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S. 2191

[Report No. 110–_____]

To direct the Administrator of the Environmental Protection Agency to establish a program to decrease emissions of greenhouse gases, and for other purposes.

IN THE SENATE OF THE UNITED STATES

OCTOBER 18, 2007

Mr. LIEBERMAN (for himself, Mr. WARNER, Mr. HARKIN, Mr. COLEMAN, Mrs. DOLE, Ms. COLLINS, Mr. CARDIN, Ms. KLOBUCHAR, Mr. CASEY, and Mr. NELSON of Florida) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

JANUARY _____ (legislative day, JANUARY _____), 2008

Reported by Mrs. BOXER, with an amendment

[Strike out all after the enacting clause and insert the part printed in italic]

A BILL

To direct the Administrator of the Environmental Protection Agency to establish a program to decrease emissions of greenhouse gases, 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; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the ''America's Climate Security Act of 2007''.

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. Findings.
Sec. 3. Purposes.
Sec. 4. Definitions.

TITLE I—CAPPING GREENHOUSE GAS EMISSIONS

Subtitle A—Tracking Emissions

Sec. 1101. Purpose.
Sec. 1102. Definitions.
Sec. 1103. Reporting requirements.
Sec. 1104. Data quality and verification.
Sec. 1105. Federal greenhouse gas registry.
Sec. 1106. Enforcement.

Subtitle B—Reducing Emissions

Sec. 1201. Emission allowance account.
Sec. 1202. Compliance obligation.
Sec. 1203. Penalty for noncompliance.

TITLE II—MANAGING AND CONTAINING COSTS EFFICIENTLY

Subtitle A—Trading

Sec. 2101. Sale, exchange, and retirement of emission allowances.
Sec. 2102. No restriction on transactions.
Sec. 2103. Allowance transfer system.
Sec. 2104. Allowance tracking system.

Subtitle B—Banking

Sec. 2201. Indication of calendar year.
Sec. 2202. Effect of time.

Subtitle C—Borrowing

Sec. 2301. Regulations.
Sec. 2302. Term.
Sec. 2303. Repayment with interest.

Subtitle D—Offsets

Sec. 2401. Outreach initiative on revenue enhancement for agricultural producers.
Sec. 2402. Establishment of domestic offset program.
Sec. 2403. Eligible agricultural and forestry offset project types.

Sec. 2404. Project initiation and approval.
Sec. 2405. Offset verification and issuance of allowances for agricultural and forestry projects.
Sec. 2406. Tracking of reversals for sequestration projects.
Sec. 2407. Examinations.
Sec. 2408. Timing and the provision of offset allowances.
Sec. 2409. Offset registry.
Sec. 2410. Environmental considerations.
Sec. 2411. Program review.

Subtitle E—International Credits

Sec. 2501. Use of international allowances or credits.
Sec. 2502. Regulations.
Sec. 2503. Facility certification.

Subtitle F—Carbon Market Efficiency Board

Sec. 2601. Purposes.
Sec. 2602. Establishment of Carbon Market Efficiency Board.
Sec. 2603. Duties.
Sec. 2604. Powers.
Sec. 2605. Estimate of costs to economy of limiting greenhouse gas emissions.

TITLE III—ALLOCATING AND DISTRIBUTING ALLOWANCES

Subtitle A—Early Auctions

Sec. 3101. Allocation for early auctions.

Subtitle B—Annual Auctions

Sec. 3201. Allocation for annual auctions.

Subtitle C—Early Action

Sec. 3301. Allocation.
Sec. 3302. Distribution.

Subtitle D—States

Sec. 3401. Allocation for energy savings.
Sec. 3402. Allocation for States with programs that exceed Federal emission reduction targets.
Sec. 3403. General allocation.

Subtitle E—Electricity Consumers

Sec. 3501. Allocation.
Sec. 3502. Distribution.
Sec. 3503. Use.
Sec. 3504. Reporting.

Subtitle F—Bonus Allowances for Carbon Capture and Geological Sequestration

Sec. 3601. Allocation.
Sec. 3602. Qualifying projects.
Sec. 3603. Distribution.

Sec. 3604. 10-Year limit.
Sec. 3605. Exhaustion of bonus allowance account.

Subtitle G—Domestic Agriculture and Forestry

Sec. 3701. Allocation.
Sec. 3702. Agricultural and forestry greenhouse gas management research.
Sec. 3703. Distribution.

Subtitle H—International Forest Protection

Sec. 3801. Findings.
Sec. 3802. Definition of forest carbon activities.
Sec. 3803. Allocation.
Sec. 3804. Definition and eligibility requirements.
Sec. 3805. International forest carbon activities.
Sec. 3806. Reviews and discount.

Subtitle I—Covered Facilities

Sec. 3901. Allocation.
Sec. 3902. Distribution system.
Sec. 3903. Distributing emission allowances within the electric power sector.
Sec. 3904. Distributing emission allowances within the industrial sector.

TITLE IV—AUCTIONS AND USES OF AUCTION PROCEEDS

Subtitle A—Funds

Sec. 4101. Establishment.
Sec. 4102. Amounts in Funds.
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Sec. 4201. Establishment.
Sec. 4202. Applicable laws.
Sec. 4203. Board of directors.

Subtitle C—Auctions

Sec. 4301. Early auctions.
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Subtitle D—Energy Technology Deployment

Sec. 4401. In general.
Sec. 4402. Zero- or low-carbon energy technologies deployment.
Sec. 4403. Advanced coal and sequestration technologies program.
Sec. 4404. Fuel from cellulosic biomass.
Sec. 4405. Advanced technology vehicles manufacturing incentive program.

Subtitle E—Energy Consumers

Sec. 4501. Proportions of funding availability.
Sec. 4502. Rural energy assistance program.

Subtitle F—Climate Change Worker Training Program

Sec. 4601. Funding.

Sec. 4602. Purposes.
Sec. 4603. Establishment.
Sec. 4604. Grants to States.
Sec. 4605. Types of assistance.

Subtitle G—Adaptation Program for Natural Resources in United States and Territories

Sec. 4701. Definitions.
Sec. 4702. Adaptation fund.

Subtitle H—Climate Change and National Security Program

Sec. 4801. Interagency Climate Change and National Security Council.
Sec. 4802. Funding.

Subtitle I—Audits

Sec. 4901. Review and audit by Comptroller General of the United States.

TITLE V—ENERGY EFFICIENCY

Subtitle A—Appliance Efficiency

Sec. 5101. Residential boilers.
Sec. 5102. Regional variations in heating or cooling standards.

Subtitle B—Building Efficiency

Sec. 5201. Updating State building energy efficiency codes.
Sec. 5202. Conforming amendment.

TITLE VI—GLOBAL EFFORT TO REDUCE GREENHOUSE GAS EMISSIONS

Sec. 6001. Definitions.
Sec. 6002. Purposes.
Sec. 6003. International negotiations.
Sec. 6004. Interagency review.
Sec. 6005. Presidential determinations.
Sec. 6006. International reserve allowance program.
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TITLE VII—REVIEWS

Sec. 7001. National Academy of Sciences Review.
Sec. 7002. Transportation sector review.
Sec. 7003. Adaptation review.

TITLE VIII—FRAMEWORK FOR GEOLOGICAL SEQUESTRATION OF CARBON DIOXIDE

Sec. 8001. National drinking water regulations.
Sec. 8002. Assessment of geological storage capacity for carbon dioxide.
Sec. 8003. Study of the feasibility relating to construction of pipelines and geological carbon dioxide sequestration activities.
Sec. 8004. Liabilities for closed geological storage sites.

TITLE IX—MISCELLANEOUS

Sec. 9001. Paramount interest waiver.
Sec. 9002. Corporate environmental disclosure of climate change risks.
Sec. 9003. Administrative procedure and judicial review.
Sec. 9004. Retention of State authority.
Sec. 9005. Tribal authority.
Sec. 9006. Authorization of appropriations.

SEC. 2. FINDINGS.

Congress finds that—

(1) unchecked global warming poses a significant threat to—

(A) the national security and economy of the United States;

(B) public health and welfare in the United States;

(C) the well-being of other countries; and

(D) the global environment;

(2) under the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992, the United States is committed to stabilizing greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic interference with the climate system;

(3) according to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, stabilizing greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous interference with the climate system will require a global effort to reduce anthropogenic greenhouse gas

emissions worldwide by 50 to 85 percent below 2000 levels by 2050;

(4) prompt, decisive action is critical, since global warming pollutants can persist in the atmosphere for more than a century;

(5) the ingenuity of the people of the United States will allow the United States to become a leader in curbing global warming;

(6) it is possible and desirable to cap greenhouse gas emissions, from sources that together account for the majority of those emissions in the United States, at the current level in 2012, and to lower the cap each year between 2012 and 2050, on the condition that the system includes—

(A) cost containment measures;

(B) periodic review of requirements;

(C) an aggressive program for deploying advanced energy technology;

(D) programs to assist low- and middle-income energy consumers; and

(E) programs to mitigate the impacts of any unavoidable global climate change;

(7) Congress may need to update the emissions caps in order to account for continuing scientific

data and steps taken, or not taken, by foreign countries;

(8) accurate emission data and timely compliance with the requirements of the greenhouse gas emission reduction and trading program established under this Act are needed to ensure that reductions are achieved and to provide equity, efficiency, and openness in the market for allowances subject to the program; and

(9) additional policies external to a cap-and-trade program may be required, including with respect to—

(A) the transportation sector, where reducing greenhouse gas emissions requires changes in the vehicle, in the fuels, and in consumer behavior; and

(B) the built environment, where reducing direct and indirect greenhouse gas emissions requires changes in buildings, appliances, lighting, heating, cooling, and consumer behavior.

