENERAL.—The Secretary shall retain an independent, commercial auditor to determine the extent to which funds made available under this section have been expended in a manner that is consistent with the objectives under subsection (b) and, in the case of funds made available to the consortium, the annual program plan of the consortium under subsection (c)(4)(B).

(B) REPORTS.—The auditor shall submit to Congress, the Secretary, and the Comptroller General of the United States an annual report containing the results of the audit.

(6) APPLICABLE LAW.—Grants, contracts, and cooperative agreements under this section shall not be subject to the Federal Acquisition Regulation.

(f) PROTECTION OF INFORMATION.—Information obtained by the Federal Government on a confidential basis under this section shall be considered to constitute trade secrets and commercial or financial information obtained from a person and privileged or confidential under section 552(b)(4) of title 5, United States Code.

(g) AUTHORIZATION OF APPROPRIATIONS.—In addition to amounts authorized under section 1211(c), there are authorized to be appropriated for activities under this section $50,000,000 for each of fiscal years 2003 through 2011.

(h) DEFINITIONS.—In this section:

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

(2) CONSORTIUM.—The term ''consortium'' means the Next Generation Lighting Initiative Consortium under subsection (c).

(3) INITIATIVE.—The term ''initiative'' means the Next Generation Lighting Initiative established under subsection (a).

(4) INORGANIC WHITE LIGHT EMITTING DIODE.—The term ''inorganic white light emitting diode'' means an inorganic semiconducting package that produces white light using externally applied voltage.

(5) ORGANIC WHITE LIGHT EMITTING DIODE.—The term ''organic white light emitting diode'' means an organic semiconducting compound that produces white light using externally applied voltage.

(6) WHITE LIGHT EMITTING DIODE.—The term ''white light emitting diode'' means—

(A) an inorganic white light emitting diode; or

(B) an organic white light emitting diode.

SEC. 1214. RAILROAD EFFICIENCY.

(a) ESTABLISHMENT.—The Secretary shall, in cooperation with the Secretaries of Transportation and Defense, and the Administrator of the Environmental Protection Agency, establish a public-private research partnership involving the federal government, railroad carriers, locomotive manufacturers, and the Association of American Railroads. The goal of the initiative shall include de-

veloping and demonstrating locomotive technologies that increase fuel economy, reduce emissions, improve safety, and lower costs.

(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out the requirements of this section $60,000,000 for fiscal year 2003 and $70,000,000 for fiscal year 2004.

Subtitle B—Renewable Energy

SEC. 1221. ENHANCED RENEWABLE ENERGY RESEARCH AND DEVELOPMENT.

(a) PROGRAM DIRECTION.—The Secretary shall conduct balanced energy research, development, demonstration, and technology deployment programs to enhance the use of renewable energy.

(b) PROGRAM GOALS.—

(1) WIND POWER.—The goals of the wind power program shall be to develop, in partnership with industry, a variety of advanced wind turbine designs and manufacturing technologies that are cost-competitive with fossil-fuel generated electricity, with a focus on developing advanced low wind speed technologies that, by 2007, will enable the expanding utilization of widespread class 3 and 4 winds.

(2) PHOTOVOLTAICS.—The goal of the photovoltaic program shall be to develop, in partnership

with industry, total photovoltaic systems with installed costs of $4000 per peak kilowatt by 2005 and $2000 per peak kilowatt by 2015.

(3) SOLAR THERMAL ELECTRIC SYSTEMS.—The goal of the solar thermal electric systems program shall be to develop, in partnership with industry, solar power technologies (including baseload solar power) that are competitive with fossil-fuel generated electricity by 2015, by combining high-efficiency and high-temperature receivers with advanced thermal storage and power cycles.

(4) BIOMASS-BASED POWER SYSTEMS.—The goal of the biomass program shall be to develop, in partnership with industry, integrated power-generating systems, advanced conversion, and feedstock technologies capable of producing electric power that is cost-competitive with fossil-fuel generated electricity by 2010, together with the production of fuels, chemicals, and other products under paragraph (6).

(5) GEOTHERMAL ENERGY.—The goal of the geothermal program shall be to develop, in partnership with industry, technologies and processes based on advanced hydrothermal systems and advanced

heat and power systems, including geothermal heat pump technology, with a specific focus on—

(A) improving exploration and characterization technology to increase the probability of drilling successful wells from 20 percent to 40 percent by 2006;

(B) reducing the cost of drilling by 2008 to an average cost of $150 per foot; and

(C) developing enhanced geothermal systems technology with the potential to double the useable geothermal resource base.

(6) BIOFUELS.—The goal of the biofuels program shall be to develop, in partnership with industry, advanced biochemical and thermochemical conversion technologies capable of making liquid and gaseous fuels from cellulosic feedstocks, that are price-competitive with gasoline or diesel, in either internal combustion engines or fuel cell vehicles, by 2010.

(7) HYDROGEN-BASED ENERGY SYSTEMS.—The goals of the hydrogen program shall be to support research and development on technologies for production, storage, and use of hydrogen, including fuel cells and, specifically, fuel-cell vehicle development activities under section 1211.

(8) HYDROPOWER.—The goal of the hydropower program shall be to develop, in partnership with industry, a new generation of turbine technologies that are less damaging to fish and aquatic ecosystems.

(9) ELECTRIC ENERGY SYSTEMS AND STORAGE.—The goals of the electric energy and storage program shall be to develop, in partnership with industry—

(A) generators and transmission, distribution, and storage systems that combine high capacity with high efficiency;

(B) technologies to interconnect distributed energy resources with electric power systems, comply with any national interconnection standards, have a minimum 10-year useful life;

(C) advanced technologies to increase the average efficiency of electric transmission facilities in rural and remote areas, giving priority for demonstrations to advanced transmission technologies that are being or have been field tested;

(D) the use of new transmission technologies, including composite conductor materials, advanced protection devices, controllers,

and other cost-effective methods and technologies;

(E) the use of superconducting materials in power delivery equipment such as transmission and distribution cables, transformers, and generators;

(F) energy management technologies for enterprises with aggregated loads and distributed generation, such as power parks;

(G) economic and system models to measure the costs and benefits of imporoved system performance;

(H) hybrid distributed energy systems to optimize two or more distributed or on-site generation technologies; and

(I) real-time transmission and distribution system control technologies that provide for continual exchange of information between generation, transmission, distribution, and end-user facilities.

(c) SPECIAL PROJECTS.—In carrying out this section, the Secretary shall demonstrate—

(1) the use of advanced wind power technology, biomass, geothermal energy systems, and other re-

newable energy technologies to assist in delivering electricity to rural and remote locations; and

(2) the combined use of wind power and coal gasification technologies.

(d) FINANCIAL ASSISTANCE TO RURAL AREAS.—In carrying out special projects under subsection (c), the Secretary may provide financial assistance to rural electric cooperatives and other rural entities.

(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary for carrying out research, development, demonstration, and technology deployment activities under this subtitle—

(1) $500,000,000 for fiscal year 2003;

(2) $595,000,000 for fiscal year 2004;

(3) $683,000,000 for fiscal year 2005; and

(4) $733,000,000 for fiscal year 2006.

SEC. 1222. BIOENERGY PROGRAMS.

(a) PROGRAM DIRECTION.—The Secretary shall carry out research, development, demonstration, and technology development activities related to bioenergy, including programs under paragraphs (4) and (6) of section 1221(b).

(b) AUTHORIZATION OF APPROPRIATIONS.—

(1) BIOPOWER ENERGY SYSTEMS.—From amounts authorized under section 1221(e), there are

authorized to be appropriated to the Secretary for biopower energy systems—

(A) $60,300,000 for fiscal year 2003;

(B) $69,300,000 for fiscal year 2004;

(C) $79,600,000 for fiscal year 2005; and

(D) $86,250,000 for fiscal year 2006.

(2) BIOFUELS ENERGY SYSTEMS.—From amounts authorized under section 1221(e), there are authorized to be appropriated to the Secretary for biofuels energy systems—

(A) $57,500,000 for fiscal year 2003;

(B) $66,125,000 for fiscal year 2004;

(C) $76,000,000 for fiscal year 2005; and

(D) $81,400,000 for fiscal year 2006.

(3) INTEGRATED BIOENERGY RESEARCH AND DEVELOPMENT.—The Secretary may use funds authorized under paragraph (1) or (2) for programs, projects, or activities that integrate applications for both biopower and biofuels, including cross-cutting research and development in feedstocks and economic analysis.

SEC. 1223. HYDROGEN RESEARCH AND DEVELOPMENT.

(a) SHORT TITLE.—This section may be cited as the ''Hydrogen Future Act of 2002''.

(b) PURPOSES.—Section 102(b) of the Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 (42 U.S.C. 12401(b)) is amended by striking paragraphs (2) and (3) and inserting the following:

''(2) to direct the Secretary to develop a program of technology assessment, information transfer, and education in which Federal agencies, members of the transportation, energy, and other industries, and other entities may participate;

''(3) to develop methods of hydrogen production that minimize production of greenhouse gases, including developing—

''(A) efficient production from non-renewable resources; and

''(B) cost-effective production from renewable resources such as biomass, geothermal, wind, and solar energy; and

''(4) to foster the use of hydrogen as a major energy source, including developing the use of hydrogen in—

''(A) isolated villages, islands, and communities in which other energy sources are not available or are very expensive; and

''(B) foreign economic development, to avoid environmental damage from increased fossil fuel use.''.

(c) REPORT TO CONGRESS.—Section 103 of the Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 (42 U.S.C. 12402) is amended—

(1) in subsection (a), by striking ''January 1, 1999,'' and inserting ''1 year after the date of enactment of the Hydrogen Future Act of 2002, and biennially thereafter,'';

(2) in subsection (b), by striking paragraphs (1) and (2) and inserting the following:

''(1) an analysis of hydrogen-related activities throughout the United States Government to identify productive areas for increased intragovernmental collaboration;

''(2) recommendations of the Hydrogen Technical Advisory Panel established by section 108 for any improvements in the program that are needed, including recommendations for additional legislation; and

''(3) to the extent practicable, an analysis of State and local hydrogen-related activities.''; and

(3) by adding at the end the following:

''(c) COORDINATION PLAN.—The report under subsection (a) shall be based on a comprehensive coordination plan for hydrogen energy prepared by the Secretary in consultation with other Federal agencies.''.

(d) HYDROGEN RESEARCH AND DEVELOPMENT.—Section 104 of the Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 (42 U.S.C. 12403) is amended—

(1) in subsection (b)(1), by striking ''marketplace;'' and inserting ''marketplace, including foreign markets, particularly where an energy infrastructure is not well developed;'';

(2) in subsection (e), by striking ''this chapter'' and inserting ''this Act'';

(3) by striking subsection (g) and inserting the following:

''(g) COST SHARING.—

''(1) INABILITY TO FUND ENTIRE COST.—The Secretary shall not consider a proposal submitted by a person from industry unless the proposal contains a certification that—

''(A) reasonable efforts to obtain non-Federal funding in the amount necessary to pay 100 percent of the cost of the project have been made; and

''(B) non-Federal funding in that amount could not reasonably be obtained.

''(2) NON-FEDERAL SHARE.—

''(A) IN GENERAL.—The Secretary shall require a commitment from non-Federal sources of at least 25 percent of the cost of the project.

''(B) REDUCTION OR ELIMINATION.—The Secretary may reduce or eliminate the cost-sharing requirement under subparagraph (A) for the proposed research and development project, including for technical analyses, economic analyses, outreach activities, and educational programs, if the Secretary determines that reduction or elimination is necessary to achieve the objectives of this Act.

(4) in subsection (i), by striking ''this chapter'' and inserting ''this Act''.

(e) DEMONSTRATIONS.—Section 105 of the Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 (42 U.S.C. 12404) is amended by striking subsection (c) and inserting the following:

''(c) NON-FEDERAL SHARE.—

''(1) IN GENERAL.—Except as provided in paragraph (2), the Secretary shall require a commitment

from non-Federal sources of at least 50 percent of the costs directly relating to a demonstration project under this section.

''(2) REDUCTION.—The Secretary may reduce the non-Federal requirement under paragraph (1) if the Secretary determines that the reduction is appropriate considering the technological risks involved in the project and is necessary to meet the objectives of this Act.''.

(f) TECHNOLOGY TRANSFER.—Section 106 of the Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 (42 U.S.C. 12405) is amended—

(1) in subsection (a)—

(A) in the first sentence—

(i) by striking ''The Secretary shall conduct a program designed to accelerate wider application'' and inserting the following:

''(1) IN GENERAL.—The Secretary shall conduct a program designed to—

''(A) accelerate wider application''; and

(ii) by striking ''private sector'' and inserting ''private sector; and

''(B) accelerate wider application of hydrogen technologies in foreign countries to increase the global market for the technologies and foster global economic development without harmful environmental effects.''; and

(B) in the second sentence, by striking ''The Secretary'' and inserting the following:

''(2) ADVICE AND ASSISTANCE.—The Secretary''; and

(2) in subsection (b)—

(A) in paragraph (2), by redesignating subparagraphs (A) through (D) as clauses (i) through (iv), respectively, and indenting appropriately;

(B) by redesignating paragraphs (1) and (2) as subparagraphs (A) and (B), respectively, and indenting appropriately;

(C) by striking ''The Secretary, in'' and inserting the following:

''(1) IN GENERAL.—The Secretary, in'';

(D) by striking ''The information'' and inserting the following:

''(2) ACTIVITIES.—The information''; and

(E) in paragraph (1) (as designated by subparagraph (C))—

(i) in subparagraph (A) (as redesignated by subparagraph (B)), by striking ''an inventory'' and inserting ''an update of the inventory''; and

(ii) in subparagraph (B) (as redesignated by subparagraph (B)), by striking ''develop'' and all that follows through ''to improve'' and inserting ''develop with the National Aeronautics and Space Administration, the Department of Energy, other Federal agencies as appropriate, and industry, an information exchange program to improve''.

(g) TECHNICAL PANEL REVIEW.—

(1) IN GENERAL.—Section 108 of the Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 (42 U.S.C. 12407) is amended—

(A) in subsection (b)—

(i) by striking ''(b) MEMBERSHIP.—The technical panel shall be appointed'' and inserting the following:

''(b) MEMBERSHIP.—

''(1) IN GENERAL.—The technical panel shall be comprised of not fewer than 9 nor more than 15 members appointed'';

(ii) by striking the second sentence and inserting the following:

''(2) TERMS.—

''(A) IN GENERAL.—The term of a member of the technical panel shall be not more than 3 years.

''(B) STAGGERED TERMS.—The Secretary may appoint members of the technical panel in a manner that allows the terms of the members serving at any time to expire at spaced intervals so as to ensure continuity in the functioning of the technical panel.

''(C) REAPPOINTMENT.—A member of the technical panel whose term expires may be reappointed.''; and

(iii) by striking ''The technical panel shall have a chairman,'' and inserting the following:

''(3) CHAIRPERSON.—The technical panel shall have a chairperson,''; and

(B) in subsection (d)—

(i) in the matter preceding paragraph (1), by striking ''the following items'';

(ii) in paragraph (1), by striking ''and'' at the end;

(iii) in paragraph (2), by striking the period at the end and inserting ''; and''; and

(iv) by adding at the end the following:

''(3) the plan developed by the interagency task force under section 202(b) of the Hydrogen Future Act of 1996.''.

(2) NEW APPOINTMENTS.—Not later than 180 days after the date of enactment of this Act, the Secretary—

(A) shall review the membership composition of the Hydrogen Technical Advisory Panel; and

(B) may appoint new members consistent with the amendments made by subsection (a).

(h) AUTHORIZATION OF APPROPRIATIONS.—Section 109 of the Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 (42 U.S.C. 12408) is amended—

(1) in paragraph (8), by striking ''and'';

(2) in paragraph (9), by striking the period and inserting a semicolon; and

(3) by adding at the end the following:

''(10) $65,000,000 for fiscal year 2003;

''(11) $70,000,000 for fiscal year 2004;

''(12) $75,000,000 for fiscal year 2005; and

''(13) $80,000,000 for fiscal year 2006.''.

(i) FUEL CELLS.—

(1) INTEGRATION OF FUEL CELLS WITH HYDROGEN PRODUCTION SYSTEMS.—Section 201 of the Hydrogen Future Act of 1996 is amended—

(A) in subsection (a)—

(i) by striking ''(a) Not later than 180 days after the date of enactment of this section, and subject'' and inserting ''(a) IN GENERAL.—Subject''; and

(B) by striking ''with—'' and all that follows and inserting ''into Federal, State, and local government facilities for stationary and transportation applications.'';

(2) in subsection (b), by striking ''gas is'' and inserting ''basis'';

(3) in subsection (c)(2), by striking ''systems described in subsections (a)(1) and (a)(2)'' and inserting ''projects proposed''; and

(4) by striking subsection (d) and inserting the following:

''(d) NON-FEDERAL SHARE.—

''(1) IN GENERAL.—Except as provided in paragraph (2), the Secretary shall require a commitment from non-Federal sources of at least 50 percent of the costs directly relating to a demonstration project under this section.

''(2) REDUCTION.—The Secretary may reduce the non-Federal requirement under paragraph (1) if the Secretary determines that the reduction is appropriate considering the technological risks involved in the project and is necessary to meet the objectives of this Act.''.

(2) COOPERATIVE AND COST-SHARING AGREEMENTS; INTEGRATION OF TECHNICAL INFORMATION.—Title II of the Hydrogen Future Act of 1996 (42 U.S.C. 12403 note; Public Law 104–271) is amended by striking section 202 and inserting the following:

''SEC. 202. INTERAGENCY TASK FORCE.

''(a) ESTABLISHMENT.—Not later than 120 days after the date of enactment of this section, the Secretary shall establish an interagency task force led by a Deputy

Assistant Secretary of the Department of Energy and comprised of representatives of—

''(1) the Office of Science and Technology Policy;

''(2) the Department of Transportation;

''(3) the Department of Defense;

''(4) the Department of Commerce (including the National Institute for Standards and Technology);

''(5) the Environmental Protection Agency;

''(6) the National Aeronautics and Space Administration; and

''(7) other agencies as appropriate.

''(b) DUTIES.—

''(1) IN GENERAL.—The task force shall develop a plan for carrying out this title.

''(2) FOCUS OF PLAN.—The plan shall focus on development and demonstration of integrated systems and components for—

''(A) hydrogen production, storage, and use in Federal, State, and local government buildings and vehicles;

''(B) hydrogen-based infrastructure for buses and other fleet transportation systems that include zero-emission vehicles; and

''(C) hydrogen-based distributed power generation, including the generation of combined heat, power, and hydrogen.

''SEC. 203. COOPERATIVE AND COST-SHARING AGREEMENTS.

''The Secretary shall enter into cooperative and cost-sharing agreements with Federal, State, and local agencies for participation by the agencies in demonstrations at facilities administered by the agencies, with the aim of integrating high efficiency hydrogen systems using fuel cells into the facilities to provide immediate benefits and promote a smooth transition to hydrogen as an energy source.

''SEC. 204. INTEGRATION AND DISSEMINATION OF TECHNICAL INFORMATION.

''The Secretary shall—

''(1) integrate all the technical information that becomes available as a result of development and demonstration projects under this title;

''(2) make the information available to all Federal and State agencies for dissemination to all interested persons; and

''(3) foster the exchange of generic, nonproprietary information and technology developed under this title among industry, academia, and Federal, State, and local governments, to help the United

States economy attain the economic benefits of the information and technology.

''SEC. 205. AUTHORIZATION OF APPROPRIATIONS.

''There are authorized to be appropriated, for activities under this title—

''(1) $25,000,000 for fiscal year 2003;

''(2) $30,000,000 for fiscal year 2004;

''(3) $35,000,000 for fiscal year 2005; and

''(4) $40,000,000 for fiscal year 2006.''.

Subtitle C—Fossil Energy

SEC. 1231. ENHANCED FOSSIL ENERGY RESEARCH AND DEVELOPMENT.

(a) PROGRAM DIRECTION.—The Secretary shall conduct a balanced energy research, development, demonstration, and technology deployment program to enhance fossil energy.