SEC. 3. PURPOSES.

The purposes of this Act are—

(1) to establish the core of a Federal program that will reduce United States greenhouse gas emissions substantially enough between 2007 and 2050

to avert the catastrophic impacts of global climate change; and

(2) to accomplish that purpose while preserving robust growth in the United States economy and avoiding the imposition of hardship on United States citizens.

SEC. 4. DEFINITIONS.

In this Act:

(1) ADDITIONAL AND ADDITIONALITY.—The terms ''additional'' and ''additionality'' mean the extent to which reductions in greenhouse gas emissions or increases in sequestration are incremental to business-as-usual, measured as the difference between—

(A) baseline greenhouse gas fluxes of an offset project; and

(B) greenhouse gas fluxes of the offset project.

(2) ADMINISTRATOR.—The term ''Administrator'' means the Administrator of the Environmental Protection Agency.

(3) BASELINE.—The term ''baseline'' means the greenhouse gas flux or carbon stock that would have occurred in the absence of an offset allowance.

(4) BIOLOGICAL SEQUESTRATION; BIOLOGICALLY SEQUESTERED.—The terms ''biological

~~sequestration'' and ''biologically sequestered'' mean—~~

~~(A) the removal of greenhouse gases from the atmosphere by terrestrial biological means, such as by growing plants; and~~

~~(B) the storage of those greenhouse gases without reversal in the plants or related soils.~~

~~(5) CARBON DIOXIDE EQUIVALENT.—The term ''carbon dioxide equivalent'' means, for each greenhouse gas, the quantity of the greenhouse gas that the Administrator determines makes the same contribution to global warming as 1 metric ton of carbon dioxide.~~

~~(6) CORPORATION.—The term ''Corporation'' means the Climate Change Credit Corporation established by section 4201(a).~~

~~(7) COVERED FACILITY.—The term ''covered facility'' means—~~

~~(A) any facility within the electric power sector that contains fossil fuel-fired electricity generating units that together emit more than 10,000 carbon dioxide equivalents of greenhouse gas in any year;~~

(B) any facility within the industrial sector that emits more than 10,000 carbon dioxide equivalents of greenhouse gas in any year;

(C) any facility that in any year produces, or any entity that in any year imports, petroleum- or coal-based transportation fuel, the use of which will emit more than 10,000 carbon dioxide equivalents of greenhouse gas, assuming no capture and permanent sequestration of that gas; or

(D) any facility that in any year produces, or any entity that in any year imports, nonfuel chemicals that will emit more than 10,000 carbon dioxide equivalents of greenhouse gas, assuming no capture and destruction or permanent sequestration of that gas.

(8) DESTRUCTION.—The term ''destruction'' means the conversion of a greenhouse gas by thermal, chemical, or other means—

(A) to another gas with a low- or zero-global warming potential; and

(B) for which credit given reflects the extent of reduction in global warming potential actually achieved.

(9) ELECTRIC POWER SECTOR.—The term ''electric power sector'' means the ''Electric Power Industry'', as that term is used in Table ES–7 of the Environmental Protection Agency document entitled ''Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2005''.

(10) EMISSION ALLOWANCE.—The term ''emission allowance'' means an authorization to emit 1 carbon dioxide equivalent of greenhouse gas.

(11) EMISSION ALLOWANCE ACCOUNT.—The term ''Emission Allowance Account'' means the aggregate of emission allowances that the Administrator establishes for a calendar year.

(12) FACILITY.—The term ''facility'' means—

(A) a building, structure, or installation located on 1 or more contiguous or adjacent properties of an entity in the United States; and

(B) at the option of the Administrator, any activity or operation that has a technical connection with the activities carried out at a facility, such as use of transportation fleets, pipelines, transmission lines, and distribution lines, but that is not conducted or located on the property of the facility.

(13) FAIR MARKET VALUE.—The term ''fair market value'' means the average price, in a particular calendar year, of an emission allowance auctioned by the Corporation.

(14) GEOLOGICAL SEQUESTRATION; GEOLOGICALLY SEQUESTERED.—The terms ''geological sequestration'' and ''geologically sequestered'' mean the long-term isolation of greenhouse gases, without reversal, in geological formations, in accordance with section 1421(d) of the Safe Drinking Water Act (42 U.S.C. 300h(d)).

(15) GREENHOUSE GAS.—The term ''greenhouse gas'' means any of—

(A) carbon dioxide;

(B) methane;

(C) nitrous oxide;

(D) sulfur hexafluoride;

(E) a hydrofluorocarbon; or

(F) a perfluorocarbon.

(16) INDUSTRIAL SECTOR.—The term ''industrial sector'' means ''Industry'', as that term is used in Table ES–7 of the Environmental Protection Agency document entitled ''Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2005''.

(17) LEAKAGE.—The term ''leakage'' means—

(A) a potentially unaccounted increase in greenhouse gas emissions by a facility or entity caused by an offset project that produces an accounted reduction in greenhouse gas emissions; or

(B) a potentially unaccounted decrease in sequestration that is caused by an offset project that results in an accounted increase in sequestration.

(18) LOAD-SERVING ENTITY.—The term ''load-serving entity'' means an entity, whether public or private—

(A) that has a legal, regulatory, or contractual obligation to deliver electricity to retail consumers; and

(B) whose rates and costs are, except in the case of a registered electric cooperative, regulated by a State agency, regulatory commission, municipality, or public utility district.

(19) NEW ENTRANT.—The term ''new entrant'' means any facility that commences operation on or after January 1, 2008.

(20) OFFSET ALLOWANCE.—The term ''offset allowance'' means a unit of reduction in the quantity of emissions or an increase in sequestration equal to

1 ~~1 carbon dioxide equivalent at a facility that is not~~
2 ~~a covered facility, where the reduction in emissions~~
3 ~~or increase in sequestration is eligible to be used as~~
4 ~~an additional means of compliance for the submis-~~
5 ~~sion requirements established under section 1202.~~

6 ~~(21) OFFSET PROJECT.—The term ''offset~~
7 ~~project'' means a project, other than a project at a~~
8 ~~covered facility, that reduces greenhouse gas emis-~~
9 ~~sions or increases sequestration of carbon dioxide.~~

10 ~~(22) PROJECT DEVELOPER.—The term ''project~~
11 ~~developer'' means an individual or entity imple-~~
12 ~~menting an offset project.~~

13 ~~(23) RETAIL RATE FOR DISTRIBUTION SERV-~~
14 ~~ICE.—~~

15 ~~(A) IN GENERAL.—The term ''retail rate~~
16 ~~for distribution service'' means the rate that a~~
17 ~~load-serving entity charges for the use of the~~
18 ~~system of the load-serving entity.~~

19 ~~(B) EXCLUSION.—The term ''retail rate~~
20 ~~for distribution service'' does not include any~~
21 ~~energy component of the rate.~~

22 ~~(24) RETIRE AN EMISSION ALLOWANCE.—The~~
23 ~~term ''retire an emission allowance'' means to dis-~~
24 ~~qualify an emission allowance for any subsequent~~
25 ~~use, regardless of whether the use is a sale, ex-~~

change, or submission of the allowance in satisfying a compliance obligation.

(25) REVERSAL.—The term ''reversal'' means an intentional or unintentional loss of sequestered carbon dioxide to the atmosphere.

(26) RURAL ELECTRIC COOPERATIVE.—The term ''rural electric cooperative'' means a cooperatively-owned association that is eligible to receive loans under section 4 of the Rural Electrification Act of 1936 (7 U.S.C. 904).

(27) SEQUESTERED AND SEQUESTRATION.—The terms ''sequestered'' and ''sequestration'' mean the capture, permanent separation, isolation, or removal of greenhouse gases from the atmosphere.

(28) STATE REGULATORY AUTHORITY.—The term ''State regulatory authority'' means any State agency that has ratemaking authority with respect to the retail rate for distribution service.

(29) TRANSPORTATION SECTOR.—The term ''transportation sector'' means ''Transportation'', as that term is used in Table ES–7 of the Environmental Protection Agency document entitled, ''Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2005''.

TITLE I—CAPPING GREENHOUSE GAS EMISSIONS

Subtitle A—Tracking Emissions

SEC. 1101. PURPOSE.

The purpose of this subtitle is to establish a Federal greenhouse gas registry that—

(1) is complete, consistent, transparent, and accurate;

(2) will collect reliable and accurate data that can be used by public and private entities to design efficient and effective energy security initiatives and greenhouse gas emission reduction strategies; and

(3) will provide appropriate high-quality data to be used for implementing greenhouse gas reduction policies.

SEC. 1102. DEFINITIONS.

In this subtitle:

(1) AFFECTED FACILITY.—

(A) IN GENERAL.—The term ''affected facility'' means—

(i) a covered facility;

(ii) another facility that emits a greenhouse gas, as determined by the Administrator; and

(iii) at the option of the Administrator, a vehicle fleet with emissions of more than 10,000 carbon dioxide equivalents per year, assuming no double-counting of emissions.

(B) EXCLUSIONS.—The term ''affected facility'' does not include any facility that—

(i) is not a covered facility;

(ii) is owned or operated by a small business (as described in part 121 of title 13, Code of Federal Regulations (or a successor regulation)); and

(iii) emits fewer than 10,000 carbon dioxide equivalents in any year.

(2) CARBON CONTENT.—The term ''carbon content'' means the quantity of carbon (in carbon dioxide equivalent) contained in a fuel.

(3) CLIMATE REGISTRY.—The term ''Climate Registry'' means the greenhouse gas emissions registry jointly established and managed by more than 40 States and Indian tribes to collect high-quality greenhouse gas emission data from facilities, corporations, and other organizations to support various greenhouse gas emission reporting and reduc-

tion policies for the member States and Indian tribes.

(4) FEEDSTOCK FOSSIL FUEL.—The term ''feedstock fossil fuel'' means fossil fuel used as raw material in a manufacturing process.

(5) GREENHOUSE GAS EMISSIONS.—The term ''greenhouse gas emissions'' means emissions of a greenhouse gas, including—

(A) stationary combustion source emissions emitted as a result of combustion of fuels in stationary equipment, such as boilers, furnaces, burners, turbines, heaters, incinerators, engines, flares, and other similar sources;

(B) process emissions consisting of emissions from chemical or physical processes other than combustion;

(C) fugitive emissions consisting of intentional and unintentional emissions from equipment leaks, such as joints, seals, packing, and gaskets, or from piles, pits, cooling towers, and other similar sources; and

(D) biogenic emissions resulting from biological processes, such as anaerobic decomposition, nitrification, and denitrification.

(6) INDIAN TRIBE.—The term ''Indian tribe'' has the meaning given the term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b).

(7) REGISTRY.—The term ''Registry'' means the Federal greenhouse gas registry established under section 1105(a).

(8) SOURCE.—The term ''source'' means any building, structure, installation, unit, point, operation, vehicle, land area, or other item that emits or may emit a greenhouse gas.

SEC. 1103. REPORTING REQUIREMENTS.

(a) IN GENERAL.—Subject to this section, each affected facility shall submit to the Administrator, for inclusion in the Registry, periodic reports, including annual and quarterly data, that—

(1) include the quantity and type of fossil fuels, including feedstock fossil fuels, that are extracted, produced, refined, imported, exported, or consumed at or by the facility;

(2) include the quantity of hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, nitrous oxide, carbon dioxide that has been captured and sequestered, and other greenhouse gases generated, pro-

duced, imported, exported, or consumed at or by the facility;

(3) include the quantity of electricity generated, imported, exported, or consumed by or at the facility, and information on the quantity of greenhouse gases emitted when the imported, exported, or consumed electricity was generated, as determined by the Administrator;

(4) include the aggregate quantity of all greenhouse gas emissions from sources at the facility, including stationary combustion source emissions, process emissions, and fugitive emissions;

(5) include greenhouse gas emissions expressed in metric tons of each greenhouse gas emitted and in the quantity of carbon dioxide equivalents of each greenhouse gas emitted;

(6) include a list and description of sources of greenhouse gas emissions at the facility;

(7) quantify greenhouse gas emissions in accordance with the measurement standards established under section 1104;

(8) include other data necessary for accurate and complete accounting of greenhouse gas emissions, as determined by the Administrator;

(9) include an appropriate certification regarding the accuracy and completeness of reported data, as determined by the Administrator; and

(10) are submitted electronically to the Administrator, in such form and to such extent as may be required by the Administrator.

(b) DE MINIMIS EXEMPTIONS.—

(1) IN GENERAL.—The Administrator may determine—

(A) whether certain sources at a facility should be considered to be eligible for a de minimis exemption from a requirement for reporting under subsection (a); and

(B) the level of greenhouse gases emitted from a source that would qualify for such an exemption.

(2) FACTORS.—In making a determination under paragraph (1), the Administrator shall consider the availability and suitability of simplified techniques and tools for quantifying emissions and the cost to measure those emissions relative to the purposes of this title, including the goal of collecting complete and consistent facility-wide data.

(c) VERIFICATION OF REPORT REQUIRED.—Before including the information from a report required under

this section in the Registry, the Administrator shall verify the completeness and accuracy of the report using information provided under this section, obtained under section 9003(c), or obtained under other provisions of law.

(d) TIMING.—

(1) CALENDAR YEARS 2004 THROUGH 2007.—For a baseline period of calendar years 2004 through 2007, each affected facility shall submit required annual data described in this section to the Administrator not later than March 31, 2009.

(2) SUBSEQUENT CALENDAR YEARS.—For calendar year 2008 and each subsequent calendar year, each affected facility shall submit quarterly data described in this section to the Administrator not later than 60 days after the end of the applicable quarter.

(e) NO EFFECT ON OTHER REQUIREMENTS.—Nothing in this title affects any requirement in effect as of the date of enactment of this Act relating to the reporting of—

(1) fossil fuel production, refining, importation, exportation, or consumption data;

(2) greenhouse gas emission data; or

(3) other relevant data.

SEC. 1104. DATA QUALITY AND VERIFICATION.

(a) PROTOCOLS AND METHODS.—

(1) IN GENERAL.—The Administrator shall establish by regulation, taking into account the work done by the Climate Registry, comprehensive protocols and methods to ensure the accuracy, completeness, consistency, and transparency of data on greenhouse gas emissions and fossil fuel production, refining, importation, exportation, and consumption submitted to the Registry that include—

(A) accounting and reporting standards for fossil fuel production, refining, importation, exportation, and consumption;

(B) a requirement that, where technologically feasible, submitted data are monitored using monitoring systems for fuel flow or emissions, such as continuous emission monitoring systems or equivalent systems of similar rigor, accuracy, quality, and timeliness;

(C) a requirement that, if a facility has already been directed to monitor emissions of a greenhouse gas using a continuous emission monitoring system under existing law, that system be used in complying with this Act with respect to the greenhouse gas;

(D) for cases in which the Administrator determines that monitoring emissions with the

precision, reliability, accessibility, and timeliness similar to that provided by a continuous emission monitoring system are not technologically feasible, standardized methods for calculating greenhouse gas emissions in specific industries using other readily available and reliable information, such as fuel consumption, materials consumption, production, or other relevant activity data, on the condition that those methods do not underreport emissions, as compared with the continuous emission monitoring system;

(E) information on the accuracy of measurement and calculation methods;

(F) methods to avoid double-counting of greenhouse gas emissions;

(G) protocols to prevent an affected facility from avoiding the reporting requirements of this title; and

(H) protocols for verification of data submitted by affected facilities.

(2) BEST PRACTICES.—The protocols and methods developed under paragraph (1) shall incorporate and conform to the best practices from the most recent Federal, State, and international proto-

cols for the measurement, accounting, reporting, and verification of greenhouse gas emissions to ensure the accuracy, completeness, and consistency of the data.

(b) VERIFICATION; INFORMATION BY REPORTING ENTITIES.—Each affected facility shall—

(1) provide information sufficient for the Administrator to verify, in accordance with the protocols and methods developed under subsection (a), that the fossil fuel data and greenhouse gas emission data of the affected facility have been completely and accurately reported; and

(2) ensure the submission or retention, for the 5-year period beginning on the date of provision of the information, of—

(A) data sources;

(B) information on internal control activities;

(C) information on assumptions used in reporting emissions and fuels;

(D) uncertainty analyses; and

(E) other relevant data and information to facilitate the verification of reports submitted to the Registry.

(c) WAIVER OF REPORTING REQUIREMENTS.—The Administrator may waive reporting requirements for specific facilities if the Administrator determines that sufficient and equally or more reliable data are available under other provisions of law.

(d) MISSING DATA.—If information, satisfactory to the Administrator, is not provided for an affected facility, the Administrator shall—

(1) prescribe methods to estimate emissions for the facility for each period for which data are missing, reflecting the highest emission levels that may reasonably have occurred during the period for which data are missing; and

(2) take appropriate enforcement action pursuant to this section and section 9003(b).

SEC. 1105. FEDERAL GREENHOUSE GAS REGISTRY.

(a) ESTABLISHMENT.—The Administrator shall establish a Federal greenhouse gas registry.

(b) ADMINISTRATION.—In establishing the Registry, the Administrator shall—

(1) design and operate the Registry;

(2) establish an advisory body that is broadly representative of private enterprise, agriculture, environmental groups, and State, tribal, and local gov-

ernments to guide the development and management of the Registry;

(3) provide coordination and technical assistance for the development of proposed protocols and methods, taking into account the duties carried out by the Climate Registry, to be published by the Administrator;

(4)(A) develop an electronic format for reporting under guidelines established under section 1104(a)(1); and

(B) make the electronic format available to reporting entities;

(5) verify and audit the data submitted by reporting entities;

(6) establish consistent policies for calculating carbon content and greenhouse gas emissions for each type of fossil fuel reported under section 1103;

(7) calculate carbon content and greenhouse gas emissions associated with the combustion of fossil fuel data reported by reporting entities;

(8) immediately publish on the Internet all information contained in the Registry, except in any case in which publishing the information would result in a disclosure of—

(A) information vital to national security, as determined by the President, or

(B) confidential business information that cannot be derived from information that is otherwise publicly available and that would cause significant calculable competitive harm if published (except that information relating to greenhouse gas emissions shall not be considered to be confidential business information).

(c) THIRD-PARTY VERIFICATION.—The Administrator may use the services of third parties that have no conflicts of interest to verify reports required under section 1103.

(d) REGULATIONS.—The Administrator shall—

(1) not later than 180 days after the date of enactment of this Act, propose regulations to carry out this section; and

(2) not later than July 1, 2008, promulgate final regulations to carry out this section.

SEC. 1106. ENFORCEMENT.

(a) CIVIL ACTIONS.—The Administrator may bring a civil action in United States district court against the owner or operator of an affected facility that fails to comply with any requirement of this subtitle.

(b) PENALTY.—Any person that has violated or is violating this subtitle shall be subject to a civil penalty of not more than $25,000 per day of each violation.

Subtitle B—Reducing Emissions

SEC. 1201. EMISSION ALLOWANCE ACCOUNT.

(a) IN GENERAL.—The Administrator shall establish a separate quantity of emission allowances for each of calendar years 2012 through 2050.

(b) IDENTIFICATION NUMBERS.—The Administrator shall assign to each emission allowance established under subsection (a) a unique identification number that includes the calendar year for which that emission allowance was established.