(b) PROGRAM GOALS.—

(1) CORE FOSSIL RESEARCH AND DEVELOPMENT.—The goals of the core fossil research and development program shall be to reduce emissions from fossil fuel use by developing technologies, including precombustion technologies, by 2015 with the capability of realizing—

(A) electricity generating efficiencies of 60 percent for coal and 75 percent for natural gas;

(B) combined heat and power thermal efficiencies of more than 85 percent;

(C) fuels utilization efficiency of 75 percent for the production of liquid transportation fuels from coal;

(D) near zero emissions of mercury and of emissions that form fine particles, smog, and acid rain;

(E) reduction of carbon dioxide emissions by at least 40 percent through efficiency improvements and 100 percent with sequestration; and

(F) improved reliability, efficiency, reductions of air pollutant emissions, or reductions in solid waste disposal requirements.

(2) OFFSHORE OIL AND NATURAL GAS RESOURCES.—The goal of the offshore oil and natural gas resources program shall be to develop technologies to—

(A) extract methane hydrates in coastal waters of the United States, and

(B) develop natural gas and oil reserves in the ultra-deepwater of the Central and Western Gulf of Mexico.

(3) ONSHORE OIL AND NATURAL GAS RESOURCES.—The goal of the onshore oil and natural gas resources program shall be to advance the science and technology available to domestic onshore petroleum producers, particularly independent operators, through—

(A) advances in technology for exploration and production of domestic petroleum resources, particularly those not accessible with current technology;

(B) improvement in the ability to extract hydrocarbons from known reservoirs and classes of reservoirs; and

(C) development of technologies and practices that reduce the threat to the environment from petroleum exploration and production and decrease the cost of effective environmental compliance.

(4) TRANSPORTATION FUELS.—The goals of the transportation fuels program shall be to increase the price elasticity of oil supply and demand by focusing research on—

(A) reducing the cost of producing transportation fuels from coal and natural gas; and

(B) indirect liquefaction of coal and biomass.

(c) AUTHORIZATION OF APPROPRIATIONS.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary for carrying out research, development, demonstration, and technology deployment activities under this section—

(A) $485,000,000 for fiscal year 2003;

(B) $508,000,000 for fiscal year 2004;

(C) $532,000,000 for fiscal year 2005; and

(D) $558,000,000 for fiscal year 2006.

(2) LIMITS ON USE OF FUNDS.—

(A) None of the funds authorized in paragraph (1) may be used for—

(i) Fossil energy environmental restoration;

(ii) Import/export authorization;

(iii) Program direction; or

(iv) General plant projects.

(B) COAL-BASED PROJECTS.—The coal-based projects funded under this section shall be consistent with the goals in subsection (b). The program shall emphasize carbon capture

and sequestration technologies and gasification technologies, including gasification combined cycle, gasification fuel cells, gasification co-production, hybrid gasification/combustion, or other technology with the potential to address the goals in subparagraphs (D) or (E) of subsection (b)(1).

SEC. 1232. POWER PLANT IMPROVEMENT INITIATIVE.

(a) PROGRAM DIRECTION.—The Secretary shall conduct a balanced energy research, development, demonstration, and technology deployment program to demonstrate commercial applications of advanced lignite and coal-based technologies applicable to new or existing power plants (including co-production plants) that advance the efficiency, environmental performance, and cost-competitiveness substantially beyond technologies that are in operation or have been demonstrated by the date of enactment of this subtitle.

(b) TECHNICAL MILESTONES.—

(1) IN GENERAL.—The Secretary shall set technical milestones specifying efficiency and emissions levels that projects shall be designed to achieve. The milestones shall become more restrictive over the life of the program.

(2) 2010 EFFICIENCY MILESTONES.—The milestones shall be designed to achieve by 2010 interim thermal efficiency of—

(A) 45 percent for coal of more than 9,000 Btu;

(B) 44 percent for coal of 7,000 to 9,000 Btu; and (C) 42 percent for coal of less than 7,000 Btu.

(3) 2020 EFFICIENCY MILESTONES.—The milestones shall be designed to achieve by 2020 thermal efficiency of—

(A) 60 percent for coal of more than 9,000 Btu;

(B) 59 percent for coal of 7,000 to 9,000 Btu; and

(C) 57 percent for coal of less than 7,000 Btu.

(4) EMISSIONS MILESTONES.—The milestones shall include near zero emissions of mercury and greenhouse gases and of emissions that form fine particles, smog, and acid rain.

(5) REGIONAL AND QUALITY DIFFERENCES.—The Secretary may consider regional and quality differences in developing the efficiency milestones.

(c) PROJECT CRITERIA.—The demonstration activities proposed to be conducted at a new or existing coal-based electric generation unit having a nameplate rating of not less than 100 megawatts, excluding a co-production plant, shall include at least one of the following—

(1) a means of recycling or reusing a significant portion of coal combustion wastes produced by coal-based generating units, excluding practices that are commercially available by the date of enactment of this subtitle;

(2) a means of capture and sequestering emissions, including greenhouse gases, in a manner that is more effective and substantially below the cost of technologies that are in operation or that have been demonstrated by the date of enactment of this subtitle;

(3) a means of controlling sulfur dioxide and nitrogen oxide or mercury in a manner that improves environmental performance beyond technologies that are in operation or that have been demonstrated by the date of enactment of this subtitle, and

(A) in the case of an existing unit, achieve an overall thermal design efficiency improvement compared to the efficiency of the unit as operated, of not less than—

(i) 7 percent for coal of more than 9,000 Btu;

(ii) 6 percent for coal of 7,000 to 9,000 Btu; or

(iii) 4 percent for coal of less than 7,000 Btu; or

(B) in the case of a new unit, achieve the efficiency milestones set for in subsection (b) compared to the efficiency of a typical unit as operated on the date of enactment of this subtitle, before any retrofit, repowering, replacement, or installation.

(d) STUDY.—The Secretary, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of the Interior, and interested entities (including coal producers, industries using coal, organizations to promote coal or advanced coal technologies, environmental organizations, and organizations representing workers), shall conduct an assessment that identifies performance criteria that would be necessary for coal-based technologies to meet, to enable future reliance on coal in an environmentally sustainable manner for electricity generation, use as a chemical feedstock, and use as a transportation fuel.

(e) AUTHORIZATION OF APPROPRIATIONS.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary for carrying out activities under this section $200,000,000 for each of fiscal years 2003 through 2011.

(2) LIMITATION ON FUNDING OF PROJECTS.—Eighty percent of the funding under this section shall be limited to—

(A) carbon capture and sequestration technologies; or

(B) gasification technologies, including gasification combined cycle, gasification fuel cells, gasification co-production, or hybrid gasification/combustion, or

(C) other technology either by itself or in conjunction with other technologies has the potential to achieve near zero emissions.

SEC. 1233. RESEARCH AND DEVELOPMENT FOR ADVANCED SAFE AND EFFICIENT COAL MINING TECHNOLOGIES.

(a) ESTABLISHMENT.—The Secretary of Energy shall establish a cooperative research partnership involving appropriate Federal agencies, coal producers, including associations, equipment manufacturers, universities with mining engineering departments, and other relevant entities to—

(1) develop mining research priorities identified by the Mining Industry of the Future Program and in the recommendations from relevant reports of the National Academy of Sciences on mining technologies;

(2) establish a process for conducting joint industry-government research and development; and

(3) expand mining research capabilities at institutions of higher education.

(b) AUTHORIZATION OF APPROPRIATIONS.—

(1) IN GENERAL.—There are authorized to be appropriated to carry out activities under this section, $12,000,000 in fiscal year 2003 and $15,000,000 in fiscal year 2004.

(2) LIMIT ON USE OF FUNDS.—Not less than 20 percent of any funds appropriated in a given fiscal year under this subsection shall be dedicated to research carried out at institutions of higher education.

SEC. 1234. ULTRA-DEEPWATER AND UNCONVENTIONAL RESOURCE EXPLORATION AND PRODUCTION TECHNOLOGIES.

(a) DEFINITIONS.—In this section:

(1) ADVISORY COMMITTEE.—The term ''Advisory Committee'' means the Ultra-Deepwater and

Unconventional Resource Technology Advisory Committee established under subsection (c).

(2) AWARD.—The term ''award'' means a cooperative agreement, contract, award or other types of agreement as appropriate.

(3) DEEPWATER.—The term ''deepwater'' means a water depth that is greater than 200 but less than 1,500 meters.

(4) ELIGIBLE AWARD RECIPIENT.—The term ''eligible award recipient'' includes—

(A) a research institution;

(B) an institution of higher education;

(C) a corporation; and

(D) a managing consortium formed among entities described in subparagraphs (A) through (C).

(5) INSTITUTION OF HIGHER EDUCATION.—The term ''institution of higher education'' has the meaning given the term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

(6) MANAGING CONSORTIUM.—The term ''managing consortium'' means an entity that—

(A) exists as of the date of enactment of this section;

(B)(i) is an organization described in section 501(c)(3) of the Internal Revenue Code of 1986; and

(ii) is exempt from taxation under section 501(a) of that Code;

(C) is experienced in planning and managing programs in natural gas or other petroleum exploration and production research, development, and demonstration; and

(D) has demonstrated capabilities and experience in representing the views and priorities of industry, institutions of higher education and other research institutions in formulating comprehensive research and development plans and programs.

(7) PROGRAM.—The term ''program'' means the program of research, development, and demonstration established under subsection (b)(1)(A).

(8) ULTRA-DEEPWATER.—The term ''ultra-deepwater'' means a water depth that is equal to or greater than 1,500 meters.

(9) ULTRA-DEEPWATER ARCHITECTURE.—The term ''ultra-deepwater architecture'' means the integration of technologies to explore and produce nat-

ural gas or petroleum products located at ultra-deepwater depths.

(10) ULTRA-DEEPWATER RESOURCE.—The term ''ultra-deepwater resource'' means natural gas or any other petroleum resource (including methane hydrate) located in an ultra-deepwater area.

(11) UNCONVENTIONAL RESOURCE.—The term ''unconventional resource'' means natural gas or any other petroleum resource located in a formation on physically or economically inaccessible land currently available for lease for purposes of natural gas or other petroleum exploration or production.

(b) ULTRA-DEEPWATER AND UNCONVENTIONAL EXPLORATION AND PRODUCTION PROGRAM.—

(1) ESTABLISHMENT.—

(A) IN GENERAL.—The Secretary shall establish a program of research into, and development and demonstration of, ultra-deepwater resource and unconventional resource exploration and production technologies.

(B) LOCATION; IMPLEMENTATION.—The program under this subsection shall be carried out—

(i) in areas on the outer Continental Shelf that, as of the date of enactment of this section, are available for leasing; and

(ii) on unconventional resources.

(2) COMPONENTS.—The program shall include one or more programs for long-term research into—

(A) new deepwater ultra-deepwater resource and unconventional resource exploration and production technologies; or

(B) environmental mitigation technologies for production of ultra-deepwater resource and unconventional resource.

(c) ADVISORY COMMITTEE.—

(1) ESTABLISHMENT.—Not later than 30 days after the date of enactment of this section, the Secretary shall establish an advisory committee to be known as the ''Ultra-Deepwater and Unconventional Resource Technology Advisory Committee''.

(2) MEMBERSHIP.—

(A) COMPOSITION.—Subject to subparagraph (B), the advisory committee shall be composed of 7 members appointed by the Secretary that—

(i) have extensive operational knowledge of and experience in the natural gas

and other petroleum exploration and production industry; and

(ii) are not Federal employees or employees of contractors to a federal agency.

(B) EXPERTISE.—Of the members of the advisory committee appointed under subparagraph (A)—

(i) at least 4 members shall have extensive knowledge of ultra-deepwater resource exploration and production technologies;

(ii) at least 3 members shall have extensive knowledge of unconventional resource exploration and production technologies.

(3) DUTIES.—The advisory committee shall advise the Secretary in the implementation of this section.

(4) COMPENSATION.—A member of the advisory committee shall serve without compensation but shall receive travel expenses, including per diem in lieu of subsistence, in accordance with applicable provisions under subchapter I of chapter 57 of title 5, United States Code.

(d) AWARDS.—

(1) TYPES OF AWARDS.—

(A) ULTRA-DEEPWATER RESOURCES.—

(i) IN GENERAL.—The Secretary shall make awards for research into, and development and demonstration of, ultra-deepwater resource exploration and production technologies—

(I) to maximize the value of the ultra-deepwater resources of the United States;

(II) to increase the supply of ultra-deepwater resources by lowering the cost and improving the efficiency of exploration and production of such resources; and

(III) to improve safety and minimize negative environmental impacts of that exploration and production.

(ii) ULTRA-DEEPWATER ARCHITECTURE.—In furtherance of the purposes described in clause (i), the Secretary shall, where appropriate, solicit proposals from a managing consortium to develop and demonstrate next-generation architecture for ultra-deepwater resource production.

(B) UNCONVENTIONAL RESOURCES.—The Secretary shall make awards—

(i) to carry out research into, and development and demonstration of, technologies to maximize the value of unconventional resources; and

(ii) to develop technologies to simultaneously—

(I) increase the supply of unconventional resources by lowering the cost and improving the efficiency of exploration and production of unconventional resources; and

(II) improve safety and minimize negative environmental impacts of that exploration and production.

(2) CONDITIONS.—An award made under this subsection shall be subject to the following conditions:

(A) MULTIPLE ENTITIES.—If an award recipient is composed of more than one eligible organization, the recipient shall provide a signed contract, agreed to by all eligible organizations comprising the award recipient, that defines, in a manner that is consistent with all

applicable law in effect as of the date of the contract, all rights to intellectual property for—

(i) technology in existence as of that date; and

(ii) future inventions conceived and developed using funds provided under the award.

(B) COMPONENTS OF APPLICATION.—An application for an award for a demonstration project shall describe with specificity any intended commercial applications of the technology to be demonstrated.

(C) COST SHARING.—Non-federal cost sharing shall be in accordance with section 1403.

(e) PLAN AND FUNDING.—

(1) IN GENERAL.—The Secretary, and where appropriate, a managing consortium under subsection (d)(1)(A)(ii), shall formulate annual operating and performance objectives, develop multi-year technology roadmaps, and establish research and development priorities for the funding of activities under this section which will serve as guidelines for making awards including cost-matching objectives.

(2) INDUSTRY INPUT.—In carrying out this program, the Secretary shall promote maximum industry input through the use of managing consortia or other organizations in planning and executing the research areas and conducting workshops or reviews to ensure that this program focuses on industry problems and needs.

(f) AUDITING.—

(1) IN GENERAL.—The Secretary shall retain an independent, commercial auditor to determine the extent to which funds authorized by this section, provided through a managing consortium, are expended in a manner consistent with the purposes of this section.

(2) REPORTS.—The auditor retained under paragraph (1) shall submit to the Secretary, and the Secretary shall transmit to the appropriate congressional committees, an annual report that describes—

(A) the findings of the auditor under paragraph (1); and

(B) a plan under which the Secretary may remedy any deficiencies identified by the auditor.

(g) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary such sums as may be necessary to carry out this section.

(h) TERMINATION OF AUTHORITY.—The authority provided by this section shall terminate on September 30, 2009.

(i) SAVINGS PROVISION.—Nothing in this section is intended to displace, duplicate or diminish any previously authorized research activities of the Department of Energy.

SEC. 1235. RESEARCH AND DEVELOPMENT FOR NEW NATURAL GAS TRANSPORTATION TECHNOLOGIES.

The Secretary of Energy shall conduct a comprehensive five-year program for research, development and demonstration to improve the reliability, efficiency, safety and integrity of the natural gas transportation and distribution infrastructure and for distributed energy resources (including microturbines, fuel cells, advanced engine-generators, gas turbines, reciprocating engines, hybrid power generation systems, and all ancillary equipment for dispatch, control and maintenance).

SEC. 1236. AUTHORIZATION OF APPROPRIATIONS FOR OFFICE OF ARCTIC ENERGY.

There are authorized to be appropriated to the Secretary for the Office of Arctic Energy under section 3197 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law 106–398) such sums as may be necessary, but not to exceed $25,000,000 for each of fiscal years 2003 through 2011.

Subtitle D—Nuclear Energy

SEC. 1241. ENHANCED NUCLEAR ENERGY RESEARCH AND DEVELOPMENT.

(a) PROGRAM DIRECTION.—The Secretary shall conduct an energy research, development, demonstration, and technology deployment program to enhance nuclear energy.

(b) PROGRAM GOALS.—The program shall—

(1) support research related to existing United States nuclear power reactors to extend their lifetimes and increase their reliability while optimizing their current operations for greater efficiencies;

(2) examine advanced proliferation-resistant and passively safe reactor designs, new reactor designs with higher efficiency, lower cost, and improved safety, proliferation-resistant and high burn-up nuclear fuels, minimization of generation of radioactive materials, improved nuclear waste manage-

ment technologies, and improved instrumentation science;

(3) attract new students and faculty to the nuclear sciences and nuclear engineering and related fields (including health physics and nuclear and radiochemistry) through—

(A) university-based fundamental research for existing faculty and new junior faculty;

(B) support for the re-licensing of existing training reactors at universities in conjunction with industry; and

(C) completing the conversion of existing training reactors with proliferation resistant fuels that are low enriched and to adapt those reactors to new investigative uses;

(4) maintain a national capability and infrastructure to produce medical isotopes and ensure a well trained cadre of nuclear medicine specialists in partnership with industry;

(5) ensure that our nation has adequate capability to power future satellite and space missions; and

(6) maintain, where appropriate through a prioritization process, a balanced research infra-

structure so that future research programs can use these facilities.

(c) AUTHORIZATION OF APPROPRIATIONS.—

(1) CORE NUCLEAR RESEARCH PROGRAMS.—There are authorized to be appropriated to the Secretary for carrying out research, development, demonstration, and technology deployment activities under subsection (b)(1) through (3)—

(A) $100,000,000 for fiscal year 2003;

(B) $110,000,000 for fiscal year 2004;

(C) $120,000,000 for fiscal year 2005; and

(D) $130,000,000 for fiscal year 2006.

(2) SUPPORTING NUCLEAR ACTIVITIES.—There are authorized to be appropriated to the Secretary for carrying out activities under subsection (b)(4) through (6), as well as nuclear facilities management and program direction—

(A) $200,000,000 for fiscal year 2003;

(B) $202,000,000 for fiscal year 2004;

(C) $207,000,000 for fiscal year 2005; and

(D) $212,000,000 for fiscal year 2006.

SEC. 1242. UNIVERSITY NUCLEAR SCIENCE AND ENGINEERING SUPPORT.

(a) ESTABLISHMENT.—The Secretary shall support a program to maintain the nation's human resource in-

vestment 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.

(b) DUTIES.—In carrying out the program under this section, the Secretary shall—

(1) develop a graduate and undergraduate fellowship program to attract new and talented students;

(2) assist universities in recruiting and retaining new faculty in the nuclear sciences and engineering through a Junior Faculty Research Initiation Grant Program;

(3) support fundamental nuclear sciences and engineering research through the Nuclear Engineering Education Research Program;

(4) encourage collaborative nuclear research between industry, national laboratories and universities through the Nuclear Energy Research Initiative; and

(5) support communication and outreach related to nuclear science and engineering.

(c) MAINTAINING UNIVERSITY RESEARCH AND TRAINING REACTORS AND ASSOCIATED INFRASTRUCTURE.—Activities under this section may include:

(1) converting research reactors to low-enrichment fuels, upgrading operational instrumentation, and sharing of reactors among universities;

(2) providing technical assistance, in collaboration with the U.S. nuclear industry, in re-licensing and upgrading training reactors as part of a student training program;

(3) providing funding for reactor improvements as part of a focused effort that emphasizes research, training, and education.

(d) UNIVERSITY-NATIONAL LABORATORY INTERACTIONS.—The Secretary shall develop—

(1) a sabbatical fellowship program for university professors to spend extended periods of time at National Laboratories in the areas of nuclear science and technology; and

(2) a visiting scientist program in which National Laboratory staff can spend time in academic nuclear science and engineering departments. The Secretary may provide for fellowships for students to spend time at National Laboratories in the area of nuclear science with a member of the Laboratory staff acting as a mentor.

(e) OPERATING AND MAINTENANCE COSTS.—Funding for a research project provided under this section may

be used to offset a portion of the operating and maintenance costs of a university research reactor used in the research project, on a cost-shared basis with the university.

(f) AUTHORIZATION OF APPROPRIATIONS.—From amounts authorized under section 1241(c)(1), the following amounts are authorized for activities under this section—

(1) $33,000,000 for fiscal year 2003;

(2) $37,900,000 for fiscal year 2004;

(3) $43,600,000 for fiscal year 2005; and

(4) $50,100,000 for fiscal year 2006.