(c) LEGAL STATUS OF EMISSION ALLOWANCES.—

(1) IN GENERAL.—An emission allowance shall not be a property right.

(2) TERMINATION OR LIMITATION.—Nothing in this Act or any other provision of law limits the authority of the United States to terminate or limit an emission allowance.

(3) OTHER PROVISIONS UNAFFECTED.—Nothing in this Act relating to emission allowances shall affect the application of, or compliance with, any other provision of law to or by a covered facility.

(d) ALLOWANCES FOR EACH CALENDAR YEAR.—The numbers of emission allowances established by the Administrator for each of calendar years 2012 through 2050 shall be as follows:

Calendar Year	Number of Emission Allowances (in Millions)
2012	5,200
2013	5,104
2014	5,008
2015	4,912
2016	4,816
2017	4,720
2018	4,624
2019	4,528
2020	4,432
2021	4,336
2022	4,240
2023	4,144
2024	4,048
2025	3,952
2026	3,856
2027	3,760
2028	3,664
2029	3,568
2030	3,472
2031	3,376
2032	3,280
2033	3,184

Calendar Year	Number of Emission Allowances (in Millions)
2034	3,088
2035	2,992
2036	2,896
2037	2,800
2038	2.704
2039	2,608
2040	2,512
2041	2,416
2042	2,320
2043	2,224
2044	2,128
2045	2,032
2046	1,936
2047	1,840
2048	1,744
2049	1,646
2050	1,560

SEC. 1202. COMPLIANCE OBLIGATION.

(a) IN GENERAL.—Not later than 90 days after the end of a calendar year, the owner or operator of a covered facility shall submit to the Administrator an emission allowance, an offset allowance awarded pursuant to subtitle D of title II, or an international allowance or credit obtained in compliance with regulations promulgated under section 2502, for each carbon dioxide equivalent of greenhouse gas that—

(1) was emitted by that facility during the preceding year;

(2) will, assuming no capture and permanent geological sequestration of that gas, be emitted from the use of any petroleum- or coal-based transportation fuel that was produced or imported at that facility during the preceding year; and

(3) will, assuming no capture and destruction or permanent geological sequestration of that gas, be emitted from any nonfuel chemical that was produced or imported at that facility during the preceding year.

(b) RETIREMENT OF ALLOWANCES.—Immediately upon receipt of an emission allowance under subsection (a), the Administrator shall retire the emission allowance.

(c) DETERMINATION OF COMPLIANCE.—Not later than July 1 of each year, the Administrator shall determine whether the owners and operators of all covered facilities are in full compliance with subsection (a) for the preceding year.

SEC. 1203. PENALTY FOR NONCOMPLIANCE.

(a) EXCESS EMISSIONS PENALTY.—

(1) IN GENERAL.—The owner or operator of any covered facility that fails for any year to submit to the Administrator by the deadline described in

section 1202(a) or 2303, 1 or more of the emission allowances due pursuant to either of those sections shall be liable for the payment to the Administrator of an excess emissions penalty.

(2) AMOUNT.—The amount of an excess emissions penalty required to be paid under paragraph (1) shall be, as determined by the Administrator, an amount equal to the product obtained by multiplying—

(A) the number of excess emission allowances that the owner or operator failed to submit; and

(B) the greater of—

(i) $200; or

(ii) a dollar figure representing 3 times the mean market value of an emission allowance during the calendar year for which the emission allowances were due.

(3) TIMING.—An excess emissions penalty required under this subsection shall be immediately due and payable to the Administrator, without demand, in accordance with such regulations as shall be promulgated by the Administrator by the date that is 1 year after the date of enactment of this Act.

~~(4) DEPOSIT.—The Administrator shall deposit each excess emissions penalty paid under this subsection in the Treasury of the United States.~~

~~(5) NO EFFECT ON LIABILITY.—An excess emissions penalty due and payable by the owner or operator of a covered facility under this subsection shall not diminish the liability of the owner or operator for any fine, penalty, or assessment against the owner or operator for the same violation under any other provision of this Act or any other law.~~

~~(b) EXCESS EMISSION ALLOWANCE.—~~

~~(1) IN GENERAL.—The owner or operator of a covered facility that fails for any year to submit to the Administrator by the deadline described in section 1202(a) or 2303 1 or more of the emission allowances due pursuant to either of those sections shall be liable to offset the excess emissions by an equal quantity, in tons, during—~~

~~(A) the following calendar year; or~~

~~(B) such longer period as the Administrator may prescribe.~~

~~(2) PLAN.—~~

~~(A) IN GENERAL.—Not later than 60 days after the end of the calendar year during which a covered facility emits excess emissions, the~~

owner or operator of the covered facility shall submit to the Administrator, and to the State in which the covered facility is located, a proposed plan to achieve the required offsets for the excess emissions.

(B) CONDITION OF OPERATION.—Upon approval of a proposed plan described in subparagraph (A) by the Administrator, the plan, as submitted, modified, or conditioned, shall be considered to be a condition of the operating permit for the covered facility, without further review or revision of the permit.

(C) DEDUCTION OF ALLOWANCES.—For each covered facility that, in any calendar year, emits excess emissions, the Administrator shall deduct, from emission allowances allocated to the covered facility for the calendar year, or for succeeding years during which offsets are required, emission allowances equal to the excess quantity, in tons, of the excess emissions.

(c) PROHIBITION.—It shall be unlawful for the owner or operator of any facility liable for a penalty and offset under this section to fail—

(1) to pay the penalty in accordance with this section;

(2) to provide, and thereafter comply with, a proposed plan for compliance as required by subsection (b)(2); and

(3) to offset excess emissions as required by subsection (b)(1).

(d) NO EFFECT ON OTHER SECTION.—Nothing in this subtitle limits or otherwise affects the application of section 9003(b).

TITLE II—MANAGING AND CONTAINING COSTS EFFICIENTLY

Subtitle A—Trading

SEC. 2101. SALE, EXCHANGE, AND RETIREMENT OF EMISSION ALLOWANCES.

Except as otherwise provided in this Act, the lawful holder of an emission allowance may sell, exchange, transfer, submit for compliance in accordance with section 1202, or retire the emission allowance.

SEC. 2102. NO RESTRICTION ON TRANSACTIONS.

The privilege of purchasing, holding, selling, exchanging, and retiring emission allowances shall not be restricted to the owners and operators of covered facilities.

SEC. 2103. ALLOWANCE TRANSFER SYSTEM.

(a) IN GENERAL.—Not later than 18 months after the date of enactment of this Act, the Administrator shall promulgate regulations to carry out the provisions of this

Act relating to emission allowances, including regulations providing that the transfer of emission allowances shall not be effective until such date as a written certification of the transfer, signed by a responsible official of each party to the transfer, is received and recorded by the Administrator in accordance with those regulations.

(b) TRANSFERS.—

(1) IN GENERAL.—The regulations promulgated under subsection (a) shall permit the transfer of allowances prior to the issuance of the allowances.

(2) DEDUCTION AND ADDITION OF TRANSFERS.—A recorded pre-allocation transfer of allowances shall be—

(A) deducted by the Administrator from the number of allowances that would otherwise be distributed to the transferor; and

(B) added to those allowances distributed to the transferee.

SEC. 2104. ALLOWANCE TRACKING SYSTEM.

The regulations promulgated under section 2103(a) shall include a system for issuing, recording, and tracking emission allowances that shall specify all necessary procedures and requirements for an orderly and competitive functioning of the emission allowance system.

Subtitle B—Banking

SEC. 2201. INDICATION OF CALENDAR YEAR.

An emission allowance submitted to the Administrator by the owner or operator of a covered facility in accordance with section 1202(a) shall not be required to indicate in the identification number of the emission allowance the calendar year for which the emission allowance is submitted.

SEC. 2202. EFFECT OF TIME.

The passage of time shall not, by itself, cause an emission allowance to be retired or otherwise diminish the compliance value of the emission allowance.

Subtitle C—Borrowing

SEC. 2301. REGULATIONS.

(a) IN GENERAL.—Not later than 3 years after the date of enactment of this Act, the Administrator shall promulgate regulations under which, subject to subsection (b), the owner or operator of a covered facility may—

(1) borrow emission allowances from the Administrator; and

(2) for a calendar year, submit borrowed emission allowances to the Administrator in satisfaction of up to 15 percent of the compliance obligation under section 1202(a).

(b) LIMITATION.—An emission allowance borrowed under subsection (a) shall be an emission allowance established by the Administrator for a specific future calendar year under subsection 1201(a).

SEC. 2302. TERM.

The owner or operator of a covered facility shall not submit, and the Administrator shall not accept, a borrowed emission allowance in partial satisfaction of the compliance obligation under section 1202(a) for any calendar year that is more than 5 years earlier than the calendar year included in the identification number of the borrowed emission allowance.

SEC. 2303. REPAYMENT WITH INTEREST.

For each borrowed emission allowance submitted in partial satisfaction of the compliance obligation under subsection 1202(a) for a particular calendar year (referred to in this section as the ''use year''), the number of emission allowances that the owner or operator is required to submit under section 1202(a) for the year from which the borrowed emission allowance was taken (referred to in this section as the ''source year'') shall be increased by an amount equal to the product obtained by multiplying—

(1) 1.1; and

(2) the number of years beginning after the use year and before the source year.

Subtitle D—Offsets

SEC. 2401. OUTREACH INITIATIVE ON REVENUE ENHANCEMENT FOR AGRICULTURAL PRODUCERS.

(a) ESTABLISHMENT.—The Secretary of Agriculture, acting through the Chief of the Natural Resources Conservation Service, the Chief of the Forest Service, the Administrator of the Cooperative State Research, Education, and Extension Service, and land-grant colleges and universities, in consultation with the Administrator and the heads of other appropriate departments and agencies, shall establish an outreach initiative to provide information to agricultural producers, agricultural organizations, foresters, and other landowners about opportunities under this subtitle to earn new revenue.