SEC. 1243. NUCLEAR ENERGY RESEARCH INITIATIVE.

(a) ESTABLISHMENT.—The Secretary shall support a Nuclear Energy Research Initiative for grants for research relating to nuclear energy.

(b) AUTHORIZATION OF APPROPRIATIONS.—From amounts authorized under section 1241(c), there are authorized to be appropriated to the Secretary for activities under this section such sums as are necessary for each fiscal year.

SEC. 1244. NUCLEAR ENERGY PLANT OPTIMIZATION PROGRAM.

(a) ESTABLISHMENT.—The Secretary shall support a Nuclear Energy Plant Optimization Program for grants

to improve nuclear energy plant reliability, availability, and productivity. Notwithstanding section 1403, the program shall require industry cost-sharing of at least 50 percent and be subject to annual review by the Nuclear Energy Research Advisory Committee of the Department.

(b) AUTHORIZATION OF APPROPRIATIONS.—From amounts authorized under section 1241(c), there are authorized to be appropriated to the Secretary for activities under this section such sums as are necessary for each fiscal year.

SEC. 1245. NUCLEAR ENERGY TECHNOLOGY DEVELOPMENT PROGRAM.

(a) ESTABLISHMENT.—The Secretary shall support a Nuclear Energy Technology Development Program to develop a technology roadmap to design and develop new nuclear energy powerplants in the United States.

(b) GENERATION IV REACTOR STUDY.—The Secretary shall, as part of the program under subsection (a), also conduct a study of Generation IV nuclear energy systems, including development of a technology roadmap and performance of research and development necessary to make an informed technical decision regarding the most promising candidates for commercial deployment. The study shall examine advanced proliferation-resistant and passively safe reactor designs, new reactor designs with

higher efficiency, lower cost and improved safety, proliferation-resistant and high burn-up fuels, minimization of generation of radioactive materials, improved nuclear waste management technologies, and improved instrumentation science. Not later than December 31, 2002, the Secretary shall submit to Congress a report describing the results of the study.

(c) AUTHORIZATION OF APPROPRIATIONS.—From amounts authorized to be appropriated under section 1241(c), there are authorized to be appropriated to the Secretary for activities under this section such sums as are necessary for each fiscal year.

Subtitle E—Fundamental Energy Science

SEC. 1251. ENHANCED PROGRAMS IN FUNDAMENTAL ENERGY SCIENCE.

(a) PROGRAM DIRECTION.—The Secretary, acting through the Office of Science, shall—

(1) conduct a comprehensive program of fundamental research, including research on chemical sciences, physics, materials sciences, biological and environmental sciences, geosciences, engineering sciences, plasma sciences, mathematics, and advanced scientific computing;

(2) maintain, upgrade and expand the scientific user facilities maintained by the Office of Science and ensure that they are an integral part of the departmental mission for exploring the frontiers of fundamental science;

(3) maintain a leading-edge research capability in the energy-related aspects of nanoscience and nanotechnology, advanced scientific computing and genome research; and

(4) ensure that its fundamental science programs, where appropriate, help inform the applied research and development programs of the Department.

(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary for carrying out research, development, demonstration, and technology deployment activities under this subtitle—

(1) $3,785,000,000 for fiscal year 2003;

(2) $4,153,000,000 for fiscal year 2004;

(3) $4,586,000,000 for fiscal year 2005; and

(4) $5,000,000,000 for fiscal year 2006.

SEC. 1252. NANOSCALE SCIENCE AND ENGINEERING RESEARCH.

(a) ESTABLISHMENT.—The Secretary, acting through the Office of Science, shall support a program of

research and development in nanoscience and nanoengineering consistent with the Department's statutory authorities related to research and development. The program shall include efforts to further the understanding of the chemistry, physics, materials science and engineering of phenomena on the scale of 1 to 100 nanometers.

(b) DUTIES OF THE OFFICE OF SCIENCE.—In carrying out the program under this section, the Office of Science shall—

(1) support both individual investigators and multidisciplinary teams of investigators;

(2) pursuant to subsection (c), develop, plan, construct, acquire, or operate special equipment or facilities for the use of investigators conducting research and development in nanoscience and nanoengineering;

(3) support technology transfer activities to benefit industry and other users of nanoscience and nanoengineering; and

(4) coordinate research and development activities with industry and other federal agencies.

(c) NANOSCIENCE AND NANOENGINEERING RESEARCH CENTERS AND MAJOR INSTRUMENTATION.—

(1) AUTHORIZATION.—From amounts authorized to be appropriated under section 1251(b), the

amounts specified under subsection (d)(2) shall, subject to appropriations, be available for projects to develop, plan, construct, acquire, or operate special equipment, instrumentation, or facilities for investigators conducting research and development in nanoscience and nanoengineering.

(2) PROJECTS.—Projects under paragraph (1) may include the measurement of properties at the scale of 1 to 100 nanometers, manipulation at such scales, and the integration of technologies based on nanoscience or nanoengineering into bulk materials or other technologies.

(3) FACILITIES.—Facilities under paragraph (1) may include electron microcharacterization facilities, microlithography facilities, scanning probe facilities and related instrumentation science.

(4) COLLABORATION.—The Secretary shall encourage collaborations among universities, laboratories and industry at facilities under this subsection. At least one facility under this subsection shall have a specific mission of technology transfer to other institutions and to industry.

(d) AUTHORIZATION OF APPROPRIATIONS.—

(1) TOTAL AUTHORIZATION.—From amounts authorized to be appropriated under section 1251(b),

the following amounts are authorized for activities under this section—

(A) $270,000,000 for fiscal year 2003;

(B) $290,000,000 for fiscal year 2004;

(C) $310,000,000 for fiscal year 2005; and

(D) $330,000,000 for fiscal year 2006.

(2) NANOSCIENCE AND NANOENGINEERING RESEARCH CENTERS AND MAJOR INSTRUMENTATION.—Of the amounts under paragraph (1), the following amounts are authorized to carry out subsection (c)—

(A) $135,000,000 for fiscal year 2003;

(B) $150,000,000 for fiscal year 2004;

(C) $120,000,000 for fiscal year 2005; and

(D) $100,000,000 for fiscal year 2006.

SEC. 1253. ADVANCED SCIENTIFIC COMPUTING FOR ENERGY MISSIONS.

(a) ESTABLISHMENT.—The Secretary, acting through the Office of Science, shall 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.

(b) DUTIES OF THE OFFICE OF SCIENCE.—In carrying out the program under this section, the Office of Science shall—

(1) advance basic science through computation by developing software to solve grand challenge science problems on new generations of computing platforms,

(2) enhance the foundations for scientific computing by developing the basic mathematical and computing systems software needed to take full advantage of the computing capabilities of computers with peak speeds of 100 teraflops or more, some of which may be unique to the scientific problem of interest,

(3) enhance national collaboratory and networking capabilities by developing software to integrate geographically separated researchers into effective research teams and to facilitate access to and movement and analysis of large (petabyte) data sets, and

(4) maintain a robust scientific computing hardware infrastructure to ensure that the computing resources needed to address DOE missions are available; explore new computing approaches and technologies that promise to advance scientific computing.

(c) HIGH-PERFORMANCE COMPUTING ACT PROGRAM.—Section 203(a) of the High-Performance Computing Act of 1991 (15 U.S.C. 5523(a)) is amended—

(1) in paragraph (3), by striking ''and'';

(2) in paragraph (4), by striking the period and inserting ''; and''; and

(3) by adding after paragraph (4) the following:

''(5) conduct an integrated program of research, development, and provision of facilities to develop and deploy to scientific and technical users the high-performance computing and collaboration tools needed to fulfill the statutory missions of the Department of Energy in conducting basic and applied energy research.''.

(d) COORDINATION WITH THE DOE NATIONAL NUCLEAR SECURITY AGENCY ACCELERATED STRATEGIC COMPUTING INITIATIVE AND OTHER NATIONAL COMPUTING PROGRAMS.—The Secretary shall ensure that this program, to the extent feasible, is integrated and consistent with—

(1) the Accelerated Strategic Computing Initiative of the National Nuclear Security Agency; and

(2) other national efforts related to advanced scientific computing for science and engineering.

(e) AUTHORIZATION OF APPROPRIATIONS.—From amounts authorized under section 1251(b), the following amounts are authorized for activities under this section—

(1) $285,000,000 for fiscal year 2003;

(2) $300,000,000 for fiscal year 2004;

(3) $310,000,000 for fiscal year 2005; and

(4) $320,000,000 for fiscal year 2006.

SEC. 1254. FUSION ENERGY SCIENCES PROGRAM AND PLANNING.

(a) OVERALL PLAN FOR FUSION ENERGY SCIENCES PROGRAM.—

(1) IN GENERAL.—Not later than 6 months after the date of enactment of this subtitle, the Secretary, after consultation with the Fusion Energy Sciences Advisory Committee, shall develop and transmit to the Congress a plan to ensure a strong scientific base for the Fusion Energy Sciences Program within the Office of Science and to enable the experiments described in subsections (b) and (c).

(2) OBJECTIVES OF PLAN.—The plan under this subsection shall include as its objectives—

(A) to ensure that existing fusion research facilities and equipment are more fully utilized with appropriate measurements and control tools;

(B) to ensure a strengthened fusion science theory and computational base;

(C) to encourage and ensure that the selection of and funding for new magnetic and inertial fusion research facilities is based on scientific innovation and cost effectiveness;

(D) to improve the communication of scientific results and methods between the fusion science community and the wider scientific community;

(E) to ensure that adequate support is provided to optimize the design of the magnetic fusion burning plasma experiments referred to in subsections (b) and (c); and

(F) to ensure that inertial confinement fusion facilities are utilized to the extent practicable for the purpose of inertial fusion energy research and development.

(b) PLAN FOR UNITED STATES FUSION EXPERIMENT.—

(1) IN GENERAL.—The Secretary, after consultation with the Fusion Energy Sciences Advisory Committee, shall develop a plan for construction in the United States of a magnetic fusion burning plasma experiment for the purpose of accelerating sci-

entific understanding of fusion plasmas. The Secretary shall request a review of the plan by the National Academy of Sciences and shall transmit the plan and the review to the Congress by July 1, 2004.

(2) REQUIREMENTS OF PLAN.—The plan described in paragraph (1) shall—

(A) address key burning plasma physics issues; and

(B) include specific information on the scientific capabilities of the proposed experiment, the relevance of these capabilities to the goal of practical fusion energy, and the overall design of the experiment including its estimated cost and potential construction sites.

(c) PLAN FOR PARTICIPATION IN AN INTERNATIONAL EXPERIMENT.—In addition to the plan described in subsection (b), the Secretary, after consultation with the Fusion Energy Sciences Advisory Committee, may also develop a plan for United States participation in an international burning plasma experiment for the same purpose, whose construction is found by the Secretary to be highly likely and where United States participation is cost-effective relative to the cost and scientific benefits of a domestic experiment described in subsection

(b). If the Secretary elects to develop a plan under this subsection, he shall include the information described in subsection (b)(2), and an estimate of the cost of United States participation in such an international experiment. The Secretary shall request a review by the National Academy of Sciences of a plan developed under this subsection, and shall transmit the plan and the review to the Congress no later than July 1, 2004.

(d) AUTHORIZATION FOR RESEARCH AND DEVELOPMENT.—The Secretary, through the Office of Science, may conduct any research and development necessary to fully develop the plans described in this section.

(e) AUTHORIZATION OF APPROPRIATIONS.—From amounts authorized under section 1251(b) for fiscal year 2003, $335,000,000 are authorized for fiscal year 2003 for activities under this section and for activities of the Fusion Energy Sciences Program.

Subtitle F—Energy, Safety, and Environmental Protection

SEC. 1261. CRITICAL ENERGY INFRASTRUCTURE PROTECTION RESEARCH AND DEVELOPMENT.

(a) IN GENERAL.—The Secretary shall carry out a research, development, demonstration and technology deployment program, in partnership with industry, on critical energy infrastructure protection, consistent with the

roles and missions outlined for the Secretary in Presidential Decision Directive 63, entitled ''Critical Infrastructure Protection''. The program shall have the following goals:

(1) Increase the understanding of physical and information system disruptions to the energy infrastructure that could result in cascading or widespread regional outages.

(2) Develop energy infrastructure assurance ''best practices'' through vulnerability and risk assessments.

(3) Protect against, mitigate the effect of, and improve the ability to recover from disruptive incidents within the energy infrastructure.

(b) PROGRAM SCOPE.—The program under subsection (a) shall include research, development, deployment, technology demonstration for—

(1) analysis of energy infrastructure interdependencies to quantify the impacts of system vulnerabilities in relation to each other;

(2) probabilistic risk assessment of the energy infrastructure to account for unconventional and terrorist threats;

(3) incident tracking and trend analysis tools to assess the severity of threats and reported incidents

to the energy infrastructure; and (4) integrated multi-sensor, warning and mitigation technologies to detect, integrate, and localize events affecting the energy infrastructure including real time control to permit the reconfiguration of energy delivery systems.

(c) REGIONAL COORDINATION.—The program under this section shall cooperate with Departmental activities to promote regional coordination under section 102 of this Act, to ensure that the technologies and assessments developed by the program are transferred in a timely manner to State and local authorities, and to the energy industries.

(d) COORDINATION WITH INDUSTRY RESEARCH ORGANIZATIONS.—The Secretary may enter into grants, contracts, and cooperative agreements with industry research organizations to facilitate industry participation in research under this section and to fulfill applicable cost-sharing requirements.

(e) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Secretary to carry out this section $10,000,000 for each of fiscal years 2003 through 2006.

(f) CRITICAL ENERGY INFRASTRUCTURE FACILITY DEFINED.—For purposes of this section, the term ''crit-

ical energy infrastructure facility'' means a physical or cyber-based system or service for the generation, transmission or distribution of electrical energy, or the production, refining, transportation, or storage of petroleum, natural gas, or petroleum product, the incapacity or destruction of which would have a debilitating impact on the defense or economic security of the United States. The term shall not include a facility that is licensed by the Nuclear Regulatory Commission under section 103 or 104b of the Atomic Energy Act of 1954 (42 U.S.C. 2133 and 2134(b)).

SEC. 1262. PIPELINE INTEGRITY, SAFETY, AND RELIABILITY RESEARCH AND DEVELOPMENT.

(a) IN GENERAL.—The Secretary of Transportation, in coordination with the Secretary of Energy, shall develop and implement an accelerated cooperative program of research and development to ensure the integrity of natural gas and hazardous liquid pipelines. This research and development program shall include materials inspection techniques, risk assessment methodology, and information systems surety.

(b) PURPOSE.—The purpose of the cooperative research program shall be to promote research and development to—

(1) ensure long-term safety, reliability and service life for existing pipelines;

(2) expand capabilities of internal inspection devices to identify and accurately measure defects and anomalies;

(3) develop inspection techniques for pipelines that cannot accommodate the internal inspection devices available on the date of enactment;

(4) develop innovative techniques to measure the structural integrity of pipelines to prevent pipeline failures;

(5) develop improved materials and coatings for use in pipelines;

(6) improve the capability, reliability, and practicality of external leak detection devices;

(7) identify underground environments that might lead to shortened service life;

(8) enhance safety in pipeline siting and land use;

(9) minimize the environmental impact of pipelines;

(10) demonstrate technologies that improve pipeline safety, reliability, and integrity;

(11) provide risk assessment tools for optimizing risk mitigation strategies; and

(12) provide highly secure information systems for controlling the operation of pipelines.

(c) AREAS.—In carrying out this section, the Secretary of Transportation, in coordination with the Secretary of Energy, shall consider research and development on natural gas, crude oil, and petroleum product pipelines for—

(1) early crack, defect, and damage detection, including real-time damage monitoring;

(2) automated internal pipeline inspection sensor systems;

(3) land use guidance and set back management along pipeline rights-of-way for communities;

(4) internal corrosion control;

(5) corrosion-resistant coatings;

(6) improved cathodic protection;

(7) inspection techniques where internal inspection is not feasible, including measurement of structural integrity;

(8) external leak detection, including portable real-time video imaging technology, and the advancement of computerized control center leak detection systems utilizing real-time remote field data input;

(9) longer life, high strength, non-corrosive pipeline materials;

(10) assessing the remaining strength of existing pipes;

(11) risk and reliability analysis models, to be used to identify safety improvements that could be realized in the near term resulting from analysis of data obtained from a pipeline performance tracking initiative;

(12) identification, monitoring, and prevention of outside force damage, including satellite surveillance; and

(13) any other areas necessary to ensuring the public safety and protecting the environment.

(d) RESEARCH AND DEVELOPMENT PROGRAM PLAN.—Within 240 days after the date of enactment of this section, the Secretary of Transportation, in coordination with the Secretary of Energy and the Pipeline Integrity Technical Advisory Committee, shall prepare and submit to the Congress a five-year program plan to guide activities under this section. In preparing the program plan, the Secretary shall consult with appropriate representatives of the natural gas, crude oil, and petroleum product pipeline industries to select and prioritize appropriate project proposals. The Secretary may also seek the advice of utilities, manufacturers, institutions of higher learning, Federal agencies, the pipeline research institutions, na-

tional laboratories, State pipeline safety officials, environmental organizations, pipeline safety advocates, and professional and technical societies.

(e) IMPLEMENTATION.—The Secretary of Transportation shall have primary responsibility for ensuring the five-year plan provided for in subsection (d) is implemented as intended by this section. In carrying out the research, development, and demonstration activities under this section, the Secretary of Transportation and the Secretary of Energy may use, to the extent authorized under applicable provisions of law, contracts, cooperative agreements, cooperative research and development agreements under the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701 et seq.), grants, joint ventures, other transactions, and any other form of agreement available to the Secretary consistent with the recommendations of the Advisory Committee.

(f) REPORTS TO CONGRESS.—The Secretary of Transportation shall report to the Congress annually as to the status and results to date of the implementation of the research and development program plan. The report shall include the activities of the Departments of Transportation and Energy, the natural laboratories, universities, and any other research organizations, including industry research organizations.

(g) PIPELINE INTEGRITY TECHNICAL ADVISORY COMMITTEE.—

(1) ESTABLISHMENT.—The Secretary of Transportation shall enter into appropriate arrangements with the National Academy of Sciences to establish and manage the Pipeline Integrity Technical Advisory Committee for the purpose of advising the Secretary of Transportation and the Secretary of Energy on the development and implementation of the research and development program plan under subsection (d). The Advisory Committee shall have an ongoing role in evaluating the progress and results of the research, development, and demonstration carried out under this section.

(2) MEMBERSHIP.—The National Academy of Sciences shall appoint the members of the Pipeline Integrity Technical Advisory Committee after consultation with the Secretary of Transportation and the Secretary of Energy. Members appointed to the Advisory Committee should have the necessary qualifications to provide technical contributions to the purposes of the Advisory Committee.

(h) AUTHORIZATION OF APPROPRIATIONS.—

(1) There are authorized to be appropriated to the Secretary of Transportation for carrying out this

section $3,000,000, to be derived from user fees under section 60301 of title 49, United States Code, for each of the fiscal years 2003 through 2006.

(2) Of the amounts available in the Oil Spill Liability Trust Fund established by section 9509 of the Internal Revenue Code of 1986 (26 U.S.C. 9509), $3,000,000 shall be transferred to the Secretary of Transportation, as provided in appropriation Acts, to carry out programs for detection, prevention and mitigation of oil spills under this section for each of the fiscal years 2003 through 2006.

(3) There are authorized to be appropriated to the Secretary of Energy for carrying out this section such sums as may be necessary for each of the fiscal years 2003 through 2006.

SEC. 1263. RESEARCH AND DEMONSTRATION FOR REMEDIATION OF GROUNDWATER FROM ENERGY ACTIVITIES.

(a) IN GENERAL.—The Secretary shall carry out a research, development, demonstration, and technology deployment program to improve methods for environmental restoration of groundwater contaminated by energy activities, including oil and gas production, surface and underground mining of coal, and in-situ extraction of energy resources.

(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out this section $10,000,000 for each of fiscal years 2003 through 2006.

TITLE XIII—CLIMATE CHANGE-RELATED RESEARCH AND DEVELOPMENT

Subtitle A—Department of Energy Programs

SEC. 1301. PROGRAM GOALS.

The goals of the research, development, demonstration, and technology deployment programs under this subtitle shall be to—

(1) provide a sound scientific understanding of the human and natural forces that influence the Earth's climate system, particularly those forces related to energy production and use;

(2) help mitigate climate change from human activities related to energy production and use; and

(3) reduce, avoid, or sequester emissions of greenhouse gases in furtherance of the goals of the United National Framework Convention on Climate Change, done at New York on May 9, 1992, in a manner that does not result in serious harm to the U.S. economy.

SEC. 1302. DEPARTMENT OF ENERGY GLOBAL CHANGE SCIENCE RESEARCH.

(a) PROGRAM DIRECTION.—The Secretary, acting through the Office of Science, shall conduct a comprehensive research program to understand and address the effects of energy production and use on the global climate system.

(b) PROGRAM ELEMENTS.—

(1) CLIMATE MODELING.—The Secretary shall—

(A) conduct observational and analytical research to acquire and interpret the data needed to describe the radiation balance from the surface of the Earth to the top of the atmosphere;

(B) determine the factors responsible for the Earth's radiation balance and incorporate improved understanding of such factors in climate models;

(C) improve the treatment of aerosols and clouds in climate models;

(D) reduce the uncertainty in decade-to-century model-based projections of climate change; and

(E) increase the availability and utility of climate change simulations to researchers and

policy makers interested in assessing the relationship between energy and climate change.

(2) CARBON CYCLE.—The Secretary shall—

(A) carry out field research and modeling activities—

(i) to understand and document the net exchange of carbon dioxide between major terrestrial ecosystems and the atmosphere; or

(ii) to evaluate the potential of proposed methods of carbon sequestration;

(B) develop and test carbon cycle models; and

(C) acquire data and develop and test models to simulate and predict the transport, transformation, and fate of energy-related emissions in the atmosphere.

(3) ECOLOGICAL PROCESSES.—The Secretary shall carry out long-term experiments of the response of intact terrestrial ecosystems to—

(A) alterations in climate and atmospheric composition; or

(B) land-use changes that affect ecosystem extent and function.

(4) INTEGRATED ASSESSMENT.—The Secretary shall develop and improve methods and tools for integrated analyses of the climate change system from emissions of aerosols and greenhouse gases to the consequences of these emissions on climate and the resulting effects of human-induced climate change on economic and social systems, with emphasis on critical gaps in integrated assessment modeling, including modeling of technology innovation and diffusion and the development of metrics of economic costs of climate change and policies for mitigating or adapting to climate change.

(c) AUTHORIZATION OF APPROPRIATIONS.—From amounts authorized under section 1440(c), there are authorized to be appropriated to the Secretary for carrying out activities under this section—

(1) $150,000,000 for fiscal year 2003;

(2) $175,000,000 for fiscal year 2004;

(3) $200,000,000 for fiscal year 2005; and

(4) $230,000,000 for fiscal year 2006.

(d) LIMITATION ON FUNDS.—Funds authorized to be appropriated under this section shall not be used for the development, demonstration, or deployment of technology to reduce, avoid, or sequester greenhouse gas emissions.

SEC. 1303. AMENDMENTS TO THE FEDERAL NONNUCLEAR RESEARCH AND DEVELOPMENT ACT OF 1974.

Section 6 of the Federal Nonnuclear Energy Research and Development Act of 1974 (42 U.S.C. 5905) is amended—

(1) in subsection (a)—

(A) in paragraph (2), by striking ''and'' at the end;

(B) in paragraph (3) by striking the period at the end and inserting '', and''; and

(C) by adding at the end the following:

''(4) solutions to the effective management of greenhouse gas emissions in the long term by the development of technologies and practices designed to—

''(A) reduce or avoid anthropogenic emissions of greenhouse gases;

''(B) remove and sequester greenhouse gases from emissions streams; and

''(C) remove and sequester greenhouse gases from the atmosphere.''; and

(2) in subsection (b)—

(A) in paragraph (2), by striking ''subsection (a)(1) through (3)'' and inserting ''paragraphs (1) through (4) of subsection (a)''; and

(B) in paragraph (3)—

(i) in subparagraph (R), by striking ''and'' at the end;

(ii) in subparagraph (S), by striking the period at the end and inserting ''; and''; and

(iii) by adding at the end the following:

''(T) to pursue a long-term climate technology strategy designed to demonstrate a variety of technologies by which stabilization of greenhouse gases might be best achieved, including accelerated research, development, demonstration and deployment of—

''(i) renewable energy systems;

''(ii) advanced fossil energy technology;

''(iii) advanced nuclear power plant design;

''(iv) fuel cell technology for residential, industrial and transportation applications;

''(v) carbon sequestration practices and technologies, including agricultural

and forestry practices that store and sequester carbon;

''(vi) efficient electrical generation, transmission and distribution technologies; and

''(vii) efficient end use energy technologies.''.

Subtitle B—Department of Agriculture Programs

SEC. 1311. CARBON SEQUESTRATION BASIC AND APPLIED RESEARCH.

(a) BASIC RESEARCH.—

(1) IN GENERAL.—The Secretary of Agriculture shall carry out research in the areas of soil science that promote understanding of—

(A) the net sequestration of organic carbon in soil; and

(B) net emissions of other greenhouse bases from agriculture.

(2) Agricultural Research Service.—The Secretary of Agriculture, acting through the Agricultural Research Service, shall collaborate with other Federal agencies in developing data and carrying out research addressing soil carbon fluxes (losses and gains) and net emissions of methane and nitrous

oxide from cultivation and animal management activities.

(3) COOPERATIVE STATE RESEARCH EXTENSION AND EDUCATION SERVICE.—

(A) IN GENERAL.—The Secretary of Agriculture, acting through the Cooperative State Research Extension and Education Service, shall establish a competitive giant program to carry out research on the matters described in paragraph (1) in land grant universities and other research institutions.

(B) CONSULTATION ON RESEARCH TOPICS.—Before issuing a request for proposals for basic research under paragraph (1), the Cooperative State Research, Education, and Extension Service shall consult with the Agricultural Research Service to ensure that proposed research areas are complementary with and do not duplicate research projects underway at the Agricultural Research Service or other Federal agencies.

(b) APPLIED RESEARCH.—

(1) IN GENERAL.—The Secretary of Agriculture shall carry out applied research in the areas of soil

science, agronomy, agricultural economics and other agricultural sciences to—

(A) promote understanding of—

(i) how agricultural and forestry practices affect the sequestration of organic and inorganic carbon in soil and net emissions of other greenhouse gases;

(ii) how changes in soil carbon pools are cost-effectively measured, monitored, and verified; and

(iii) how public programs and private market approaches can be devised to incorporate carbon sequestration in a broader societal greenhouse gas emission reduction effort;

(B) develop methods for establishing baselines for measuring the quantities of carbon and other greenhouse gases sequestered; and

(C) evaluate leakage and performance issues.

(2) REQUIREMENTS.—To the maximum extent practicable, applied research under paragraph (1) shall—

(A) draw on existing technologies and methods; and

(B) strive to provide methodologies that are accessible to a nontechnical audience.

(3) MINIMIZATION OF ADVERSE ENVIRONMENTAL IMPACTS.—All applied research under paragraph (1) shall be conducted with an emphasis on minimizing adverse environmental impacts.

(4) NATURAL RESOURCES CONSERVATION SERVICE.—The Secretary of Agriculture, acting through the Natural Resources Conservation Service, shall collaborate with other Federal agencies, including the National Institute of Standards and Technology, in developing new measuring techniques and equipment or adapting existing techniques and equipment to enable cost-effective and accurate monitoring and verification, for a wide range of agricultural and forestry practices, of—

(A) changes in soil carbon content in agricultural soils, plants, and trees; and

(B) net emissions of other greenhouse gases.

(5) COOPERATIVE STATE RESEARCH EXTENSION AND EDUCATION SERVICE.—

(A) IN GENERAL.—The Secretary of Agriculture, acting through the Cooperative State Research Extension and Education Service,

shall establish a competitive grant program to encourage research on the matters described in paragraph (1) by land grant universities and other research institutions.

(B) CONSULTATION ON RESEARCH TOPICS.—Before issuing a request for proposals for applied research under paragraph (1), the Cooperative State Research, Education, and Extension Service shall consult with the National Resources Conservation Service and the Agricultural Research Service to ensure that proposed research areas are complementary with and do not duplicate research projects underway at the Agricultural Research Service or other Federal agencies.

(c) RESEARCH CONSORTIA.—

(1) IN GENERAL.—The Secretary of Agriculture may designate not more than 2 research consortia to carry out research projects under this section, with the requirement that the consortia propose to conduct basic, research under subsection (a) and applied research under subsection (b).

(2) SELECTION.—The consortia shall be selected in a competitive manner by the Cooperative State Research, Education, and Extension Service.

(3) ELIGIBLE CONSORTIUM PARTICIPANTS.—Entities eligible to participate in a consortium include—

(A) land grant colleges and universities;

(B) private research institutions;

(C) State geological surveys;

(D) agencies of the Department of Agriculture;

(E) research centers of the National Aeronautics and Space Administration and the Department of Energy;

(F) other Federal agencies;

(G) representatives of agricultural businesses and organizations with demonstrated expertise in these areas; and

(H) representatives of the private sector with demonstrated expertise in these areas.

(4) RESERVATION OF FUNDING.—If the Secretary of Agriculture designates 1 or 2 consortia, the Secretary of Agriculture shall reserve for research projects carried out by the consortium or consortia not more than 25 percent of the amounts made available to carry out this section for a fiscal year.

(d) STANDARDS OF PRECISION.—

(1) CONFERENCE.—Not later than 3 years after the date of enactment of this subtitle, the Secretary of Agriculture, acting through the Agricultural Research Service and in consultation with the Natural Resources Conservation Service, shall convene a conference of key scientific experts on carbon sequestration and measurement techniques from various sectors (including the government, academic, and private sectors) to—

(A) discuss and establish benchmark standards of precision for measuring soil carbon content and net emissions of other greenhouse gases;

(B) designate packages of measurement techniques and modeling approaches to achieve a level of precision agreed on by the participants in the conference; and

(C) evaluate results of analyses on baseline, permanence, and leakage issues.

(2) REPORT.—Not later than 180 days after the conclusion of the conference under paragraph (1), the Secretary of Agriculture shall submit to the Committee on Agriculture of the House of Representatives and the Committee on Agriculture, Nu-

trition, and Forestry of the Senate a report on the results of the conference.

(e) AUTHORIZATION OF APPROPRIATIONS.—

(1) IN GENERAL.—There are authorized to be appropriated to carry out this section $25,000,000 for each of fiscal years 2003 through 2006.

(2) ALLOCATION.—Of the amounts made available to carry out this section for a fiscal year, at least 50 percent shall be allocated for competitive grants by the Cooperative State Research, Education, and Extension Service.

SEC. 1312. CARBON SEQUESTRATION DEMONSTRATION PROJECTS AND OUTREACH.

(a) DEMONSTRATION PROJECTS.—

(1) DEVELOPMENT OF MONITORING PROGRAMS.—

(A) IN GENERAL.—The Secretary of Agriculture, acting through the Natural Resources Conservation Service and in cooperation with local extension agents, experts from land grant universities, and other local agricultural or conservation organizations, shall develop user-friendly, programs that combine measurement tools and modeling techniques into integrated packages to monitor the carbon sequestering

benefits of conservation practices and net changes in greenhouse gas emissions.

(B) BENCHMARK LEVELS OF PRECISION.—The programs developed under subparagraph (A) shall strive to achieve benchmark levels of precision in measurement in a cost-effective manner.

(2) PROJECTS.—

(A) IN GENERAL.—The Secretary of Agriculture, acting through the Farm Service Agency, shall establish a program under which projects use the monitoring programs developed under paragraph (1) to demonstrate the feasibility of methods of measuring, verifying, and monitoring—

(i) changes in organic carbon content and other carbon pools in agricultural soils, plants, and trees; and

(ii) net changes in emissions of other greenhouse gases.

(B) EVALUATION OF IMPLICATIONS.—The projects under subparagraph (A) shall include evaluation of the implications for reassessed baselines, carbon or other greenhouse gas leakage, and permanence of sequestration.

(C) SUBMISSION OF PROPOSALS.—Proposals for projects under subparagraph (A) shall be submitted by the appropriate agency of each State, in cooperation with interested local ,jurisdictions and State agricultural and conservation organizations.

(D) LIMITATION.—Not more than 10 projects under subparagraph (A) may be approved in conjunction with applied research projects under section 1331(b) until benchmark measurement and assessment standards are established under section 1331(d).

(b) OUTREACH.—

(1) IN GENERAL.—The Cooperative State Research Extension and Education Service shall widely disseminate information about the economic and environmental benefits that can be generated by adoption of conservation practices (including benefits from increased sequestration of carbon and reduced emission of other greenhouse gases.

(2) PROJECT RESULTS.—The Cooperative State Research Extension and Education Service shall inform farmers, ranchers, and State agricultural and energy offices in each State of—

(A) the results of demonstration projects under subsection (a)(2) in the State; and

(B) the ways in which the methods demonstrated in the projects might be applicable to the operations of those farmers and ranchers.

(3) POLICY OUTREACH.—On a periodic basis, the Cooperative State Research Extension and Education Service shall disseminate information on the police nexus between global climate change mitigation strategies and agriculture, so that farmers and ranchers may better understand the global implications of the activities of farmers and ranchers.

(c) AUTHORIZATION OF APPROPRIATIONS.—

(1) IN GENERAL.—There are authorized to be appropriated to carry out this section $10,000,000 for each of fiscal years 2003 through 2006.

(2) ALLOCATION.—Of the amounts made available to carry out this section for a fiscal year, at least 50 percent shall be allocated for demonstration projects under subsection (a)(2).

SUBTITLE C—CLEAN ENERGY TECHNOLOGY EXPORTS PROGRAM

SEC. 1321. CLEAN ENERGY TECHNOLOGY EXPORTS PROGRAM.

(a) DEFINITIONS.—In this section:

(1) CLEAN ENERGY TECHNOLOGY.—The term ''clean energy technology'' means an energy supply or end-use technology that, over its lifecycle and compared to a similar technology already in commercial use in developing countries, countries in transition, and other partner countries—

(A) emits substantially lower levels of pollutants or greenhouse gases; and

(B) may generate substantially smaller or less toxic volumes of solid or liquid waste.

(2) INTERAGENCY WORKING GROUP.—The term ''interagency working group'' means the Interagency Working Group on Clean Energy Technology Exports established under subsection (b).

(b) INTERAGENCY WORKING GROUP.—

(1) ESTABLISHMENT.—Not later than 90 days after the date of enactment of this section, the Secretary of Energy, the Secretary of Commerce, and the Administrator of the U.S. Agency for International Development shall jointly establish a Interagency Working Group on Clean Energy Technology Exports. The interagency working group will focus on opening and expanding energy markets and transferring clean energy technology to the developing countries, countries in transition, and other

partner countries that are expected to experience, over the next 20 years, the most significant growth in energy production and associated greenhouse gas emissions, including through technology transfer programs under the Framework Convention on Climate Change, other international agreements, and relevant Federal efforts.

(2) MEMBERSHIP.—The interagency working group shall be jointly chaired by representatives appointed by the agency heads under paragraph (1) and shall also include representatives from the Department of State, the Department of Treasury, the Environmental Protection Agency, the Export-Import Bank, the Overseas Private Investment Corporation, the Trade and Development Agency, and other federal agencies as deemed appropriate by all three agency heads under paragraph (1).

(3) DUTIES.—The interagency working group shall—

(A) analyze technology, policy, and market opportunities for international development, demonstration, and deployment of clean energy technology;

(B) investigate issues associated with building capacity to deploy clean energy tech-

nology in developing countries, countries in transition, and other partner countries, including—

(i) energy-sector reform;

(ii) creation of open, transparent, and competitive markets for energy technologies;

(iii) availability of trained personnel to deploy and maintain the technology; and

(iv) demonstration and cost-buydown mechanisms to promote first adoption of the technology;

(C) examine relevant trade, tax, international, and other policy issues to assess what policies would help open markets and improve U.S. clean energy technology exports in support of the following areas:

(i) enhancing energy innovation and cooperation, including energy sector and market reform, capacity building, and financing measures;

(ii) improving energy end-use efficiency technologies, including buildings and facilities, vehicle, industrial, and co-generation technology initiatives; and

(iii) promoting energy supply technologies, including fossil, nuclear, and renewable technology initiatives.

(D) establish an advisory committee involving the private sector and other interested groups on the export and deployment of clean energy technology;

(E) monitor each agency's progress towards meeting goals in the 5–year strategic plan submitted to Congress pursuant to the Energy and Water Development Appropriations Act, 2001, and the Energy and Water Development Appropriations Act, 2002;

(F) make recommendations to heads of appropriate Federal agencies on ways to streamline federal programs and policies improve each agency's role in the international development, demonstration, and deployment of clean energy technology;

(G) make assessments and recommendations regarding the distinct technological, market, regional, and stakeholder challenges necessary to carry out the program; and

(H) recommend conditions and criteria that will help ensure that United States funds

promote sound energy policies in participating countries while simultaneously opening their markets and exporting United States energy technology.

(c) FEDERAL SUPPORT FOR CLEAN ENERGY TECHNOLOGY TRANSFER.—Notwithstanding any other provision of law, each federal agency or government corporation carrying out an assistance program in support of the activities of United States persons in the environment or energy sector of a developing country, country in transition, or other partner country shall support, to the maximum extent practicable, the transfer of United States clean energy technology as part of that program.

(d) ANNUAL REPORT.—Not later than April 1, 2002, and each year thereafter, the Interagency Working Group shall submit a report to Congress on its activities during the preceding calendar year. The report shall include a description of the technology, policy, and market opportunities for international development, demonstration, and deployment of clean energy technology investigated by the Interagency Working Group in that year, as well as any policy recommendations to improve the expansion of clean energy markets and U.S. clean energy technology exports.

(e) REPORT ON USE OF FUNDS.—Not later than October 1, 2002, and each year thereafter, the Secretary of

State, in consultation with other federal agencies, shall submit a report to Congress indicating how United States funds appropriated for clean energy technology exports and other relevant federal programs are being directed in a manner that promotes sound energy policy commitments in developing countries, countries in transition, and other partner countries, including efforts pursuant to multi-lateral environmental agreements.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the departments, agencies, and entities of the United States described in subsection (b) such sums as may be necessary to support the transfer of clean energy technology, consistent with the subsidy codes of the World Trade Organization, as part of assistance programs carried out by those departments, agencies, and entities in support of activities of United States persons in the energy sector of a developing country, country in transition, or other partner country.

SEC. 1322. INTERNATIONAL ENERGY TECHNOLOGY DEPLOYMENT PROGRAM.

(a) IN GENERAL.—Section 1608 of the Energy Policy Act of 1992 (42 U.S.C. 13387) is amended by striking subsection (l) and inserting the following:

''(l) INTERNATIONAL ENERGY TECHNOLOGY DEPLOYMENT PROGRAM.—

''(1) DEFINITIONS.—In this subsection:

''(A) INTERNATIONAL ENERGY DEPLOYMENT PROJECT.—The term ''international energy deployment project'' means a project to construct an energy production facility outside the United States—

''(i) the output of which will be consumed outside the United States; and

''(ii) the deployment of which will result in a greenhouse gas reduction per unit of energy produced when compared to the technology that would otherwise be implemented—

''(I) 10 percentage points or more, in the case of a unit placed in service before January 1, 2010;

''(II) 20 percentage points or more, in the case of a unit placed in service after December 31, 2009, and before January 1, 2020; or

''(III) 30 percentage points or more, in the case of a unit placed in service after December 31, 2019, and before January 1, 2030.

''(B) QUALIFYING INTERNATIONAL ENERGY DEPLOYMENT PROJECT.—The term ''qualifying international energy deployment project'' means an international energy deployment project that—

''(i) is submitted by a United States firm to the Secretary in accordance with procedures established by the Secretary by regulation;

''(ii) uses technology that has been successfully developed or deployed in the United States;

''(iii) meets the criteria of subsection (k);

''(iv) is approved by the Secretary, with notice of the approval being published in the Federal Register; and

''(v) complies with such terms and conditions as the Secretary establishes by regulation.