(b) COMPONENTS.—The initiative under this section—

(1) shall be designed to ensure that, to the maximum extent practicable, agricultural organizations and individual agricultural producers, foresters, and other landowners receive detailed practical information about—

(A) opportunities to earn new revenue under this subtitle;

(B) measurement protocols, monitoring, verifying, inventorying, registering, insuring, and marketing offsets under this title;

(C) emerging domestic and international markets for energy crops, allowances, and offsets; and

(D) local, regional, and national databases and aggregation networks to facilitate achievement, measurement, registration, and sales of offsets;

(2) shall provide—

(A) outreach materials, including the handbook published under subsection (c), to interested parties;

(B) workshops; and

(C) technical assistance; and

(3) may include the creation and development of regional marketing centers or coordination with existing centers (including centers within the Natural Resources Conservation Service or the Cooperative State Research, Education, and Extension Service or at land-grant colleges and universities).

(c) HANDBOOK.—

(1) IN GENERAL.—Not later than 2 years after the date of enactment of this Act, the Secretary of

Agriculture, in consultation with the Administrator and after an opportunity for public comment, shall publish a handbook for use by agricultural producers, agricultural cooperatives, foresters, other landowners, offset buyers, and other stakeholders that provides easy-to-use guidance on achieving, reporting, registering, and marketing offsets.

(2) DISTRIBUTION.—The Secretary of Agriculture shall ensure, to the maximum extent practicable, that the handbook—

(A) is made available through the Internet and in other electronic media;

(B) includes, with respect to the electronic form of the handbook described in subparagraph (A), electronic forms and calculation tools to facilitate the petition process described in section 2404; and

(C) is distributed widely through land-grant colleges and universities and other appropriate institutions.

SEC. 2402. ESTABLISHMENT OF DOMESTIC OFFSET PROGRAM.

(a) ALTERNATIVE MEANS OF COMPLIANCE.—Beginning with calendar year 2012, the owner or operator of a covered entity may satisfy 15 percent of the total allow-

ance submission requirement of the covered entity under section 1202(a) by submitting offset allowances generated in accordance with this subtitle.

(b) REGULATIONS REQUIRED.—Not later than 18 months after the date of enactment of this Act, the Administrator, in consultation with the Secretary of Agriculture, shall promulgate regulations authorizing the issuance and certification of offset allowances from certain agricultural, forestry, and other land use-related projects undertaken within the United States, and certain other projects identified by the Administrator under section 2403(b)(4), including provisions that—

(1) ensure that those offsets represent real, verifiable, additional, permanent, and enforceable reductions in greenhouse gas emissions or increases in biological sequestration;

(2) specify the types of offset projects eligible to generate offset allowances, in accordance with section 2403;

(3) establish procedures for project initiation and approval, in accordance with section 2404;

(4) establish procedures to monitor, quantify, and discount reductions in greenhouse gas emissions or increases in biological sequestration, in accord-

ance with subsections (d) through (g) of section 2404;

(5) establish procedures for verification, registration, and issuance of offset allowances, in accordance with section 2405; and

(6) ensure permanence of offsets by mitigating and compensating for reversals, in accordance with section 2406.

(c) OFFSET ALLOWANCES AWARDED.—The Administrator shall issue offset allowances for qualifying emission reductions and biological sequestrations from offset projects that satisfy the applicable requirements of this subtitle.

(d) OWNERSHIP.—Initial ownership of an offset allowance shall lie with a project developer, unless otherwise specified in a legally-binding contract or agreement.

(e) TRANSFERABILITY.—An offset allowance generated pursuant to this subtitle may be sold, traded, or transferred, on the conditions that—

(1) the offset allowance has not expired or been retired or canceled; and

(2) liability and responsibility for mitigating and compensating for reversals of registered offset allowances is specified in accordance with section 2406(b).

SEC. 2403. ELIGIBLE AGRICULTURAL AND FORESTRY OFFSET PROJECT TYPES.

(a) IN GENERAL.—Offset allowances from agricultural, forestry, and other land use-related projects shall be limited to those allowances achieving an offset of 1 or more greenhouse gases by a method other than a reduction of combustion of greenhouse gas-emitting fuel.

(b) CATEGORIES OF ELIGIBLE AGRICULTURAL, FORESTRY, AND OTHER LAND USE-RELATED PROJECTS.—Subject to the requirements promulgated pursuant to section 2402(b), the types of operations eligible to generate offset allowances under this subtitle include—

(1) agricultural and rangeland sequestration and management practices, including—

(A) altered tillage practices;

(B) winter cover cropping, continuous cropping, and other means to increase biomass returned to soil in lieu of planting followed by fallowing;

(C) conversion of cropland to rangeland or grassland, on the condition that the land has been in nonforest use for at least 10 years before the date of initiation of the project;

(D) reduction of nitrogen fertilizer use or increase in nitrogen use efficiency;

(E) reduction in the frequency and duration of flooding of rice paddies; and

(F) reduction in carbon emissions from organic soils;

(2) changes in carbon stocks attributed to land use change and forestry activities limited to—

(A) afforestation or reforestation of acreage not forested as of the date of enactment of this Act; and

(B) forest management resulting in an increase in forest stand volume;

(3) manure management and disposal, including—

(A) waste aeration; and

(B) methane capture and combustion;

(4) subject to the requirements of this subtitle, any other terrestrial offset practices identified by the Administrator, including—

(A) the capture or reduction of noncovered fugitive emissions;

(B) methane capture and combustion at nonagricultural facilities; and

(C) other actions that result in the avoidance or reduction of greenhouse gas emissions in accordance with section 2402; and

(5) combinations of any of the offset practices described in paragraphs (1) through (4).

(c) EXCLUSION.—A project participating in a Federal, State, or local cost-sharing, competitive grant, or technical assistance program shall not be eligible to generate offset allowances under this subtitle.

(d) EARNED ALLOWANCES.—

(1) IN GENERAL.—Any project approved by the Administrator shall earn offset allowances in proportion to the private investment in the project, as described in paragraph (2).

(2) PRIVATE INVESTMENT.—

(A) IN GENERAL.—Except as provided in subparagraph (B), the private share of investment in the project shall be assumed to be 50 percent.

(B) DEMONSTRATION OF INVESTMENT.—Subparagraph (A) shall not apply in any case in which a project elects to demonstrate the private share of investment in the project in accordance with rules established by the Administrator.

SEC. 2404. PROJECT INITIATION AND APPROVAL.

(a) PROJECT APPROVAL.—A project developer—

(1) may submit a petition for offset project approval at any time following the effective date of regulations promulgated under section 2402(b); but

(2) may not register or issue offset allowances until such approval is received and until after the emission reductions or sequestrations supporting the offset allowances have actually occurred.

(b) PETITION PROCESS.—Prior to offset registration and issuance of offset allowances, a project developer shall submit a petition to the Administrator, consisting of—

(1) a copy of the monitoring and quantification plan prepared for the offset project, as described under subsection (d);

(2) a greenhouse gas initiation certification, as described under subsection (e); and

(3) subject to the requirements of this subtitle, any other information identified by the Administrator as necessary to meet the objectives of this subtitle.

(c) APPROVAL AND NOTIFICATION.—

(1) IN GENERAL.—Not later than 180 days after the date on which the Administrator receives a complete petition under subsection (b), the Administrator shall—

(A) determine whether the monitoring and quantification plan satisfies the applicable requirements of this subtitle;

(B) determine whether the greenhouse gas initiation certification indicates a significant deviation in accordance with subsection (c)(3);

(C) notify the project developer of the determinations under subparagraphs (A) and (B); and

(D) issue offset allowances for approved projects.

(2) APPEAL.—The Administrator shall establish mechanisms for appeal and review of determinations made under this subsection.

(d) MONITORING AND QUANTIFICATION.—

(1) IN GENERAL.—A project developer shall make use of the standardized tools and methods described in this section to monitor, quantify, and discount reductions in greenhouse gas emissions or increases in sequestration.

(2) MONITORING AND QUANTIFICATION PLAN.—A monitoring and quantification plan shall be used to monitor, quantify, and discount reductions in greenhouse gas emissions or increases in sequestration as described by this subsection.

~~(3) PLAN COMPLETION AND RETENTION.—A monitoring and quantification plan shall be—~~

~~(A) completed for all offset projects prior to offset project initiation; and~~

~~(B) retained by the project developer for the duration of the offset project.~~

~~(4) PLAN REQUIREMENTS.—Subject to section 2402, the Administrator shall specify the required components of a monitoring and quantification plan, including—~~

~~(A) a description of the offset project, including project type;~~

~~(B) a determination of accounting periods;~~

~~(C) an assignment of reporting responsibility;~~

~~(D) the contents and timing of public reports, including summaries of the original data, as well as the results of any analyses;~~

~~(E) a delineation of project boundaries, based on methods and formats determined to be acceptable to the Administrator;~~

~~(F) a description of which of the monitoring and quantification tools developed under subsection (f) are to be used to monitor and~~

quantify changes in greenhouse gas fluxes or carbon stocks associated with a project;

(G) a description of which of the standardized methods developed under subsection (g) to be used to determine additionality, estimate the baseline carbon, and discount for leakage;

(H) based on the standardized methods chosen in subparagraphs (F) and (G), a determination of uncertainty in accordance with subsection (h);

(I) what site-specific data, if any, will be used in monitoring, quantification, and the determination of discounts;

(J) a description of procedures for use in managing and storing data, including quality-control standards and methods, such as redundancy in case records are lost; and

(K) subject to the requirements of this subtitle, any other information identified by the Administrator as being necessary to meet the objectives of this subtitle.