''(C) UNITED STATES.—For purposes of this paragraph, the term ''United States'', when used in a geographical sense, means the 50 States, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, American Samoa,

and the Commonwealth of the Northern Mariana Islands.

''(2) PILOT PROGRAM FOR FINANCIAL ASSISTANCE.—

''(A) IN GENERAL.—Not later than 180 days after the date of enactment of this subsection, the Secretary shall, by regulation, provide for a pilot program for financial assistance for qualifying international energy deployment projects.

''(B) SELECTION CRITERIA.—After consultation with the Secretary of State, the Secretary of Commerce, and the United States Trade Representative, the Secretary shall select projects for participation in the program based solely on the criteria under this title and without regard to the country in which the project is located.

''(C) FINANCIAL ASSISTANCE.—

''(i) IN GENERAL.—A United States firm that undertakes a qualifying international energy deployment project that is selected to participate in the pilot program shall be eligible to receive a loan or a loan guarantee from the Secretary.

''(ii) RATE OF INTEREST.—The rate of interest of any loan made under clause (i) shall be equal to the rate for Treasury obligations then issued for periods of comparable maturities.

''(iii) AMOUNT.—The amount of a loan or loan guarantee under clause (i) shall not exceed 50 percent of the total cost of the qualified international energy deployment project.

''(iv) DEVELOPED COUNTRIES.—Loans or loan guarantees made for projects to be located in a developed country, as listed in Annex I of the United Nations Framework Convention on Climate Change, shall require at least a 50 percent contribution towards the total cost of the loan or loan guarantee by the host country.

''(v) DEVELOPING COUNTRIES.—Loans or loan guarantees made for projects to be located in a developing country (those countries not listed in Annex I of the United Nations Framework Convention on Climate Change) shall require at least a 10 percent contribution towards the

total cost of the loan or loan guarantee by the host country.

''(vi) CAPACITY BUILDING RESEARCH.—Proposals made for projects to be located in a developing country may include a research component intended to build technological capacity within the host country. Such research must be related to the technologies being deployed and must involve both an institution in the host country and an industry, university or national laboratory participant from the United States. The host institution shall contribute at least 50 percent of funds provided for the capacity building research.

''(D) COORDINATION WITH OTHER PROGRAMS.—A qualifying international energy deployment project funded under this section shall not be eligible as a qualifying clean coal technology under section 415 of the Clean Air Act (42 U.S.C. 7651n).

''(E) REPORT.—Not later than 5 years after the date of enactment of this subsection, the Secretary shall submit to the President a report on the results of the pilot projects.

''(F) RECOMMENDATION.—Not later than 60 days after receiving the report under subparagraph (E), the President shall submit to Congress a recommendation, based on the results of the pilot projects as reported by the Secretary of Energy, concerning whether the financial assistance program under this section should be continued, expanded, reduced, or eliminated.

''(3) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary carry out this section $100,000,000 for each of fiscal years 2003 through 2011, to remain available until expended.''.

Subtitle D—Climate Change Science and Information

PART I—AMENDMENTS TO THE GLOBAL CHANGE RESEARCH ACT OF 1990

SEC. 1331. AMENDMENT OF GLOBAL CHANGE RESEARCH ACT OF 1990.

Except as otherwise expressly provided, whenever in this subtitle an amendment or repeal is expressed in terms of an amendment to, or repeal of, a section or other provision, the reference shall be considered to be made to a

section or other provision of the Global Change Research Act of 1990 (15 U.S.C. 2921 et seq.).

SEC. 1332. CHANGES IN DEFINITIONS.

Paragraph (1) of section 2 (15 U.S.C. 2921) is amended by striking ''Earth and'' inserting ''Climate and''.

SEC. 1333. CHANGE IN COMMITTEE NAME.

Section 102 (15 U.S.C. 2932) is amended—

(1) by striking ''EARTH AND'' in the section heading and inserting ''CLIMATE AND''; and

(2) by striking ''Earth and'' in subsection (a) and inserting ''Climate and''.

SEC. 1334. CHANGE IN NATIONAL GLOBAL CHANGE RESEARCH PLAN.

Section 104 (15 U.S.C. 2934) is amended—

(1) by adding at the end of subsection (c) the following:

''(6) Methods for integrating information to provide predictive tools for planning and decision making by governments, communities and the private sector.'';

(2) by inserting ''local, State, and Federal'' before ''policy makers'' in subsection (d)(3);

(3) by striking ''and'' in subsection (d)(2);

(4) by striking ''change.'' in subsection (d)(3) and inserting ''change; and'';

(5) by adding at the end of subsection (d) the following:

''(4) establish a common assessment and modeling framework that may be used in both research and operations to predict and assess the vulnerability of natural and managed ecosystems and of human society in the context of other environmental and social changes.''; and

(6) by adding at the end the following:

''(g) STRATEGIC PLAN; REVISED IMPLEMENTATION PLAN.—The Chairman of the Council, through the Committee, shall develop a strategic plan for the United States Global Climate Change Research Program for the 10-year period beginning in 2002 and submit the plan to the Congress within 180 days after the date of enactment of the Global Climate Change Act of 2002. The Chairman, through the Committee, shall also submit a revised implementation plan under subsection (a).''.

SEC. 1335. INTEGRATED PROGRAM OFFICE.

Section 105 (15 U.S.C. 2935) is amended—

(1) by redesignating subsections (a), (b), and (c) as subsections (b), (c), and (d), respectively; and

(2) inserting before subsection (b), as redesignated, the following:

''(a) INTEGRATED PROGRAM OFFICE.—

''(1) ESTABLISHMENT.—There is established in the Office of Science and Technology Policy an integrated program office for the global change research program.

''(2) ORGANIZATION.—The integrated program office established under paragraph (1) shall be headed by the associate director with responsibility for climate change science and technology and shall include a representative from each Federal agency participating in the global change research program.

''(3) FUNCTION.—The integrated program office shall—

''(A) manage, working in conjunction with the Committee, interagency coordination and program integration of global change research activities and budget requests;

''(B) ensure that the activities and programs of each Federal agency or department participating in the program address the goals and objectives identified in the strategic research plan and interagency implementation plans;

"(C) ensure program and budget recommendations of the Committee are communicated to the President and are integrated into the climate change action strategy;

"(D) review, solicit, and identify, and allocate funds for, partnership projects that address critical research objectives or operational goals of the program, including projects that would fill research gaps identified by the program, and for which project resources are shared among at least 2 agencies participating in the program; and

"(E) review and provide recommendations on, in conjunction with the Committee, all annual appropriations requests from Federal agencies or departments participating in the program.

"(4) GRANT AUTHORITY.—The Integrated Program Office may authorize 1 or more of the departments or agencies participating in the program to enter into contracts and make grants, using funds appropriated for use by the Office of Science and Technology Policy for the purpose of carrying out the responsibilities of that Office.

''(5) FUNDING.—For fiscal year 2003, and each fiscal year thereafter, not less than $13,000,000 shall be made available to the Integrated Program Office from amounts appropriated to or for the use of the Office of Science and Technology Policy.'';

(3) by striking ''Committee.'' in paragraph (2) of subsection (c), as redesignated, and inserting ''Committee and the Integrated Program Office.''; and

(4) by inserting ''and the Integrated Program Office'' after ''Committee'' in paragraph (1) of subsection (d), as redesignated.

PART II—NATIONAL CLIMATE SERVICES AND MONITORING

SEC. 1341. AMENDMENT OF NATIONAL CLIMATE PROGRAM ACT.

Except as otherwise expressly provided, whenever in this subtitle an amendment or repeal is expressed in terms of an amendment to, or repeal of, a section or other provision, the reference shall be considered to be made to a section or other provision of the National Climate Program Act (15 U.S.C. 2901 et seq.).

SEC. 1342. CHANGES IN FINDINGS.

Section 2 (15 U.S.C. 2901) is amended—

(1) by striking ''Weather and climate change affect'' in paragraph (1) and inserting ''Weather, climate change, and long-term weather fluctuations affect public safety, environmental security, human health,'';

(2) by striking ''climate'' in paragraph (2) and inserting ''climate, including seasonal and decadal fluctuations,'';

(3) by striking ''changes.'' in paragraph (5) and inserting ''changes and providing free exchange of meteorological data.''; and

(4) by adding at the end the following:

''(7) The present rate of advance in research and development is inadequate and new developments must be incorporated rapidly into services for the benefit of the public.

''(8) The United States lacks adequate infrastructure and research to meet national climate monitoring and prediction needs.''.

SEC. 1343. TOOLS FOR REGIONAL PLANNING.

Section 5(d) (15 U.S.C. 2904(d)) is amended—

(1) by redesignating paragraphs (4) through (9) as paragraphs (5) through (10), respectively;

(2) by inserting after paragraph (3) the following:

''(4) methods for improving modeling and predictive capabilities and developing assessment methods to guide national, regional, and local planning and decision-making on land use, water hazards, and related issues;'';

(3) by inserting ''sharing,'' after ''collection,'' in paragraph (5), as redesignated;

(4) by striking ''experimental'' each place it appears in paragraph (9), as redesignated;

(5) by striking ''preliminary'' in paragraph (10), as redesignated;

(6) by striking ''this Act,'' the first place it appears in paragraph (10), as redesignated, and inserting ''the Global Climate Change Act of 2002,''; and

(7) by striking ''this Act,'' the second place it appears in paragraph (10), as redesignated, and inserting ''that Act,''.

SEC. 1344. AUTHORIZATION OF APPROPRIATIONS.

Section 9 (15 U.S.C. 2908) is amended—

(1) by striking ''1979,'' and inserting ''2002,'';

(2) by striking ''1980,'' and inserting ''2003,'';

(3) by striking ''1981,'' and inserting ''2004,''; and

(4) by striking ''$25,500,000'' and inserting ''$75,500,000''.

SEC. 1345. NATIONAL CLIMATE SERVICE PLAN.

The Act (15 U.S.C. 2901 et seq.) is amended by inserting after section 5 the following:

''SEC. 6. NATIONAL CLIMATE SERVICE PLAN.

''Within one year after the date of enactment of the Global Climate Change Act of 2002, the Secretary of Commerce shall submit to the Senate Committee on Commerce, Science, and Transportation and the House Science Committee a plan of action for a National Climate Service under the National Climate Program. The plan shall set forth recommendations and funding estimates for—

''(1) a national center for operational climate monitoring and predicting with the functional capacity to monitor and adjust observing systems as necessary to reduce bias;

''(2) the design, deployment, and operation of an adequate national climate observing system that builds upon existing environmental monitoring systems and closes gaps in coverage by existing systems;

''(3) the establishment of a national coordinated modeling strategy, including a national climate modeling center to provide a dedicated capability for high-end climate modeling and a regular schedule of

projections on a long and short term time schedules and at a range of spatial scales;

''(4) improvements in modeling and assessment capabilities needed to integrate information to predict regional and local climate changes and impacts;

''(5) in coordination with the private sector, improving the capacity to assess the impacts of predicted and projected climate changes and variations;

''(6) a program for long term stewardship, quality control, development of relevant climate products, and efficient access to all relevant climate data, products, and critical model simulations; and

''(7) mechanisms to coordinate among Federal agencies, State, and local government entities and the academic community to ensure timely and full sharing and dissemination of climate information and services.''.

SEC. 1346. REPORTING ON TRENDS.

(a) ATMOSPHERIC MONITORING AND VERIFICATION PROGRAM.—The Secretary of Commerce, in coordination with relevant Federal agencies, shall, as part of the National Climate Service, establish an atmospheric monitoring and verification program utilizing aircraft, satellite, ground sensors, and modeling capabilities to monitor, measure, and verify atmospheric greenhouse gas levels,

dates, and emissions. Where feasible, the program shall measure emissions from identified sources participating in the reporting system for verification purposes. The program shall use measurements and standards that are consistent with those utilized in the greenhouse gas measurement and reporting system established under subsection (a) and the registry established under section 1102.

(b) ANNUAL REPORTING.—The Secretary of Commerce shall issue an annual report that identifies greenhouse emissions and trends on a local, regional, and national level. The report shall also identify emissions or reductions attributable to individual or multiple sources covered by the greenhouse gas measurement and reporting system established under section 1102.

PART III—OCEAN AND COASTAL OBSERVING SYSTEM

SEC. 1351. OCEAN AND COASTAL OBSERVING SYSTEM.

(a) ESTABLISHMENT.—The President, through the National Ocean Research Leadership Council, established by section 7902(a) of title 10, United States Code, shall establish and maintain an integrated ocean and coastal observing system that provides for long-term, continuous, and real-time observations of the oceans and coasts for the purposes of—

(1) understanding, assessing and responding to human-induced and natural processes of global change;

(2) improving weather forecasts and public warnings;

(3) strengthening national security and military preparedness;

(4) enhancing the safety and efficiency of marine operations;

(5) supporting efforts to restore the health of and manage coastal and marine ecosystems and living resources;

(6) monitoring and evaluating the effectiveness of ocean and coastal environmental policies;

(7) reducing and mitigating ocean and coastal pollution; and

(8) providing information that contributes to public awareness of the state and importance of the oceans.

(b) COUNCIL FUNCTIONS.—In addition to its responsibilities under section 7902(a) of such title, the Council shall be responsible for planning and coordinating the observing system and in carrying out this responsibility shall—

(1) develop and submit to the Congress, within 6 months after the date of enactment of this Act, a plan for implementing a national ocean and coastal observing system that—

(A) uses an end-to end engineering and development approach to develop a system design and schedule for operational implementation;

(B) determines how current and planned observing activities can be integrated in a cost-effective manner;

(C) provides for regional and concept demonstration projects;

(D) describes the role and estimated budget of each Federal agency in implementing the plan;

(E) contributes, to the extent practicable, to the National Global Change Research Plan under section 104 of the Global Change Research Act of 1990 (15 U.S.C. 2934); and

(F) makes recommendations for coordination of ocean observing activities of the United States with those of other nations and international organizations;

(2) serve as the mechanism for coordinating Federal ocean observing requirements and activities;

(3) work with academic, State, industry and other actual and potential users of the observing system to make effective use of existing capabilities and incorporate new technologies;

(4) approve standards and protocols for the administration of the system, including—

(A) a common set of measurements to be collected and distributed routinely and by uniform methods;

(B) standards for quality control and assessment of data;

(C) design, testing and employment of forecast models for ocean conditions;

(D) data management, including data transfer protocols and archiving; and

(E) designation of coastal ocean observing regions; and

(5) in consultation with the Secretary of State, provide representation at international meetings on ocean observing programs and coordinate relevant Federal activities with those of other nations.

(c) SYSTEM ELEMENTS.—The integrated ocean and coastal observing system shall include the following elements:

(1) A nationally coordinated network of regional coastal ocean observing systems that measure and disseminate a common set of ocean observations and related products in a uniform manner and according to sound scientific practice, but that are adapted to local and regional needs.

(2) Ocean sensors for climate observations, including the Arctic Ocean and sub-polar seas.

(3) Coastal, relocatable, and cabled sea floor observatories.

(4) Broad bandwidth communications that are capable of transmitting high volumes of data from open ocean locations at low cost and in real time.

(5) Ocean data management and assimilation systems that ensure full use of new sources of data from space-borne and in situ sensors.

(6) Focused research programs.

(7) Technology development program to develop new observing technologies and techniques, including data management and dissemination.

(8) Public outreach and education.

SEC. 1352. AUTHORIZATION OF APPROPRIATIONS.

For development and implementation of an integrated ocean and coastal observation system under this title, including financial assistance to regional coastal

ocean observing systems, there are authorized to be appropriated $235,000,000 in fiscal year 2003, $315,000,000 in fiscal year 2004, $390,000,000 in fiscal year 2005, and $445,000,000 in fiscal year 2006.

Subtitle E—Climate Change Technology

SEC. 1361. NIST GREENHOUSE GAS FUNCTIONS.

Section 2(c) of the National Institute of Standards and Technology Act (15 U.S.C. 272(c) is amended—

(1) striking ''and'' after the semicolon in paragraph (21);

(2) by redesignating paragraph (22) as paragraph (23); and

(3) by inserting after paragraph (21) the following:

''(22) perform research to develop enhanced measurements, calibrations, standards, and technologies which will enable the reduced production in the United States of greenhouse gases associated with global warming, including carbon dioxide, methane, nitrous oxide, ozone, perfluorocarbons, hydrofluorocarbons, and sulphur hexafluoride; and''.

SEC. 1362. DEVELOPMENT OF NEW MEASUREMENT TECHNOLOGIES.

(a) IN GENERAL.—The Secretary of Commerce shall initiate a program to develop, with technical assistance from appropriate Federal agencies, innovative standards and measurement technologies (including technologies to measure carbon changes due to changes in land use cover) to calculate—

(1) greenhouse gas emissions and reductions from agriculture, forestry, and other land use practices;

(2) non-carbon dioxide greenhouse gas emissions from transportation;

(3) greenhouse gas emissions from facilities or sources using remote sensing technology; and

(4) any other greenhouse gas emission or reductions for which no accurate or reliable measurement technology exists.

SEC. 1363. ENHANCED ENVIRONMENTAL MEASUREMENTS AND STANDARDS.

The National Institute of Standards and Technology Act (15 U.S.C. 271 et seq.) is amended—

(1) by redesignating sections 17 through 32 as sections 18 through 33, respectively; and

(2) by inserting after section 16 the following:

"SEC. 17. CLIMATE CHANGE STANDARDS AND PROCESSES.

''(a) IN GENERAL.—The Director shall establish within the Institute a program to perform and support research on global climate change standards and processes, with the goal of providing scientific and technical knowledge applicable to the reduction of greenhouse gases (as defined in section 4 of the Global Climate Change Act of 2002).

''(b) RESEARCH PROGRAM.—

''(1) IN GENERAL.—The Director is authorized to conduct, directly or through contracts or grants, a global climate change standards and processes research program.

''(2) RESEARCH PROJECTS.—The specific contents and priorities of the research program shall be determined in consultation with appropriate Federal agencies, including the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, and the National Aeronautics and Space Administration. The program generally shall include basic and applied research—

''(A) to develop and provide the enhanced measurements, calibrations, data, models, and reference material standards which will enable the monitoring of greenhouse gases;

''(B) to assist in establishing of a baseline reference point for future trading in greenhouse gases and the measurement of progress in emissions reduction;

''(C) that will be exchanged internationally as scientific or technical information which has the stated purpose of developing mutually recognized measurements, standards, and procedures for reducing greenhouse gases; and

''(D) to assist in developing improved industrial processes designed to reduce or eliminated greenhouse gases.

''(c) NATIONAL MEASUREMENT LABORATORIES.—

''(1) IN GENERAL.—In carrying out this section, the Director shall utilize the collective skills of the National Measurement Laboratories of the National Institute of Standards and Technology to improve the accuracy of measurements that will permit better understanding and control of these industrial chemical processes and result in the reduction or elimination of greenhouse gases.

''(2) MATERIAL, PROCESS, AND BUILDING RESEARCH.—The National Measurement Laboratories shall conduct research under this subsection that includes—

"(A) developing material and manufacturing processes which are designed for energy efficiency and reduced greenhouse gas emissions into the environment;

"(B) developing environmentally-friendly, 'green' chemical processes to be used by industry; and

"(C) enhancing building performance with a focus in developing standards or tools which will help incorporate low or no-emission technologies into building designs.

"(3) STANDARDS AND TOOLS.—The National Measurement Laboratories shall develop standards and tools under this subsection that include software to assist designers in selecting alternate building materials, performance data on materials, artificial intelligence-aided design procedures for building subsystems and 'smart buildings', and improved test methods and rating procedures for evaluating the energy performance of residential and commercial appliances and products.

"(d) NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM.—The Director shall utilize the National Voluntary Laboratory Accreditation Program under this section to establish a program to include specific cali-

bration or test standards and related methods and protocols assembled to satisfy the unique needs for accreditation in measuring the production of greenhouse gases. In carrying out this subsection the Director may cooperate with other departments and agencies of the Federal Government, State and local governments, and private organizations.''.

SEC. 1364. TECHNOLOGY DEVELOPMENT AND DIFFUSION.

(a) ADVANCED TECHNOLOGY PROGRAM COMPETITIONS.—The Director of the National Institute of Standards and Technology, through the Advanced Technology Program, may hold a portion of the Institute's competitions in thematic areas, selected after consultation with industry, academics, and other Federal Agencies, designed to develop and commercialize enabling technologies to address global climate change by significantly reducing greenhouse gas emissions and concentrations in the atmosphere.