(e) GREENHOUSE GAS INITIATION CERTIFICATION.—

(1) IN GENERAL.—In reviewing a petition submitted under subsection (b), the Administrator shall

seek to exclude each activity that undermines the integrity of the offset program established under this subtitle, such as the conversion or clearing of land, or marked change in management regime, in anticipation of offset project initiation.

(2) GREENHOUSE GAS INITIATION CERTIFICATION REQUIREMENTS.—A greenhouse gas initiation certification developed under this subsection shall include—

(A) the estimated greenhouse gas flux or carbon stock for the offset project for each of the 4 complete calendar years preceding the effective date of the regulations promulgated under section 2402(b); and

(B) the estimated greenhouse gas flux or carbon stock for the offset project, averaged across each of the 4 calendar years preceding the effective date of the regulations promulgated under section 2402(b).

(3) DETERMINATION OF SIGNIFICANT DEVIATION.—Based on standards developed by the Administrator—

(A) each greenhouse gas initiation certification submitted pursuant to this section shall be reviewed; and

(B) a determination shall be made as to whether, as a result of activities or behavior inconsistent with the purposes of this title, a significant deviation exists between the average annual greenhouse gas flux or carbon stock and the greenhouse gas flux or carbon stock for a given year.

(f) DEVELOPMENT OF MONITORING AND QUANTIFICATION TOOLS FOR AGRICULTURAL AND FORESTRY PROJECTS.—

(1) IN GENERAL.—Subject to section 2402(b), the Administrator, in consultation with the Secretary of Agriculture, shall develop standardized tools for use in the monitoring and quantification of changes in greenhouse gas fluxes or carbon stocks for each offset project type listed under section 2403(b).

(2) TOOL DEVELOPMENT.—The tools used to monitor and quantify changes in greenhouse gas fluxes or carbon stocks shall, for each project type, include applicable—

(A) statistically-sound field and remote sensing sampling methods, procedures, techniques, protocols, or programs;

(B) models, factors, equations, or look-up tables; and

(C) any other process or tool considered to be acceptable by the Administrator, in consultation with the Secretary of Agriculture.

(g) DEVELOPMENT OF ACCOUNTING AND DISCOUNTING METHODS.—

(1) IN GENERAL.—The Administrator, in consultation with the Secretary of Agriculture, shall—

(A) develop standardized methods for use in accounting for additionality and uncertainty, estimating the baseline, and discounting for leakage for each offset project type listed under section 2403(b); and

(B) require that leakage be subtracted from reductions in greenhouse gas emissions or increases in sequestration attributable to a project.

(2) ADDITIONALITY DETERMINATION AND BASELINE ESTIMATION.—The standardized methods used to determine additionality and establish baselines shall, for each project type, at a minimum—

(A) in the case of a sequestration project, determine the greenhouse gas flux and carbon

stock on comparable land identified on the basis of—

(i) similarity in current management practices;

(ii) similarity of regional, State, or local policies or programs; and

(iii) similarity in geographical and biophysical characteristics;

(B) in the case of an emission reduction project, use as a basis emissions from preexisting or comparable facilities; and

(C) in the case of a sequestration project or emission reduction project, specify a selected time period.

(3) LEAKAGE.—The standardized methods used to determine and discount for leakage shall, at a minimum, take into consideration—

(A) the scope of the offset system in terms of activities and geography covered;

(B) the markets relevant to the offset project;

(C) emission intensity per unit of production, both inside and outside of the offset project; and

(D) a time period sufficient in length to yield a stable leakage rate.

(h) UNCERTAINTY FOR AGRICULTURAL AND FORESTRY PROJECTS.—

(1) IN GENERAL.—The Administrator, in consultation with the Secretary of Agriculture, shall develop standardized methods for use in determining and discounting for uncertainty for each offset project type listed under section 2403(b).

(2) BASIS.—The standardized methods used to determine and discount for uncertainty shall be based on—

(A) the robustness and rigor of the methods used by a project developer to monitor and quantify changes in greenhouse gas fluxes or carbon stocks;

(B) the robustness and rigor of methods used by a project developer to determine additionality and leakage; and

(C) an exaggerated proportional discount that increases relative to uncertainty, as determined by the Administrator, to encourage better measurement and accounting.

(i) ACQUISITION OF NEW DATA AND REVIEW OF METHODS FOR AGRICULTURAL AND FORESTRY

PROJECTS.—The Administrator, in consultation with the Secretary of Agriculture, shall—

(1) establish a comprehensive field sampling program to improve the scientific bases on which the standardized tools and methods developed under this section are based; and

(2) review and revise the standardized tools and methods developed under this section, based on—

(A) validation of existing methods, protocols, procedures, techniques, factors, equations, or models;

(B) development of new methods, protocols, procedures, techniques, factors, equations, or models;

(C) increased availability of field data or other datasets; and

(D) any other information identified by the Administrator, in consultation with the Secretary of Agriculture, that is necessary to meet the objectives of this subtitle.

(j) EXCLUSION.—No activity for which any emission allowances are received under subtitle G of title III shall generate offset allowances under this subtitle.

SEC. 2405. OFFSET VERIFICATION AND ISSUANCE OF ALLOWANCES FOR AGRICULTURAL AND FORESTRY PROJECTS.

(a) IN GENERAL.—Offset allowances may be claimed for net emission reductions or increases in sequestration annually, after accounting for any necessary discounts in accordance with section 2404, by submitting a verification report for an offset project to the Administrator.

(b) OFFSET VERIFICATION.—

(1) SCOPE OF VERIFICATION.—A verification report for an offset project shall—

(A) be completed by a verifier accredited in accordance with paragraph (3); and

(B) shall be developed taking into consideration—

(i) the information and methodology contained within a monitoring and quantification plan;

(ii) data and subsequent analysis of the offset project, including—

(I) quantification of net emission reductions or increases in sequestration;

(II) determination of additionality;

(III) calculation of leakage;

(IV) assessment of permanence;

(V) discounting for uncertainty; and

(VI) the adjustment of net emission reductions or increases in sequestration by the discounts determined under clauses (II) through (V); and

(iii) subject to the requirements of this subtitle, any other information identified by the Administrator as being necessary to achieve the purposes of this subtitle.

(2) VERIFICATION REPORT REQUIREMENTS.—The Administrator shall specify the required components of a verification report, including—

(A) the quantity of offsets generated;

(B) the amount of discounts applied;

(C) an assessment of methods (and the appropriateness of those methods);

(D) an assessment of quantitative errors or omissions (and the effect of the errors or omissions on offsets);

(E) any potential conflicts of interest between a verifier and project developer; and

(F) any other provision that the Administrator considers to be necessary to achieve the purposes of this subtitle.

(3) VERIFIER ACCREDITATION.—

(A) IN GENERAL.—Not later than 18 months after the date of enactment of this Act, the Administrator shall promulgate regulations establishing a process and requirements for accreditation by a third-party verifier that has no conflicts of interest.

(B) PUBLIC ACCESSIBILITY.—Each verifier meeting the requirements for accreditation in accordance with this paragraph shall be listed in a publicly-accessible database, which shall be maintained and updated by the Administrator.

(c) REGISTRATION AND AWARDING OF OFFSETS.—

(1) IN GENERAL.—Not later than 90 days after the date on which the Administrator receives a complete petition required under section 2404(b), the Administrator shall—

(A) determine whether the offsets satisfy the applicable requirements of this subtitle; and

(B) notify the project developer of that determination.

(2) AFFIRMATIVE DETERMINATION.—In the case of an affirmative determination under paragraph (1), the Administrator shall—

(A) register the offset allowances in accordance with this subtitle; and

(B) issue the offset allowances.

(3) APPEAL AND REVIEW.—The Administrator shall establish mechanisms for the appeal and review of determinations made under this subsection.

SEC. 2406. TRACKING OF REVERSALS FOR SEQUESTRATION PROJECTS.

(a) REVERSAL CERTIFICATION.—

(1) IN GENERAL.—Subject to section 2402, the Administrator shall promulgate regulations requiring the submission of a reversal certification for each offset project on an annual basis following the registration of offset allowances.

(2) REQUIREMENTS.—A reversal certification submitted in accordance with this subsection shall state—

(A) whether any unmitigated reversal relating to the offset project has occurred in the year preceding the year in which the certification is submitted; and

~~(B) the quantity of each unmitigated reversal.~~

~~(b) EFFECT ON OFFSET ALLOWANCES.—~~

~~(1) INVALIDITY.—The Administrator shall declare invalid all offset allowances issued for any offset project that has undergone a complete reversal.~~

~~(2) PARTIAL REVERSAL.—In the case of an offset project that has undergone a partial reversal, the Administrator shall render invalid offset allowances issued for the offset project in direct proportion to the degree of reversal.~~

~~(c) ACCOUNTABILITY FOR REVERSALS.—Liability and responsibility for compensation of a reversal of a registered offset allowance under subsection (a) shall lie with the person that submitted the offset allowance to the Administrator for the purpose of compliance with section 1202(a), unless otherwise specified in a legally-binding contract or agreement.~~

~~(d) COMPENSATION FOR REVERSALS.—The unmitigated reversal of 1 or more registered offset allowances shall require the submission of—~~

~~(1) an equal number of offset allowances; or~~

~~(2) a combination of offset allowances and emission allowances equal to the unmitigated reversal.~~

(c) ADJUSTMENT OF BASELINE.—

(1) IN GENERAL.—If the Administrator determines that, as a result of activities or behavior that is inconsistent with the purposes of this subtitle, a significant deviation exists between the average annual greenhouse gas flux or carbon stock for a given year pursuant to the certification submitted under subsection (a), the baseline for that project shall be adjusted by a quantity equal to the difference between—

(A) the estimated greenhouse gas flux or carbon stock at the end of the year prior to the year in which the significant deviation occurred; and

(B) the estimated greenhouse gas flux or carbon stock at the end of the year in which the significant deviation occurred.

(2) PROJECT TERMINATION.—A project developer may cease participation in the domestic offset program established under this subtitle at any time, on the condition that any registered allowances awarded for increases in sequestration have been compensated for by the project developer through the submission of an equal number of offset allowances.

SEC. 2407. EXAMINATIONS.

(a) REGULATIONS.—Not later than 2 years after the date of enactment of this Act, the Administrator shall promulgate regulations governing the examination and auditing of offset allowances.

(b) REQUIREMENTS.—The regulations promulgated under this section shall specifically consider—

(1) principles for initiating and conducting examinations;

(2) the type or scope of examinations, including—

(A) reporting and recordkeeping; and

(B) site review or visitation;

(3) the rights and privileges of an examined party; and

(4) the establishment of an appeal process.

SEC. 2408. TIMING AND THE PROVISION OF OFFSET ALLOWANCES.

(a) INITIATION OF OFFSET PROJECTS.—An offset project that commences operation on or after the effective date of regulations promulgated under section 2407(a) shall be eligible to generate offset allowances under this subtitle if the offset project meets the other applicable requirements of this subtitle.

(b) PRE-EXISTING PROJECTS.—

(1) IN GENERAL.—The Administrator may allow for the transition into the Registry of offset projects and banked offset allowances operating under other Federal, State, or private reporting programs or registries as of the effective date of regulations promulgated under section 2407(a) if the Administrator determines that the offset projects and banked offset allowances satisfy the applicable requirements of this subtitle.

(2) EXCEPTION.—An offset allowance that is expired, retired, or canceled under any other offset program, registry, or market as of the effective date of regulations promulgated under section 2407(a) shall be ineligible for transition into the Registry.

SEC. 2409. OFFSET REGISTRY.

In addition to the requirements established by section 2404, an offset allowance registered under this subtitle shall be accompanied in the Registry by—

(1) a verification report submitted pursuant to section 2405(a);

(2) a reversal certification submitted pursuant to section 2406(b); and

(3) subject to the requirements of this subtitle, any other information identified by the Adminis-

trator as being necessary to achieve the purposes of this subtitle.

SEC. 2410. ENVIRONMENTAL CONSIDERATIONS.

(a) COORDINATION TO MINIMIZE NEGATIVE EFFECTS.—In promulgating regulations under this subtitle, the Administrator, in consultation with the Secretary of Agriculture, shall act (including by rejecting projects, if necessary) to avoid or minimize, to the maximum extent practicable, adverse effects on human health or the environment resulting from the implementation of offset projects under this subtitle.

(b) REPORT ON POSITIVE EFFECTS.—Not later than 2 years after the date of enactment of this Act, the Administrator, in consultation with the Secretary of Agriculture, shall submit to Congress a report detailing—

(1) the incentives, programs, or policies capable of fostering improvements to human health or the environment in conjunction with the implementation of offset projects under this subtitle; and

(2) the cost of those incentives, programs, or policies.

(c) USE OF NATIVE PLANT SPECIES IN OFFSET PROJECTS.—Not later than 18 months after the date of enactment of this Act, the Administrator, in consultation with the Secretary of Agriculture, shall promulgate regula-

tions for the selection, use, and storage of native and non-native plant materials—

(1) to ensure native plant materials are given primary consideration, in accordance with applicable Department of Agriculture guidance for use of native plant materials;

(2) to prohibit the use of Federal- or State-designated noxious weeds; and

(3) to prohibit the use of a species listed by a regional or State invasive plant council within the applicable region or State.

SEC. 2411. PROGRAM REVIEW.

Not later than 5 years after the date of enactment of this Act, and periodically thereafter, the Administrator shall review and revise, as necessary, the regulations promulgated under this subtitle.

Subtitle E—International Credits

SEC. 2501. USE OF INTERNATIONAL ALLOWANCES OR CREDITS.

The owner or operator of a covered facility may satisfy up to 15 percent of the allowance submission requirement of the covered facility under section 1202(a) by submitting allowances or credits obtained on a foreign greenhouse gas emissions trading market, on the condition that the Administrator has certified the market in accordance

with the regulations promulgated pursuant to section 2502(a).

SEC. 2502. REGULATIONS.

(a) IN GENERAL.—Not later than 2 years after the date of enactment of this Act, the Administrator shall promulgate regulations, taking into consideration protocols adopted in accordance with the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992—

(1) approving the use under this subtitle of credits from such foreign greenhouse gas emissions trading markets as the regulations may establish; and

(2) permitting the use of international credits from the foreign country that issued the credits.

(b) REQUIREMENTS.—The regulations promulgated under subsection (a) shall require that, in order to be approved for use under this subtitle—

(1) a credit shall have been issued by a foreign country pursuant to a governmental program that imposes mandatory absolute tonnage limits on greenhouse gas emissions from the foreign country, or 1 or more industry sectors in that country, pursuant to protocols described in subsection (a); and

(2) the governmental program be of comparable stringency to the program established by this Act, including comparable monitoring, compliance, and enforcement.

SEC. 2503. FACILITY CERTIFICATION.

The owner or operator of a covered facility who submits an international allowance or credit under this subtitle shall certify that the allowance or credit has not been retired from use in the registry of the applicable foreign country.

Subtitle F—Carbon Market Efficiency Board

SEC. 2601. PURPOSES.

The purposes of this subtitle are—

(1) to ensure that the imposition of limits on greenhouse gas emissions will not significantly harm the economy of the United States; and

(2) to establish a Carbon Market Efficiency Board to ensure the implementation and maintenance of a stable, functioning, and efficient market in emission allowances.

SEC. 2602. ESTABLISHMENT OF CARBON MARKET EFFICIENCY BOARD.

(a) ESTABLISHMENT.—There is established a board, to be known as the ''Carbon Market Efficiency Board'' (referred to in this subtitle as the ''Board'').

(b) PURPOSES.—The purposes of the Board are—

(1) to promote the achievement of the purposes of this Act;

(2) to observe the national greenhouse gas emission market and evaluate periods during which the cost of emission allowances provided under Federal law might pose significant harm to the economy; and

(3) to submit to the President and Congress quarterly reports—

(A) describing—

(i) the status of the emission allowance market established under this Act;

(ii) the economic effects of the market, regional, industrial, and consumer responses to the market;

(iii) where practicable, energy investment responses to the market;

(iv) any corrective measures that should be carried out to relieve excessive costs of the market; and

(v) plans to compensate for those measures to ensure that the long-term emission-reduction goals of this Act are achieved;

(B) that are timely and succinct to ensure regular monitoring of market trends; and

(C) that are prepared independently by the Board.

(c) MEMBERSHIP.—

(1) COMPOSITION.—The Board shall be composed of 7 members who are citizens of the United States, to be appointed by the President, by and with the advice and consent of the Senate.

(2) REQUIREMENTS.—In appointing members of the Board under paragraph (1), the President shall—

(A) ensure fair representation of the financial, agricultural, industrial, and commercial sectors, and the geographical regions, of the United States, and include a representative of consumer interests; and

(B) appoint not more than 1 member from each such geographical region.

(3) COMPENSATION.—

(A) IN GENERAL.—A member of the Board shall be compensated at a rate equal to the daily equivalent of the annual rate of basic pay prescribed for level II of the Executive Schedule under section 5313 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 Board.

(B) CHAIRPERSON.—The Chairperson of the Board shall be compensated at a rate equal to the daily equivalent of the annual rate of basic pay prescribed for level I of the Executive Schedule under section 5312 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 Board.

(4) PROHIBITIONS.—

(A) CONFLICTS OF INTEREST.—An individual employed by, or holding any official relationship (including any shareholder) with, any entity engaged in the generation, transmission, distribution, or sale of energy, an individual who has any pecuniary interest in the generation, transmission, distribution, or sale of energy, or an individual who has a pecuniary in-

terest in the implementation of this Act, shall not be appointed to the Board under this subsection.

(B) NO OTHER EMPLOYMENT.—A member of the Board shall not hold any other employment during the term of service of the member.

(d) TERM; VACANCIES.—

(1) TERM.—

(A) IN GENERAL.—The term of a member of the Board shall be 14 years, except that the members first appointed to the Board shall be appointed for terms in a manner that ensures that—

(i) the term of not more than 1 member shall expire during any 2-year period; and

(ii) no member serves a term of more than 14 years.

(B) OATH OF OFFICE.—A member shall take the oath of office of the Board by not later than 15 days after the date on which the member is appointed under subsection (c)(1).

(C) REMOVAL.—

(i) IN GENERAL.—A member may be removed from the Board on determination of the President for cause.

(ii) NOTIFICATION.—The President shall submit to Congress a notification of any determination by the President to remove a member of the Board for cause under clause (i).

(2) VACANCIES.—

(A) IN GENERAL.—A vacancy on the Board—

(i) shall not affect the powers of the Board; and

(ii) shall be filled in the same manner as the original appointment was made.

(B) SERVICE UNTIL NEW APPOINTMENT.—A member of the Board the term of whom has expired or otherwise been terminated shall continue to serve until the date on which a replacement is appointed under subparagraph (A)(ii), if the President determines that service to be appropriate.

(c) CHAIRPERSON AND VICE-CHAIRPERSON.—Of members of the Board, the President shall appoint—

(1) 1 member to serve as Chairperson of the Board for a term of 4 years; and

(2) 1 member to serve as Vice-Chairperson of the Board for a term of 4 years.

(f) MEETINGS.—

(1) INITIAL MEETING.—The Board shall hold the initial meeting of the Board as soon as practicable after the date on which all members have been appointed to the Board under subsection (c)(1).