(b) MANUFACTURING EXTENSION PARTNERSHIP PROGRAM FOR ''GREEN'' MANUFACTURING.—The Director of the National Institute of Standards and Technology, through the Manufacturing Extension Partnership Program, may develop a program to support the implementation of new ''green'' manufacturing technologies and techniques by the more than 380,000 small manufacturers.

Subtitle F—Climate Adaptation and Hazards Prevention

PART I—ASSESSMENT AND ADAPTATION

SEC. 1371. REGIONAL CLIMATE ASSESSMENT AND ADAPTATION PROGRAM.

(a) IN GENERAL.—The President shall establish within the Department of Commerce a National Climate Change Vulnerability and Adaptation Program for regional impacts related to increasing concentrations of greenhouse gases in the atmosphere and climate variability.

(b) COORDINATION.—In designing such program the Secretary shall consult with the Federal Emergency Management Agency, the Environmental Protection Agency, the Army Corps of Engineers, the Department of Transportation, and other appropriate Federal, State, and local government entities.

(c) VULNERABILITY ASSESSMENTS.—The program shall—

(1) evaluate, based on predictions developed under this Act and the National Climate Program Act (15 U.S.C. 2901 et seq.), regional vulnerability to phenomena associated with climate change and climate variability, including—

(A) increases in severe weather events;

(B) sea level rise and shifts in the hydrological cycle;

(C) natural hazards, including tsunami, drought, flood and fire; and

(D) alteration of ecological communities; and

(2) build upon predictions and other information developed in the National Assessments prepared under the Global Change Research Act of 1990 (15 U.S.C. 2921 et seq.).

(d) PREPAREDNESS RECOMMENDATIONS.—The program shall submit a report to Congress within 2 years after the date of enactment of this Act that identifies and recommends implementation and funding strategies for short- and long-term actions that may be taken at the national, regional, State, and local level—

(1) to minimize threats to human life and property;

(2) to improve resilience to hazards;

(3) to minimize economic impacts; and

(4) to reduce threats to critical biological and ecological processes.

(e) INFORMATION AND TECHNOLOGY.—The Secretary shall make available appropriate information and other technologies and products that will assist national,

regional, State, and local efforts to reduce loss of life and property, and coordinate dissemination of such technologies and products through the Global Disaster Information Network.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary of Commerce $4,500,000 to implement the requirements of this section.

SEC. 1372. COASTAL VULNERABILITY AND ADAPTATION.

(a) COASTAL VULNERABILITY.—Within 2 years after the date of enactment of this Act, the Secretary shall, in consultation with the appropriate Federal, State, and local governmental entities, conduct regional assessments of the vulnerability of coastal areas to hazards associated with climate change, climate variability, sea level rise, and fluctuation of Great Lakes water levels. The Secretary may also consult with the governments of Canada and Mexico as appropriate in developing such regional assessments. In preparing the regional assessments, the Secretary shall collect and compile current information on climate change, sea level rise, natural hazards, and coastal erosion and mapping, and specifically address impacts on Arctic regions and small island States. The regional assessments shall include an evaluation of—

(1) social impacts associated with threats to and potential losses of housing, communities, and infrastructure;

(2) physical impacts such as coastal erosion, flooding and loss of estuarine habitat, saltwater intrusion of aquifers and saltwater encroachment, and species migration; and

(3) economic impact on local, State, and regional economies, including the impact on abundance or distribution of economically important living marine resources.

(b) COASTAL ADAPTATION PLAN.—The Secretary shall, within 3 years after the date of enactment of this Act, submit to the Congress a national coastal adaptation plan, composed of individual regional adaptation plans that recommend targets and strategies to address coastal impacts associated with climate change, sea level rise, or climate variability. The plan shall be developed with the participation of other Federal, State, and local government agencies that will be critical in the implementation of the plan at the State and local levels. The regional plans that will make up the national coastal adaptation plan shall be based on the information contained in the regional assessments and shall identify special needs associated with Arctic areas and small island States. The Plan shall

recommend both short- and long-term adaptation strategies and shall include recommendations regarding—

(1) Federal flood insurance program modifications;

(2) areas that have been identified as high risk through mapping and assessment;

(3) mitigation incentives such as rolling easements, strategic retreat, State or Federal acquisition in fee simple or other interest in land, construction standards, and zoning;

(4) land and property owner education;

(5) economic planning for small communities dependent upon affected coastal resources, including fisheries; and

(6) funding requirements and mechanisms.

(c) TECHNICAL PLANNING ASSISTANCE.—The Secretary, through the National Ocean Service, shall establish a coordinated program to provide technical planning assistance and products to coastal States and local governments as they develop and implement adaptation or mitigation strategies and plans. Products, information, tools and technical expertise generated from the development of the regional assessments and the regional adaptation plans will be made available to coastal States for the purposes of developing their own State and local plans.

(d) COASTAL ADAPTATION GRANTS.—The Secretary shall provide grants of financial assistance to coastal States with Federally approved coastal zone management programs to develop and begin implementing coastal adaptation programs if the State provides a Federal-to-State match of 4 to 1 in the first fiscal year, 2.3 to 1 in the second fiscal year, 2 to 1 in the third fiscal year, and 1 to 1 thereafter. Distribution of these funds to coastal states shall be based upon the formula established under section 306(c) of the Coastal Zone Management Act of 1972 (16 U.S.C. 1455(c)), adjusted in consultation with the States as necessary to provide assistance to particularly vulnerable coastlines.

(e) DEFINITIONS.—In this section:

(1) CZMA TERMS.—Any term used in this section that is defined in section 304 of the Coastal Zone Management Act of 1972 (16 U.S.C. 1453) has the meaning given it by that section.

(2) SMALL-ISLAND STATE.—The term ''small island State'' means any jurisdiction to which reference is made in section 3(30) of the Magnuson Stevens Fishery Conservation and Management Act (16 U.S.C. 1802(30)).

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated $3,000,000 annually for coastal adaptation grants under subsection (d).

PART II—FORECASTING AND PLANNING PILOT PROGRAMS

SEC. 1381. REMOTE SENSING PILOT PROJECTS.

(a) IN GENERAL.—The Administrator of the National Aeronautics and Space Administration shall establish, through the National Oceanic and Atmospheric Administration's Coastal Services Center, a program of grants for competitively awarded pilot projects to explore the integrated use of sources of remote sensing and other geospatial information to address State, local, regional, and tribal agency needs to forecast a plan for adaptation to coastal zone and land use changes that may result as a consequence of global climate change or climate variability.

(b) PREFERRED PROJECTS.—In awarding grants under this section, the Center shall give preference to projects that—

(1) focus on areas that are most sensitive to the consequences of global climate change or climate variability;

(2) make use of existing public or commercial data sets;

(3) integrate multiple sources of geospatial information, such as geographic information system data, satellite-provided positioning data, and remotely sensed data, in innovative ways;

(4) offer diverse, innovative approaches that may serve as models for establishing a future coordinated framework for planning strategies for adaptation to coastal zone and land use changes related to global climate change or climate variability;

(5) include funds or in-kind contributions from non-Federal sources;

(6) involve the participation of commercial entities that process raw or lightly processed data, often merging that data with other geospatial information, to create data products that have significant value added to the original data; and

(7) taken together demonstrate as diverse a set of public sector applications as possible.

(c) OPPORTUNITIES.—In carrying out this section, the Center shall seek opportunities to assist—

(1) in the development of commercial applications potentially available from the remote sensing industry; and

(2) State, local, regional, and tribal agencies in applying remote sensing and other geospatial infor-

mation technologies for management and adaptation to coastal and land use consequences of global climate change or climate variability.

(d) DURATION.—Assistance for a pilot project under subsection (a) shall be provided for a period of not more than 3 years.

(e) RESPONSIBILITIES OF GRANTEES.—Within 180 days after completion of a grant project, each recipient of a grant under subsection (a) shall transmit a report to the Center on the results of the pilot project and conduct at least one workshop for potential users to disseminate the lessons learned from the pilot project as widely as feasible.

(f) REGULATIONS.—The Center shall issue regulations establishing application, selection, and implementation procedures for pilot projects, and guidelines for reports and workshops required by this section.

SEC. 1382. DATABASE ESTABLISHMENT.

The Center shall establish and maintain an electronic, Internet-accessible database of the results of each pilot project completed under section 531.

SEC. 1383. DEFINITIONS.

In this subtitle:

(1) CENTER.—The term ''Center'' means the Coastal Services Center of the National Oceanic and Atmospheric Administration.

(2) GEOSPATIAL INFORMATION.—The term ''geospatial information'' means knowledge of the nature and distribution of physical and cultural features on the landscape based on analysis of data from airborne or spaceborne platforms or other types and sources of data.

(3) INSTITUTION OF HIGHER EDUCATION.—The term ''institution of higher education'' has the meaning given that term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

SEC. 1384. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Administrator to carry out the provisions of this subtitle—

(1) $17,500,000 for fiscal year 2003;

(2) $20,000,000 for fiscal year 2004;

(3) $22,500,000 for fiscal year 2005; and

(4) $25,000,000 for fiscal year 2006.

TITLE XIV—MANAGEMENT OF DOE SCIENCE AND TECHNOLOGY PROGRAMS

SEC. 1401. DEFINITIONS.

In this title:

(1) APPLICABILITY OF DEFINITIONS.—The definitions in section 1203 shall apply.

(2) SINGLE-PURPOSE RESEARCH FACILITY.—The term ''single-purpose research facility'' means any of the following primarily single purpose entities owned by the Department of Energy—

(A) Ames Laboratory;

(B) East Tennessee Technology Park;

(C) Environmental Measurement Laboratory;

(D) Fernald Environmental Management Project;

(E) Fermi National Accelerator Laboratory;

(F) Kansas City Plant;

(G) Nevada Test Site;

(H) New Brunswick Laboratory;

(I) Pantex Weapons Facility;

(J) Princeton Plasma Physics Laboratory;

(K) Savannah River Technology Center;

(L) Stanford Linear Accelerator Center;

(M) Thomas Jefferson National Accelerator Facility;

(N) Y–12 facility at Oak Ridge National Laboratory;

(O) Waste Isolation Pilot Plant; or

(P) other similar organization of the Department designated by the Secretary that engages in technology transfer, partnering, or licensing activities.

SEC. 1402. AVAILABILITY OF FUNDS.

Funds authorized to be appropriated to the Department of Energy under title XII, title XIII, and title XV shall remain available until expended.

SEC. 1403. COST SHARING.

(a) RESEARCH AND DEVELOPMENT.—For research and development projects funded from appropriations authorized under subtitles A through D of title XII, the Secretary shall require a commitment from non-federal sources of at least 20 percent of the cost of the project. The Secretary may reduce or eliminate the non-Federal requirement under this subsection if the Secretary determines that the research and development is of a basic or fundamental nature.

(b) DEMONSTRATION AND DEPLOYMENT.—For demonstration and technology deployment activities funded from appropriations authorized under subtitles A through D of title XII, the Secretary shall require a commitment from non-federal sources of at least 50 percent of the costs of the project directly and specifically related to any dem-

onstration or technology deployment activity. The Secretary may reduce or eliminate the non-federal requirement under this subsection if the Secretary determines that the reduction is necessary and appropriate considering the technological risks involved in the project and is necessary to meet one or more goals of this title.

(c) CALCULATION OF AMOUNT.—In calculating the amount of the non-Federal commitment under subsection (a) or (b), the Secretary shall include cash, personnel, services, equipment, and other resources.

SEC. 1404. MERIT REVIEW OF PROPOSALS.

Awards of funds authorized under title XII, subtitle A of title XIII, and title XV shall be made only after an independent review of the scientific and technical merit of the proposals for such awards has been made by the Department of Energy.

SEC. 1405. EXTERNAL TECHNICAL REVIEW OF DEPARTMENTAL PROGRAMS.

(a) NATIONAL ENERGY RESEARCH AND DEVELOPMENT ADVISORY BOARDS.—(1) The Secretary shall establish an advisory board to oversee Department research and development programs in each of the following areas—

(A) energy efficiency;

(B) renewable energy;

(C) fossil energy;

(D) nuclear energy; and

(E) climate change technology, with emphasis on integration, collaboration, and other special features of the cross-cutting technologies supported by the Office of Climate Change Technology.

(2) The Secretary may designate an existing advisory board within the Department to fulfill the responsibilities of an advisory board under this subsection, or may enter into appropriate arrangements with the National Academy of Sciences to establish such an advisory board.

(b) UTILIZATION OF EXISTING COMMITTEES.—The Secretary of Energy shall continue to use the scientific program advisory committees chartered under the Federal Advisory Committee Act by the Office of Science to oversee research and development programs under that Office.

(c) MEMBERSHIP.—Each advisory board under this section shall consist of experts drawn from industry, academia, federal laboratories, research institutions, or state, local, or tribal governments, as appropriate.

(d) MEETINGS AND PURPOSES.—Each advisory board under this section shall meet at least semi-annually to review and advise on the progress made by the respective research, development, demonstration, and technology deployment program. The advisory board shall also review the adequacy and relevance of the goals established for

each program by Congress and the President, and may otherwise advise on promising future directions in research and development that should be considered by each program.

SEC. 1406. IMPROVED COORDINATION AND MANAGEMENT OF CIVILIAN SCIENCE AND TECHNOLOGY PROGRAMS.

(a) EFFECTIVE TOP-LEVEL COORDINATION OF RESEARCH AND DEVELOPMENT PROGRAMS.—Section 202(b) of the Department of Energy Organization Act (42 U.S.C. 7132(b)) is amended to read as follows:

''(b)(1) There shall be in the Department an Under Secretary for Energy and Science, who shall be appointed by the President, by and with the advice and consent of the Senate. The Under Secretary shall be compensated at the rate provided for at level III of the Executive Schedule under section 5314 of title 5, United States Code.

''(2) The Under Secretary for Energy and Science shall be appointed from among persons who—

''(A) have extensive background in scientific or engineering fields; and

''(B) are well qualified to manage the civilian research and development programs of the Department of Energy.

''(3) The Under Secretary for Energy and Science shall—

''(A) serve as the Science and Technology Advisor to the Secretary;

''(B) monitor the Department's research and development programs in order to advise the Secretary with respect to any undesirable duplication or gaps in such programs;

''(C) advise the Secretary with respect to the well-being and management of the multipurpose laboratories under the jurisdiction of the Department;

''(D) advise the Secretary with respect to education and training activities required for effective short- and long-term basic and applied research activities of the Department;

''(E) advise the Secretary with respect to grants and other forms of financial assistance required for effective short- and long-term basic and applied research activities of the Department; and

''(F) exercise authority and responsibility over Assistant Secretaries carrying out energy research and development and energy technology functions under sections 203 and 209, as well as other elements of the Department assigned by the Secretary.

(b) RECONFIGURATION OF POSITION OF DIRECTOR OF THE OFFICE OF SCIENCE.—Section 209 of the Department of Energy Organization Act (41 U.S.C. 7139) is amended to read as follows—

''(a) There shall be within the Department an Office of Science, to be headed by an Assistant Secretary of Science, who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall be compensated at the rate provided for level IV of the Executive Schedule under section 5315 of title 5, United States Code.

''(b) The Assistant Secretary of Science shall be in addition to the Assistant Secretaries provided for under section 203 of this Act.

''(c) It shall be the duty and responsibility of the Assistant Secretary of Science to carry out the fundamental science and engineering research functions of the Department, including the responsibility for policy and management of such research, as well as other functions vested in the Secretary which he may assign to the Assistant Secretary.''.

(c) ADDITIONAL ASSISTANT SECRETARY POSITION TO ENABLE IMPROVED MANAGEMENT OF NUCLEAR ENERGY ISSUES.—

(1) Section 203(a) of the Department of Energy Organization Act (42 U.S.C. 7133(a)) is amended by striking ''There shall be in the Department six Assistant Secretaries'' and inserting ''Except as provided in section 209, there shall be in the Department seven Assistant Secretaries''.

(2) It is the Sense of the Senate that the leadership for departmental missions in nuclear energy should be at the Assistant Secretary level.

(d) TECHNICAL AND CONFORMING AMENDMENTS.—

(1) Section 202 of the Department of Energy Organization Act (42 U.S.C. 7132) is further amended by adding the following at the end:

''(d) There shall be in the Department an Under Secretary, who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall perform such functions and duties as the Secretary shall prescribe, consistent with this section. The Under Secretary shall be compensated at the rate provided for level III of the Executive Schedule under section 5314 of title 5, United States Code.

''(e) There shall be in the Department a General Counsel, who shall be appointed by the President, by and with the advice and consent of the Senate. The General Counsel shall be compensated at the rate provided for level

IV of the Executive Schedule under section 5315 of title 5, United States Code.''.

(2) Section 5314 of title 5, United States Code, is amended by striking ''Under Secretaries of Energy (2)'' and inserting ''Under Secretaries of Energy (3)''.

(3) Section 5315 of title 5, United States Code, is amended by—

(A) striking ''Director, Office of Science, Department of Energy.''; and

(B) striking ''Assistant Secretaries of Energy (6)'' and inserting ''Assistant Secretaries of Energy (8)''.

(4) The table of contents for the Department of Energy Organization Act (42 U.S.C. 7101 note) is amended—

(A) by striking ''Section 209'' and inserting ''Sec. 209'';

(B) by striking ''213.'' and inserting ''Sec. 213'';

(C) by striking ''214.'' and inserting ''Sec. 214.'';

(D) by striking ''215.'' and inserting ''Sec. 215.''; and

(E) by striking ''216.'' and inserting ''Sec. 216.''.

SEC. 1407. IMPROVED COORDINATION OF TECHNOLOGY TRANSFER ACTIVITIES.

(a) TECHNOLOGY TRANSFER COORDINATOR.—The Secretary shall appoint a Technology Transfer Coordinator to perform oversight of and policy development for technology transfer activities at the Department. The Technology Transfer Coordinator shall coordinate the activities of the Technology Partnerships Working Group, and shall oversee the expenditure of funds allocated to the Technology Partnership Working Group.

(b) TECHNOLOGY PARTNERSHIP WORKING GROUP.—The Secretary shall establish a Technology Partnership Working Group, which shall consist of representatives of the National Laboratories and single-purpose research facilities, to—

(1) coordinate technology transfer activities occurring at National Laboratories and single-purpose research facilities;

(2) exchange information about technology transfer practices; and

(3) develop and disseminate to the public and prospective technology partners information about

opportunities and procedures for technology transfer with the Department.

SEC 1408. TECHNOLOGY INFRASTRUCTURE PROGRAM.

(a) ESTABLISHMENT.—The Secretary shall establish a Technology Infrastructure Program in accordance with this section.

(b) PURPOSE.—The purpose of the Technology Infrastructure Program shall be to improve the ability of National Laboratories or single-purpose research facilities to support departmental missions by—

(1) stimulating the development of technology clusters that can support departmental missions at the National Laboratories or single-purpose research facilities;

(2) improving the ability of National Laboratories or single-purpose research facilities to leverage and benefit from commercial research, technology, products, processes, and services; and

(3) encouraging the exchange of scientific and technological expertise between National Laboratories or single-purpose research facilities and—

(A) institutions of higher education,

(B) technology-related business concerns,

(C) nonprofit institutions, and

(D) agencies of State, tribal, or local governments,

that can support departmental missions at the National Laboratories and single-purpose research facilities.

(c) PROJECTS.—The Secretary shall authorize the Director of each National Laboratory or facility to implement the Technology Infrastructure Program at such National Laboratory or single-purpose research facility through projects that meet the requirements of subsections (d) and (e).

(d) PROGRAM REQUIREMENTS.—Each project funded under this section shall meet the following requirements:

(1) MINIMUM PARTICIPANTS.—Each project shall at a minimum include—

(A) a National Laboratory or single-purpose research facility; and

(B) one of the following entities—

(i) a business,

(ii) an institution of higher education,

(iii) a nonprofit institution, or

(iv) an agency of a State, local, or tribal government.

(2) COST SHARING.—

(A) MINIMUM AMOUNT.—Not less than 50 percent of the costs of each project funded under this section shall be provided from non-Federal sources.

(B) QUALIFIED FUNDING AND RESOURCES.—

(i) The calculation of costs paid by the non-Federal sources to a project shall include cash, personnel, services, equipment, and other resources expended on the project.

(ii) Independent research and development expenses of government contractors that qualify for reimbursement under section 31–205–18(e) of the Federal Acquisition Regulations issued pursuant to section 25(c)(1) of the Office of Federal Procurement Policy Act (41 U.S.C. 421(c)(1)) may be credited towards costs paid by non-Federal sources to a project, if the expenses meet the other requirements of this section.

(iii) No funds or other resources expended either before the start of a project under this section or outside the project's

scope of work shall be credited toward the costs paid by the non-Federal sources to the project.

(3) COMPETITIVE SELECTION.—All projects in which a party other than the Department, a National Laboratory, or a single-purpose research facility receives funding under this section shall, to the extent practicable, be competitively selected by the National Laboratory or facility using procedures determined to be appropriate by the Secretary.

(4) ACCOUNTING STANDARDS.—Any participant that receives funds under this section, other than a National Laboratory or single-purpose research facility, may use generally accepted accounting principles for maintaining accounts, books, and records relating to the project.

(5) LIMITATIONS.—No Federal funds shall be made available under this section for—

(A) construction; or

(B) any project for more than five years.

(e) SELECTION CRITERIA.—

(1) THRESHOLD FUNDING CRITERIA.—The Secretary shall allocate funds under this section only if the Director of the National Laboratory or single-purpose research facility managing the project deter-

mines that the project is likely to improve the ability of the National Laboratory or single-purpose research facility to achieve technical success in meeting departmental missions.

(2) ADDITIONAL CRITERIA.—The Secretary shall require the Director of the National Laboratory or single-purpose research facility managing a project under this section to consider the following criteria in selecting a project to receive Federal funds—

(A) the potential of the project to succeed, based on its technical merit, team members, management approach, resources, and project plan;

(B) the potential of the project to promote the development of a commercially sustainable technology cluster, which will derive most of the demand for its products or services from the private sector, and which will support departmental missions at the participating National Laboratory or single-purpose research facility;

(C) the potential of the project to promote the use of commercial research, technology, products, processes, and services by the participating National Laboratory or single-purpose

research facility to achieve its departmental mission or the commercial development of technological innovations made at the participating National Laboratory or single-purpose research facility;

(D) the commitment shown by non-Federal organizations to the project, based primarily on the nature and amount of the financial and other resources they will risk on the project;

(E) the extent to which the project involves a wide variety and number of institutions of higher education, nonprofit institutions, and technology-related business concerns that can support the missions of the participating National Laboratory or single-purpose research facility and that will make substantive contributions to achieving the goals of the project;

(F) the extent of participation in the project by agencies of State, tribal, or local governments that will make substantive contributions to achieving the goals of the project;

(G) the extent to which the project focuses on promoting the development of technology-related business concerns that are small business

concerns or involves such small business concerns substantively in the project; and

(H) such other criteria as the Secretary determines to be appropriate.

(f) REPORT TO CONGRESS.—Not later than January 1, 2004, the Secretary shall report to Congress on whether the Technology Infrastructure Program should be continued and, if so, how the program should be managed.

(g) DEFINITIONS.—In this section:

(1) TECHNOLOGY CLUSTER.—The term ''technology cluster'' means a concentration of—

(A) technology-related business concerns;

(B) institutions of higher education; or

(C) other nonprofit institutions,

that reinforce each other's performance in the areas of technology development through formal or informal relationships.

(2) TECHNOLOGY-RELATED BUSINESS CONCERN.—The term ''technology-related business concern'' means a for-profit corporation, company, association, firm, partnership, or small business concern that—

(A) conducts scientific or engineering research,

(B) develops new technologies,

(C) manufacturers products based on new technologies, or

(D) performs technological services.

(h) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary for activities under this section $10,000,000 for each of fiscal years 2003 and 2004.

SEC. 1409. SMALL BUSINESS ADVOCACY AND ASSISTANCE.

(a) SMALL BUSINESS ADVOCATE.—The Secretary shall require the Director of each National Laboratory, and may require the Director of a single-purpose research facility, to appoint a small business advocate to—

(1) increase the participation of small business concerns, including socially and economically disadvantaged small business concerns, in procurement, collaborative research, technology licensing, and technology transfer activities conducted by the National Laboratory or single-purpose research facility;

(2) report to the Director of the National Laboratory or single-purpose research facility on the actual participation of small business concerns in procurement and collaborative research along with recommendations, if appropriate, on how to improve participation;

(3) make available to small business concerns training, mentoring, and clear, up-to-date information on how to participate in the procurement and collaborative research, including how to submit effective proposals;

(4) increase the awareness inside the National Laboratory or single-purpose research facility of the capabilities and opportunities presented by small business concerns; and

(5) establish guidelines for the program under subsection (b) and report on the effectiveness of such program to the Director of the National Laboratory or single-purpose research facility.

(b) ESTABLISHMENT OF SMALL BUSINESS ASSISTANCE PROGRAM.—The Secretary shall require the Director of each National Laboratory, and may require the director of a single-purpose research facility, to establish a program to provide small business concerns—

(1) assistance directed at making them more effective and efficient subcontractors or suppliers to the National Laboratory or single-purpose research facility; or

(2) general technical assistance, the cost of which shall not exceed $10,000 per instance of as-

sistance, to improve the small business concern's products or services.

(c) USE OF FUNDS.—None of the funds expended under subsection (b) may be used for direct grants to the small business concerns.

(d) DEFINITIONS.—In this section:

(1) SMALL BUSINESS CONCERN.—The term ''small business concern'' has the meaning given such term in section 3 of the Small Business Act (15 U.S.C. 632).

(2) SOCIALLY AND ECONOMICALLY DISADVANTAGED SMALL BUSINESS CONCERNS.—The term ''socially and economically disadvantaged small business concerns'' has the meaning given such term in section 8(a)(4) of the Small Business Act (15 U.S.C. 637(a)(4)).

SEC. 1410. OTHER TRANSACTIONS.

(a) IN GENERAL.—Section 646 of the Department of Energy Organization Act (42 U.S.C. 7256) is amended by adding at the end the following:

''(g) OTHER TRANSACTIONS AUTHORITY.—(1) In addition to other authorities granted to the Secretary to enter into procurement contracts, leases, cooperative agreements, grants, and other similar arrangements, the Secretary may enter into other transactions with public

agencies, private organizations, or persons on such terms as the Secretary may deem appropriate in furtherance of basic, applied, and advanced research functions now or hereafter vested in the Secretary. Such other transactions shall not be subject to the provisions of section 9 of the Federal Nonnuclear Energy Research and Development Act of 1974 (42 U.S.C. 5908).

''(2)(A) The Secretary of Energy shall ensure that—

''(i) to the maximum extent practicable, no transaction entered into under paragraph (1) provides for research that duplicates research being conducted under existing programs carried out by the Department of Energy; and

''(ii) to the extent that the Secretary determines practicable, the funds provided by the Government under a transaction authorized by paragraph (1) do not exceed the total amount provided by other parties to the transaction.

''(B) A transaction authorized by paragraph (1) may be used for a research project when the use of a standard contract, grant, or cooperative agreement for such project is not feasible or appropriate.

''(3)(A) The Secretary shall not disclose any trade secret or commercial or financial information submitted

by a non-Federal entity under paragraph (1) that is privileged and confidential.

''(B) The Secretary shall not disclose, for five years after the date the information is received, any other information submitted by a non-Federal entity under paragraph (1), including any proposal, proposal abstract, document supporting a proposal, business plan, or technical information that is privileged and confidential.

''(C) The Secretary may protect from disclosure, for up to five years, any information developed pursuant to a transaction under paragraph (1) that would be protected from disclosure under section 552(b)(4) of title 5, United States Code, if obtained from a person other than a Federal agency.''.

(b) IMPLEMENTATION.—Not later than six months after the date of enactment of this section, the Department shall establish guidelines for the use of other transactions.

SEC. 1411. MOBILITY OF SCIENTIFIC AND TECHNICAL PERSONNEL.

Not later than two years after the enactment of this section, the Secretary, acting through the Technology Transfer Coordinator under section 1407, shall determine whether each contractor operating a National Laboratory or single-purpose research facility has policies and proce-

dures that do not create disincentives to the transfer of scientific and technical personnel among the contractor-operated National Laboratories or contractor-operated single-purpose research facilities.

SEC. 1412. NATIONAL ACADEMY OF SCIENCES REPORT.

Within 90 days after the date of enactment of this Act, the Secretary shall contract with the National Academy of Sciences to—

(1) conduct a study on the obstacles to accelerating the innovation cycle for energy technology, and

(2) report to the Congress recommendations for shortening the cycle of research, development, and deployment.

SEC. 1413. REPORT ON TECHNOLOGY READINESS AND BARRIERS TO TECHNOLOGY TRANSFER.

(a) IN GENERAL.—The Secretary, acting through the Technology Partnership Working Group and in consultation with representatives of affected industries, universities, and small business concerns, shall—

(1) assess the readiness for technology transfer of energy technologies developed through projects funded from appropriations authorized under subtitles A through D of title XIV, and

(2) identify barriers to technology transfer and cooperative research and development agreements between the Department or a National Laboratory and a non-federal person; and

(3) make recommendations for administrative or legislative actions needed to reduce or eliminate such barriers.

(b) REPORT.—The Secretary provide a report to Congress and the President on activities carried out under this section not later than one year after the date of enactment of this section, and shall update such report on a biennial basis, taking into account progress toward eliminating barriers to technology transfer identified in previous reports under this section.

TITLE XV—PERSONNEL AND TRAINING

SEC. 1501. WORKFORCE TRENDS AND TRAINEESHIP GRANTS.

(a) WORKFORCE TRENDS.—

(1) MONITORING.—The Secretary of Energy (in this title referred to as the ''Secretary''), acting through the Administrator of the Energy Information Administration, in consultation with the Secretary of Labor, shall monitor trends in the workforce of skilled technical personnel supporting energy

technology industries, including renewable energy industries, companies developing and commercializing devices to increase energy-efficiency, the oil and gas industry, nuclear power industry, the coal industry, and other industrial sectors as the Secretary may deem appropriate.

(2) ANNUAL REPORTS.—The Administrator of the Energy Information Administration shall include statistics on energy industry workforce trends in the annual reports of the Energy Information Administration.

(3) SPECIAL REPORTS.—The Secretary shall report to the appropriate committees of Congress whenever the Secretary determines that significant shortfalls of technical personnel in one or more energy industry segments are forecast or have occurred.

(b) TRAINEESHIP GRANTS FOR TECHNICALLY SKILLED PERSONNEL.—

(1) GRANT PROGRAMS.—The Secretary shall establish grant programs in the appropriate offices of the Department to enhance training of technically skilled personnel for which a shortfall is determined under subsection (a).

(2) ELIGIBLE INSTITUTIONS.—As determined by the Secretary to be appropriate to the particular workforce shortfall, the Secretary shall make grants under paragraph (1) to—

(A) an institution of higher education;

(B) a postsecondary educational institution providing vocational and technical education (within the meaning given those terms in section 3 of the Carl D. Perkins Vocational and Technical Education Act of 1998 (20 U.S.C. 2302));

(C) appropriate agencies of State, local, or tribal governments; or

(D) joint labor and management training organizations with state or federally recognized apprenticeship programs and other employee-based training organizations as the Secretary considers appropriate.

(c) DEFINITION.—For purposes of this section, the term ''skilled technical personnel'' means journey and apprentice level workers who are enrolled in or have completed a state or federally recognized apprenticeship program and other skilled workers in energy technology industries.

(d) AUTHORIZATION OF APPROPRIATIONS.—From amounts authorized under section 1241(c), there are authorized to be appropriated to the Secretary for activities under this section such sums as may be necessary for each fiscal year.

SEC. 1502. POSTDOCTORAL AND SENIOR RESEARCH FELLOWSHIPS IN ENERGY RESEARCH.

(a) POSTDOCTORAL FELLOWSHIPS.—The Secretary shall establish a program of fellowships to encourage outstanding young scientists and engineers to pursue postdoctoral research appointments in energy research and development at institutions of higher education of their choice. In establishing a program under this subsection, the Secretary may enter into appropriate arrangements with the National Academy of Sciences to help administer the program.

(b) DISTINGUISHED SENIOR RESEARCH FELLOWSHIPS.—The Secretary shall establish a program of fellowships to allow outstanding senior researchers in energy research and development and their research groups to explore research and development topics of their choosing for a fixed period of time. Awards under this program shall be made on the basis of past scientific or technical accomplishment and promise for continued accomplish-

ment during the period of support, which shall not be less than 3 years.

(c) AUTHORIZATION OF APPROPRIATIONS.—From amounts authorized under section 1241(c), there are authorized to be appropriated to the Secretary for activities under this section such sums as may be necessary for each fiscal year.

SEC. 1503. TRAINING GUIDELINES FOR ELECTRIC ENERGY INDUSTRY PERSONNEL.

(a) MODEL GUIDELINES.—The Secretary shall, in cooperation with electric generation, transmission, and distribution companies and recognized representatives of employees of those entities, develop model employee training guidelines to support electric supply system reliability and safety.

(b) CONTENT OF GUIDELINES.—The guidelines under this section shall include—

(1) requirements for worker training, competency, and certification, developed using criteria set forth by the Utility Industry Group recognized by the National Skill Standards Board; and

(2) consolidation of existing guidelines on the construction, operation, maintenance, and inspection of electric supply generation, transmission and distribution facilities such as those established by the

National Electric Safety Code and other industry consensus standards.

SEC. 1504. NATIONAL CENTER ON ENERGY MANAGEMENT AND BUILDING TECHNOLOGIES.

The Secretary shall establish a National Center on Energy Management and Building Technologies, to carry out research, education, and training activities to facilitate the improvement of energy efficiency and indoor air quality in industrial, commercial and residential buildings. The National Center shall be established in cooperation with—

(1) recognized representatives of employees in the heating, ventilation, and air-conditioning industry;

(2) contractors that install and maintain heating, ventilation and air-conditioning systems and equipment;

(3) manufacturers of heating, ventilation and air-conditioning systems and equipment;

(4) representatives of the advanced building envelope industry, including design, windows, lighting, and insulation industries; and

(5) other entities as appropriate.

SEC. 1505. IMPROVED ACCESS TO ENERGY-RELATED SCIENTIFIC AND TECHNICAL CAREERS.

(a) DEPARTMENT OF ENERGY SCIENCE EDUCATION PROGRAMS.—Section 3164 of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381a) is amended by adding at the end the following:

''(c) PROGRAMS FOR WOMEN AND MINORITY STUDENTS.—In carrying out a program under subsection (a), the Secretary shall give priority to activities that are designed to encourage women and minority students to pursue scientific and technical careers.''.

(b) PARTNERSHIPS WITH HISTORICALLY BLACK COLLEGES AND UNIVERSITIES, HISPANIC-SERVICING INSTITUTIONS, AND TRIBAL COLLEGES.—The Department of Energy Science Education Enhancement Act (42 U.S.C. 7381 et seq.) is amended—

(1) by redesignating sections 3167 and 3168 as sections 3168 and 3169, respectively; and

(2) by inserting after section 3166 the following:

SEC. 3167. PARTNERSHIPS WITH HISTORICALLY BLACK COLLEGES AND UNIVERSITIES, HISPANIC-SERVING INSTITUTIONS, AND TRIBAL COLLEGES.

''(a) DEFINITIONS.—In this section:

''(1) HISPANIC-SERVING INSTITUTION.—The term 'Hispanic-serving institution' has the meaning given the term in section 502(a) of the Higher Education Act of 1965 (20 U.S.C. 1101a(a)).

''(2) HISTORICALLY BLACK COLLEGE OR UNIVERSITY.—The term 'historically Black college or university' has the meaning given the term 'part B institution' in section 322 of the Higher Education Act of 1965 (20 U.S.C. 1061).

''(3) NATIONAL LABORATORY.—The term 'National Laboratory' has the meaning given the term in section 1203 of the Energy Science and Technology Enhancement Act of 2002.

''(4) SCIENCE FACILITY.—The term 'science facility' has the meaning given the term 'single-purpose research facility' in section 1401 of the Energy Science and Technology Enhancement Act of 2002.

''(5) TRIBAL COLLEGE.—The term 'tribal college' has the meaning given the term 'tribally controlled college or university' in section 2(a) of the Tribally Controlled College or University Assistance Act of 1978 (25 U.S.C. 1801(a)).

''(b) EDUCATION PARTNERSHIP.—

''(1) IN GENERAL.—The Secretary shall direct the Director of each National Laboratory, and may

direct the head of any science facility, to increase the participation of historically Black colleges or universities, Hispanic-serving institutions, or tribal colleges in activities that increase the capacity of the historically Black colleges or universities, Hispanic-serving institutions, or tribal colleges to train personnel in science or engineering.

''(2) ACTIVITIES.—An activity under paragraph (1) may include—

''(A) collaborative research;

''(B) a transfer of equipment;

''(C) training of personnel at a National Laboratory or science facility; and

''(D) a mentoring activity by personnel at a National Laboratory or science facility.

''(c) REPORT.—Not later than 2 years after the date of enactment of this section, the Secretary shall submit to the Committee on Science of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report on the activities carried out under this section.''.

DIVISION F—TECHNOLOGY ASSESSMENT AND STUDIES

TITLE XVI—TECHNOLOGY ASSESSMENT

SEC. 1601. NATIONAL SCIENCE AND TECHNOLOGY ASSESSMENT SERVICE.

The National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. 6601 et seq.) is amended by adding at the end the following:

"TITLE VII—NATIONAL SCIENCE AND TECHNOLOGY ASSESSMENT SERVICE

"SEC. 701. ESTABLISHMENT.

''There is hereby created a Science and Technology Assessment Service (hereinafter referred to as the 'Service'), which shall be within and responsible to the legislative branch of the Government.

"SEC. 702. COMPOSITION.

''The Service shall consist of a Science and Technology Board (hereinafter referred to as the 'Board') which shall formulate and promulgate the policies of the Service, and a Director who shall carry out such policies and administer the operations of the Service.

"SEC. 703. FUNCTIONS AND DUTIES.

"The Service shall coordinate and develop information for Congress relating to the uses and application of technology to address current national science and technology policy issues. In developing such technical assessments for Congress, the Service shall utilize, to the extent practicable, experts selected in coordination with the National Research Council.

"SEC. 704. INITIATION OF ACTIVITIES.

"Science and technology assessment activities undertaken by the Service may be initiated upon the request of—

"(1) the Chairman of any standing, special, or select committee of either House of the Congress, or of any joint committee of the Congress, acting for himself or at the request of the ranking minority member or a majority of the committee members;

"(2) the Board; or

"(3) the Director.

"SEC. 705. ADMINISTRATION AND SUPPORT.

"The Director of the Science and Technology Assessment Service shall be appointed by the Board and shall serve for a term of 6 years unless sooner removed by the Board. The Director shall receive basic pay at the rate provided for level III of the Executive Schedule under section 5314 of title 5, United States Code. The Director

shall contract for administrative support from the Library of Congress.

"SEC. 706. AUTHORITY.

"The Service shall have the authority, within the limits of available appropriations, to do all things necessary to carry out the provisions of this section, including, but without being limited to, the authority to—

"(1) make full use of competent personnel and organizations outside the Office, public or private, and form special ad hoc task forces or make other arrangements when appropriate;

"(2) enter into contracts or other arrangements as may be necessary for the conduct of the work of the Office with any agency or instrumentality of the United States, with any State, territory, or possession or any political subdivision thereof, or with any person, firm, association, corporation, or educational institution, with or without reimbursement, without performance or other bonds, and without regard to section 3709 of the Revised Statutes (41 U.S.C. 51);

"(3) accept and utilize the services of voluntary and uncompensated personnel necessary for the conduct of the work of the Service and provide transportation and subsistence as authorized by section

5703 of title 5, United States Code, for persons serving without compensation; and

''(4) prescribe such rules and regulations as it deems necessary governing the operation and organization of the Service.

''SEC. 707. BOARD.

''The Board shall consist of 13 members as follows—

''(1) 6 Members of the Senate, appointed by the President pro tempore of the Senate, 3 from the majority party and 3 from the minority party;

''(2) 6 Members of the House or Representatives appointed by the Speaker of the House of Representatives, 3 from the majority party and 3 from the minority party; and

''(3) the Director, who shall not be a voting member.

''SEC. 708. REPORT TO CONGRESS.

''The Service shall submit to the Congress an annual report which shall include, but not be limited to, an evaluation of technology assessment techniques and identification, insofar as may be feasible, of technological areas and programs requiring future analysis. The annual report shall be submitted not later than March 15 of each year.

"SEC. 709. AUTHORIZATION OF APPROPRIATIONS.

''There are authorized to be appropriated to the Service such sums as are necessary to fulfill the requirements of this title.''.

TITLE XVII—STUDIES

SEC. 1701. REGULATORY REVIEWS.

(a) REGULATORY REVIEWS.—Not later than one year after the date of enactment of this section and every five years thereafter, each Federal agency shall review relevant regulations and standards to identify—

(1) existing regulations and standards that act as barriers to—

(A) market entry for emerging energy technologies (including fuel cells, combined heat and power, distributed power generation, and small-scale renewable energy), and

(B) market development and expansion for existing energy technologies (including combined heat and power, small-scale renewable energy, and energy recovery in industrial processes), and

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

(A) remove barriers to market entry for emerging energy technologies and to market expansion for existing technologies,

(B) increase energy efficiency and conservation, or

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

(b) REPORT TO CONGRESS.—Not later than 18 months after the date of enactment of this section, and every five years thereafter, the Director of the Office of Science and Technology Policy shall report to the Congress on the results of the agency reviews conducted under subsection (a).

(c) CONTENTS OF THE REPORT.—The report shall—

(1) identify all regulatory barriers to—

(A) the development and commercialization of emerging energy technologies and processes, and

(B) the further development and expansion of existing energy conservation technologies and processes,

(2) actions taken, or proposed to be taken, to remove such barriers, and

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

(A) expedite the siting and development of energy production and distribution facilities,

(B) encourage the adoption of energy efficiency and process improvements,

(C) facilitate the expanded use of existing energy conservation technologies, and

(D) reduce the environmental impacts of energy facilities and processes through transparent and flexible compliance methods.

SEC. 1702. ASSESSMENT OF DEPENDENCE OF HAWAII ON OIL.

(a) STUDY.—Not later than 60 days after the enactment of this Act, the Secretary of Energy shall initiate a study that assesses the economic risk posed by the dependence of Hawaii on oil as the principal source of energy.

(b) SCOPE OF THE STUDY.—The Secretary shall assess—

(1) the short- and long-term threats to the economy of Hawaii posed by insecure supply and volatile prices;

(2) the impact on availability and cost of refined petroleum products if oil-fired electric generation is displaced by other sources;

(3) the feasibility of increasing the contribution of renewable sources to the overall energy requirements of Hawaii; and

(4) the feasibility of using liquid natural gas as a source of energy to supplement oil.

(c) REPORT.—Not later than 300 days after the date of enactment of this section, the Secretary shall prepare, in consultation with appropriate agencies of the State of Hawaii, industry representatives, and citizen groups, and shall submit to Congress a report detailing the Secretary's findings, conclusions, and recommendations. The report shall include—

(1) a detailed analysis of the availability, economics, infrastructure needs, and recommendations to increase the contribution of renewable energy sources to the overall energy requirements of Hawaii; and

(2) a detailed analysis of the use of liquid natural gas, including—

(A) the availability of supply,

(B) economics,

(C) environmental and safety considerations,

(D) technical limitations,

(E) infrastructure and transportation requirements,

(F) siting and facility configurations, including—

(i) onshore and offshore alternatives, and

(ii) environmental and safety considerations of both onshore and offshore alternatives.

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary of Energy such sums as may be necessary to carry out the purposes of this section.

SEC. 1703. STUDY OF SITING AN ELECTRIC TRANSMISSION SYSTEM ON AMTRAK RIGHT-OF-WAY.

(a) STUDY.—The Secretary of Energy shall contract with Amtrak to conduct a study of the feasibility of building and operating a new electric transmission system on the Amtrak right-of-way in the Northeast Corridor.

(b) SCOPE OF THE STUDY.—The study shall focus on siting the new system on the Amtrak right-of-way within the Northeastern Corridor between Washington, D.C., and New Rochelle, New York, including the Amtrak right-of-way between Philadelphia, Pennsylvania and Harrisburg, Pennsylvania.

(c) CONTENTS OF THE STUDY.—The study shall consider—

(1) alternative geographic configuration of a new electronic transmission system on the Amtrak right-of-way;

(2) alternative technologies for the system;

(3) the estimated costs of building and operating each alternative;

(4) alternative means of financing the system;

(5) the environmental risks and benefits of building and operating each alternative as well as environmental risks and benefits of building and operating the system on the Northeast Corridor rather than at other locations;

(6) engineering and technological obstacles to building and operating each alternative; and

(7) the extent to which each alternative would enhance the reliability of the electric transmission grid and enhance competition in the sale of electric energy at wholesale within the Northeast Corridor.

(d) RECOMMENDATIONS.—The study shall recommend the optimal geographic configuration, the optimal technology, the optimal engineering design, and the optimal means of financing for the new system from among the alternatives considered.

(e) REPORT.—The Secretary of Energy shall submit the completed study to the Committee on Energy and Nat-

ural Resources of the United States Senate and the Committee on Energy and Commerce of the House of Representatives not later than 270 days after the date of enactment of this section.

(f) DEFINITIONS.—For purposes of this section—

(1) the term ''Amtrak'' means the National Railroad Passenger Corporation established under chapter 243 of title 49, United States Code; and

(2) the term ''Northeast Corridor'' shall have the meaning given such term under section 24102(7) of title 49, United States Code.

DIVISION G—ENERGY INFRASTRUCTURE SECURITY

TITLE XVIII—CRITICAL ENERGY INFRASTRUCTURE

Subtitle A—Department of Energy Programs

SEC. 1801. DEFINITIONS.

In this title:

(1) CRITICAL ENERGY INFRASTRUCTURE.—

(A) IN GENERAL.—The term ''critical energy infrastructure'' means a physical or cyber-based system or service for—

(i) the generation, transmission or distribution of electric energy; or

(ii) the production, refining, or storage of petroleum, natural gas, or petroleum product—

the incapacity or destruction of which would have a debilitating impact on the defense or economic security of the United States.

(B) EXCLUSION.—The term shall not include a facility that is licensed by the Nuclear Regulatory Commission under section 103 or 104 b. of the Atomic Energy Act of 1954 (42 U.S.C. 2133 and 2134(b)).

(2) DEPARTMENT; NATIONAL LABORATORY; SECRETARY.—The terms ''Department'', ''National Laboratory'', and ''Secretary'' have the meaning given such terms in section 1203.

SEC. 1802. ROLE OF THE DEPARTMENT OF ENERGY.

Section 102 of the Department of Energy Organization Act (42 U.S.C. 7112) is amended by adding at the end the following:

''(20) To ensure the safety, reliability, and security of the nation's energy infrastructure, and to respond to any threat to or disruption of such infrastructure, through activities including—

''(A) research and development;

"(B) financial assistance, technical assistance, and cooperative activities with States, industry, and other interested parties; and

"(C) education and public outreach activities.".

SEC. 1803. CRITICAL ENERGY INFRASTRUCTURE PROGRAMS.

(a) PROGRAMS.—In addition to the authorities otherwise provided by law (including section 1261), the Secretary is authorized to establish programs of financial, technical, or administrative assistance to—

(1) enhance the security of critical energy infrastructure in the United States;

(2) develop and disseminate, in cooperation with industry, best practices for critical energy infrastructure assurance; and

(3) protect against, mitigate the effect of, and improve the ability to recover from disruptive incidents affecting critical energy infrastructure.

(b) REQUIREMENTS.—A program established under this section shall—

(1) be undertaken in consultation with the advisory committee established under section 1804;

(2) have available to it the scientific and technical resources of the Department, including resources at a National Laboratory; and

(3) be consistent with any overall Federal plan for national infrastructure security developed by the President or his designee.

SEC. 1804. ADVISORY COMMITTEE ON ENERGY INFRASTRUCTURE SECURITY.

(a) ESTABLISHMENT.—The Secretary shall establish an advisory committee, or utilize an existing advisory committee within the Department, to advise the Secretary on policies and programs related to the security of U.S. energy infrastructure.

(b) BALANCED MEMBERSHIP.—The Secretary shall ensure that the advisory committee established or utilized under subsection (a) has a membership with an appropriate balance among the various interests related to energy infrastructure security, including—

(1) scientific and technical experts;

(2) industrial managers;

(3) worker representatives;

(4) insurance companies or organizations;

(5) environmental organizations;

(6) representatives of State, local, and tribal governments; and

(7) such other interests as the Secretary may deem appropriate.

(c) EXPENSES.—Members of the advisory committee established or utilized under subsection (a) shall serve without compensation, and shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for an employee of an agency under subchapter I of chapter 57 of title 5, United States Code, while away from the home or regular place of business of the member in the performance of the duties of the committee.

SEC. 1805. BEST PRACTICES AND STANDARDS FOR ENERGY INFRASTRUCTURE SECURITY.

The Secretary, in consultation with the advisory committee under section 1804, shall enter into appropriate arrangements with one or more standard-setting organizations, or similar organizations, to assist the development of industry best practices and standards for security related to protecting critical energy infrastructure.

Subtitle B—Department of the Interior Programs

SEC. 1811. OUTER CONTINENTAL SHELF ENERGY INFRASTRUCTURE SECURITY.

(a) DEFINITIONS.—In this section:

(1) APPROVED STATE PLAN.—The term ''approved State plan'' means a State plan approved by the Secretary under subsection (c)(3).

(2) COASTLINE.—The term ''coastline'' has the same meaning as the term ''coast line'' as defined in subsection 2(c) of the Submerged Lands Act (43 U.S.C. 1301(c)).

(3) CRITICAL OCS ENERGY INFRASTRUCTURE FACILITY.—The term ''OCS critical energy infrastructure facility'' means—

(A) a facility related to the production of oil or gas on the Outer Continental Shelf; and

(B) a related facility that carries out a public service, transportation, or infrastructure activity critical to the operation of an energy infrastructure facility, as determined by the Secretary.

(4) DISTANCE.—The term ''distance'' means the minimum great circle distance, measured in statute miles.

(5) LEASED TRACT.—

(A) IN GENERAL.—The term ''leased tract'' means a tract that—

(i) is subject to a lease under section 6 or 8 of the Outer Continental Shelf

Lands Act (43 U.S.C. 1335, 1337) for the purpose of drilling for, developing, and producing oil or natural gas resources; and

(ii) consists of a block, a portion of a block, a combination of blocks or portions of blocks, or a combination of portions of blocks, as—

(I) specified in the lease; and

(II) depicted on an outer Continental Shelf official protraction diagram.

(B) EXCLUSION.—The term ''leased tract'' does not include a tract described in subparagraph (A) that is located in a geographic area subject to a leasing moratorium on January 1, 2001, unless the lease was in production on that date.

(6) OCS POLITICAL SUBDIVISION.—The term ''OCS political subdivision'' means a county, parish, borough or any equivalent subdivision of an OCS Production State all or part of which subdivision lies within the coastal zone (as defined in section 304(1) of the Coastal Zone Management Act of 1972 (16 U.S.C. 1453(1)).

(7) OCS PRODUCTION STATE.—The term ''OCS Production State'' means the State of—

(A) Alaska;

(B) Alabama;

(C) California;

(D) Florida;

(F) Louisiana;

(G) Mississippi; or

(H) Texas.

(8) PRODUCTION.—The term ''production'' has the meaning given the term in section 2 of the Outer Continental Shelf Lands Act (43 U.S.C. 1331).

(9) PROGRAM.—The term ''program'' means the Outer Continental Shelf Energy Infrastructure Security Program established under subsection (b).

(10) QUALIFIED OUTER CONTINENTAL SHELF REVENUES.—The term ''qualified Outer Continental Shelf revenues'' means all amounts received by the United States from each leased tract or portion of a leased tract lying seaward of the zone defined and governed by section 8(g) of the Outer Continental Shelf Lands Act (43 U.S.C. 1331, *et seq.*), or lying within such zone but to which section 8(g) does not apply, the geographic center of which lies within a distance of 200 miles from any part of the coastline

of any State, including bonus bids, rents, royalties (including payments for royalties taken in kind and sold), net profit share payments, and related late payment interest. Such term does not include any revenues from a leased tract or portion of a leased tract that is included within any area of the Outer Continental Shelf where a moratorium on new leasing was in effect as of January 1, 2001, unless the lease was issued prior to the establishment of the moratorium and was in production on January 1, 2001.

(11) SECRETARY.—The term ''Secretary'' means the Secretary of the Interior.

(12) STATE PLAN.—The term ''State plan'' means a State plan described in subsection (b).

(b) ESTABLISHMENT.—The Secretary shall establish a program, to be known as the ''Outer Continental Shelf Energy Infrastructure Security Program,'' under which the Secretary shall provide funds to OCS Production States to implement approved State plans to provide security against hostile and natural threats to critical OCS energy infrastructure facilities and support of any necessary public service or transportation activities that are needed to maintain the safety and operation of critical energy infrastructure activities. For purposes of this program, res-

toration of any coastal wetland shall be considered to be an activity that secures critical OCS energy infrastructure facilities from a natural threat.

(c) STATE PLANS.—

(1) INITIAL PLAN.—Not later than 180 days after the date of enactment of this Act, to be eligible to receive funds under the program, the Governor of an OCS Production State shall submit to the Secretary a plan to provide security against hostile and natural threats to critical energy infrastructure facilities in the OCS Production State and to support any of the necessary public service or transportation activities that are needed to maintain the safety and operation of critical energy infrastructure facilities. Such plan shall include—

(A) the name of the State agency that will have the authority to represent and act for the State in dealing with the Secretary for purposes of this section;

(B) a program for the implementation of the plan which describes how the amounts provided under this section will be used;

(C) a contact for each OCS political subdivision and description of how such political subdivisions will use amounts provided under

this section, including a certification by the Governor that such uses are consistent with the requirements of this section;

(D) certification by the Governor that ample opportunity has been accorded for public participation in the development and revision of the plan; and

(E) Measures for taking into account other relevant Federal resources and programs.

(2) REVISED PLANS.—

(A) FIRST REVISED PLAN.—Not later than 18 months after the date of enactment of this Act, the Governor of a State shall submit to the Secretary a revised State plan.

(B) ANNUAL REVIEWS.—Not later than 1 year after the date of submission of the revised plan under subparagraph (A) and annually thereafter, the Governor of an OCS Production State shall—

(i) review the approved State plan; and

(ii) submit to the Secretary any revised State plan resulting from the review.

(3) APPROVAL OF PLANS.—

(A) IN GENERAL.—In consultation with appropriate Federal security officials and the Secretaries of Commerce and Energy, the Secretary shall—

(i) approve each State plan; or

(ii) recommend changes to the State plan.

(B) RESUBMISSION OF STATE PLANS.—If the Secretary recommends changes to a State plan under subparagraph (A)(ii), the Governor of the OCS Production State may resubmit a revised State plan to the Secretary for approval.

(4) AVAILABILITY OF PLANS.—

(A) AVAILABILITY TO THE PUBLIC.—The Secretary, in consultation with the Governor of an OCS Production State, shall determine whether and to what extent the approved State plan shall be made public.

(B) AVAILABILITY TO CONGRESS.—The Secretary shall provide to Congress, on a confidential basis, a copy of each approved State plan.

(5) CONSULTATION AND PUBLIC COMMENT.—

(A) CONSULTATION.—The Governor of an OCS Production State shall develop the State

plan in consultation with Federal, State, and local law enforcement and public safety officials, industry, Indian tribes, the scientific community, and other persons as appropriate.

(B) PUBLIC COMMENT.—The Governor of an OCS Production State may solicit public comments on the State plan to the extent that the Governor determines to be appropriate.

(d) ALLOCATION OF AMOUNTS BY THE SECRETARY.—The Secretary shall allocate the amounts made available for the purposes of carrying out the program provided for by this section among OCS Production States as follows:

(1) 25 percent of the amounts shall be divided equally among OCS Production States; and

(2) 75 percent of the amounts shall be divided among OCS Production States on the basis of the proximity of each OCS Production State to offshore locations at which oil and gas are being produced.

(e) CALCULATION.—The amount for each OCS Production State under paragraph (d)(2) shall be calculated based on the ratio of qualified OCS revenues generated off the coastline of the OCS Production State to the qualified OCS revenues generated off the coastlines of all OCS Production States for the prior five-year period. Where

there is more than one OCS Production State within 200 miles of a leased tract, the amount of each OCS Production State's payment under paragraph (d)(2) for such leased tract shall be inversely proportional to the distance between the nearest point on the coastline of such State and the geographic center of each leased tract or portion of the leased tract (to the nearest whole mile) that is within 200 miles of that coastline, as determined by the Secretary. A leased tract or portion of a leased tract shall be excluded if the tract or portion is located in a geographic area where a moratorium on new leasing was in effect on January 1, 2001, unless the lease was issued prior to the establishment of the moratorium and was in production on January 1, 2001.

(f) PAYMENTS TO OCS POLITICAL SUBDIVISIONS.—Thirty-five percent of each OCS Production State's allocable share as determined under subsection (e) shall be paid directly to the OCS political subdivisions by the Secretary based on the following formula, except that a political subdivision in the State of California that has a coastal shoreline that is not within 200 miles of the geographic center of a leased tract or portion of a leased tract and in which there is located one or more oil refineries shall be eligible for that portion of the allocation described in paragraph (3) in the same manner as if that political sub-

division were located within a distance of 50 miles from the geographic center of the closest leased tract with qualified Outer Continental Shelf revenues:

(1) 25 percent shall be allocated based on the ratio of such OCS political subdivision's coastal population to the coastal population of all OCS political subdivisions in the OCS Production State.

(2) 25 percent shall be allocated based on the ratio of such OCS political subdivision's coastline miles to the coastline miles of all OCS political subdivisions in the OCS Production State. For purposes of this subsection, those OCS political subdivisions without coastlines shall be considered to have a coastline that is the average length of the coastlines of all political subdivisions in the state.

(3) 50 percent shall be allocated based on the relative distance of such OCS political subdivision from any leased tract used to calculate that OCS Production State's allocation using ratios that are inversely proportional to the distance between the point in the coastal political subdivision closest to the geographic center of each leased tract or portion, as determined by the Secretary. For purposes of the calculations under this subparagraph, a leased tract or portion of a leased tract shall be excluded if the

leased tract or portion is located in a geographic area where a moratorium on new leasing was in effect on January 1, 2001, unless the lease was issued prior to the establishment of the moratorium and was in production on January 1, 2001.

(g) FAILURE TO HAVE PLAN APPROVED.—Any amount allocated to an OCS Production State or OCS political subdivision but not disbursed because of a failure to have an approved Plan under this section shall be allocated equally by the Secretary among all other OCS Production States in a manner consistent with this subsection except that the Secretary shall hold in escrow such amount until the final resolution of any appeal regarding the disapproval of a plan submitted under this section. The Secretary may waive the provisions of this paragraph and hold an OCS Production State's allocable share in escrow if the Secretary determines that such State is making a good faith effort to develop and submit, or update, a Plan.

(h) USE OF AMOUNTS ALLOCATED BY THE SECRETARY.—

(1) IN GENERAL.—Amounts allocated by the Secretary under subsection (d) may be used only in accordance with a plan approved pursuant to subsection (c) for—

(A) activities to secure critical OCS energy infrastructure facilities from human or natural threats; and

(B) support of any necessary public service or transportation activities that are needed to maintain the safety and operation of critical OCS energy infrastructure facilities.

(2) RESTORATION OF COASTAL WETLAND.—For the purpose of subparagraph (1)(A), restoration of any coastal wetland shall be considered to be an activity that secures critical OCS energy infrastructure facilities from a natural threat.

(i) AUTHORIZATION OF APPROPRIATIONS.—There are hereby authorized to be appropriated $450,000,000 for each of the fiscal years 2003 through 2008 to carry out the purposes of this section.

Subtitle C—Commercial Nuclear Facility Security

SEC. 1811. RESERVED.

Calendar No. 259

107TH CONGRESS
1ST SESSION

S. 1766

A BILL

To provide for the energy security of the Nation, and for other purposes.

DECEMBER 6, 2001

Read the second time and placed on the calendar