(2) PRESIDING OFFICER.—A meeting of the Board shall be presided over by—

(A) the Chairperson;

(B) in any case in which the Chairperson is absent, the Vice-Chairperson; or

(C) in any case in which the Chairperson and Vice-Chairperson are absent, a chairperson pro tempore, to be elected by the members of the Board.

(3) QUORUM.—Four members of the Board shall constitute a quorum for a meeting of the Board.

(4) OPEN MEETINGS.—The Board shall be subject to section 552b of title 5, United States Code

(commonly known as the ''Government in the Sunshine Act'').

SEC. 2603. DUTIES.

(a) INFORMATION GATHERING.—

(1) AUTHORITY.—The Board shall collect and analyze relevant market information to promote a full understanding of the dynamics of the emission allowance market established under this Act.

(2) INFORMATION.—The Board shall gather such information as the Board determines to be appropriate regarding the status of the market, including information relating to—

(A) emission allowance allocation and availability;

(B) the price of emission allowances;

(C) macro- and micro-economic effects of unexpected significant increases in emission allowance prices, or shifts in the emission allowance market, should those increases or shifts occur;

(D) economic effect thresholds that could warrant implementation of cost relief measures described in section 2604(a) after the initial 2-year period described in section 2603(d)(2);

(E) in the event any cost relief measures described in section 2604(a) are taken, the effects of those measures on the market;

(F) maximum levels of cost relief measures that are necessary to achieve avoidance of economic harm and preserve achievement of the purposes of this Act; and

(G) the success of the market in promoting achievement of the purposes of this Act.

(b) TREATMENT AS PRIMARY ACTIVITY.—

(1) IN GENERAL.—During the initial 2-year period of operation of the Board, information gathering under subsection (a) shall be the primary activity of the Board.

(2) SUBSEQUENT AUTHORITY.—After the 2-year period described in paragraph (1), the Board shall assume authority to implement the cost-relief measures described in section 2604(a).

(c) STUDY.—

(1) IN GENERAL.—During the 2-year period beginning on the date on which the emission allowance market established under this Act begins operation, the Board shall conduct a study of other markets for tradeable permits to emit covered greenhouse gases.

(2) REPORT.—Not later than 180 days after the beginning of the period described in paragraph (1), the Board shall submit to Congress a report describing the status of the market, specifically with respect to volatility within the market and the average price of emission allowances during that 180-day period.

(d) EMPLOYMENT OF COST RELIEF MEASURES.—

(1) IN GENERAL.—If the Board determines that the emission allowance market established under this Act poses a significant harm to the economy of the United States, the Board shall carry out such cost relief measures relating to that market as the Board determines to be appropriate under section 2604(a).

(2) INITIAL PERIOD.—During the 2-year period beginning on the date on which the emission allowance market established under this Act begins operation, if the Board determines that the average daily closing price of emission allowances during a 180-day period exceeds the upper range of the estimate provided under section 2605, the Board shall—

(A) increase the quantity of emission allowances that covered facilities may borrow

from the prescribed allocations of the covered facilities for future years; and

(B) take subsequent action as described in section 2604(a)(2).

(3) REQUIREMENTS.—Any action carried out pursuant to this subsection shall be subject to the requirements of section 2604(a)(3)(B).

(c) REPORTS.—The Board shall submit to the President and Congress quarterly reports—

(1) describing the status of the emission allowance market established under this Act, the economic effects of the market, regional, industrial, and consumer responses to the market, energy investment responses to the market, any corrective measures that should be carried out to relieve excessive costs of the market, and plans to compensate for those measures; and

(2) that are prepared independently by the Board, and not in partnership with Federal agencies.

SEC. 2604. POWERS.

(a) COST RELIEF MEASURES.—

(1) IN GENERAL.—Beginning on the day after the date of expiration of the 2-year period described in section 2603(b), the Board may carry out 1 or

more of the following cost relief measures to ensure functioning, stable, and efficient markets for emission allowances:

(A) Increase the quantity of emission allowances that covered facilities may borrow from the prescribed allocations of the covered facilities for future years.

(B) Expand the period during which a covered facility may repay the Administrator for an emission allowance as described in subparagraph (A).

(C) Lower the interest rate at which an emission allowance may be borrowed as described in subparagraph (A).

(D) Increase the quantity of allowances or credits obtained on a foreign greenhouse gas emissions trading market that the owner or operator of any covered facility may use to satisfy the allowance submission requirement of the covered facility under section 1202(a), on the condition that the Administrator has certified the market in accordance with the regulations promulgated pursuant to section 2502(a).

(E) Increase the quantity of offset allowances generated in accordance with subtitle D

that the owner or operator of any covered facility may use to satisfy the total allowance submission requirement of the covered facility under section 1202(a).

(F) Expand the total quantity of emission allowances made available to all covered facilities at any given time by borrowing against the total allowable quantity of emission allowances to be provided for future years.

(2) SUBSEQUENT ACTIONS.—On determination by the Board to carry out a cost relief measure pursuant to paragraph (1), the Board shall—

(A) allow the cost relief measure to be used only during the applicable allocation year;

(B) exercise the cost relief measure incrementally, and only as needed to avoid significant economic harm during the applicable allocation year;

(C) specify the terms of the relief to be achieved using the cost relief measure, including requirements for entity-level or national market-level compensation to be achieved by a specific date or within a specific time period;

(D) in accordance with section 2603(c), submit to the President and Congress a report

describing the actions carried out by the Board and recommendations for the terms under which the cost relief measure should be authorized by Congress and carried out by Federal entities; and

(E) evaluate, at the end of the applicable allocation year, actions that need to be carried out during subsequent years to compensate for any cost relief measure carried out during the applicable allocation year.

(3) ACTION ON EXPANSION OF BORROWING.—

(A) IN GENERAL.—If the Board carries out a cost relief measure pursuant to paragraph (1) that results in the expansion of borrowing of emission allowances under this Act, and if the average daily closing price of emission allowances for the 180-day period beginning on the date on which borrowing is so expanded exceeds the upper range of the estimate provided under section 2605, the Board shall increase the quantity of emission allowances available for the applicable allocation year in accordance with this paragraph.

(B) REQUIREMENTS.—An increase in the quantity of emission allowances under subparagraph (A) shall—

(i) apply to all covered facilities;

(ii) be allocated in accordance with the applicable formulas and procedures established under this Act;

(iii) be equal to not more than 5 percent of the total quantity of emission allowances otherwise available for the applicable allocation year under this Act;

(iv) remain in effect only for the applicable allocation year;

(v) specify the date by which the increase shall be repaid by covered facilities through a proportionate reduction of emission allowances available for subsequent allocation years; and

(vi) require the repayment under clause (v) to be made by not later than the date that is 15 years after the date on which the increase is provided.

(b) ASSESSMENTS.—Not more frequently than semi-annually, the Board may levy on owners and operators of covered facilities, in proportion to the capital stock and

surplus of the participants, an assessment sufficient to pay the estimated expenses of the Board and the salaries of members of and employees of the Board during the 180-day period beginning on the date on which the assessment is levied, taking into account any deficit carried forward from the preceding 180-day period.

(c) LIMITATIONS.—Nothing in this section gives the Board the authority—

(1) to consider or prescribe entity-level petitions for relief from the costs of an emission allowance allocation or trading program established under Federal law;

(2) to carry out any investigative or punitive process under the jurisdiction of any Federal or State court;

(3) to interfere with, modify, or adjust any emission allowance allocation scheme established under Federal law; or

(4) to modify the total quantity of allowances issued under this Act for the period of calendar years 2012 through 2050.

SEC. 2605. ESTIMATE OF COSTS TO ECONOMY OF LIMITING GREENHOUSE GAS EMISSIONS.

Not later than July 1, 2014, the Director of the Congressional Budget Office, using economic and scientific

analyses, shall submit to Congress a report that describes—

(1) the projected price range at which emission allowances are expected to trade during the 2-year period of the initial greenhouse gas emission market established under Federal law; and

(2) the projected impact of that market on the economy of the United States.

TITLE III—ALLOCATING AND DISTRIBUTING ALLOWANCES

Subtitle A—Early Auctions

SEC. 3101. ALLOCATION FOR EARLY AUCTIONS.

Not later than 180 days after the date of enactment of this Act, the Administrator shall allocate 6 percent of the emission allowances established for calendar year 2012, 4 percent of the emission allowances established for calendar year 2013, and 2 percent of the emissions established for calendar 2014, to the Corporation for early auctioning in accordance with section 4301.

Subtitle B—Annual Auctions

SEC. 3201. ALLOCATION FOR ANNUAL AUCTIONS.

Not later than January 1, 2012, and annually thereafter through January 1, 2050, the Administrator shall allocate to the Corporation a percentage of emission allow-

ances for that calendar year, for annual auctioning, as follows:

Calendar Year	Percentage of Emission Allowance Account Allocated to the Corporation
2012	18
2013	21
2014	24
2015	27
2016	28
2017	31
2018	33
2019	35
2020	37
2021	39
2022	41
2023	43
2024	45
2025	47
2026	49
2027	51
2028	53
2029	55
2030	57
2031	59
2032	61
2033	63
2034	65
2035	67

Calendar Year	Percentage of Emission Allowance Account Allocated to the Corporation
2036	73
2037	73
2038	73
2039	73
2040	73
2041	73
2042	73
2043	73
2044	73
2045	73
2046	73
2047	73
2048	73
2049	73
2050	73

Subtitle C—Early Action

SEC. 3301. ALLOCATION.

Not later than 2 years after the date of enactment of this Act, the Administrator shall allocate to owners or operators of covered facilities, in recognition of actions of the owners and operators taken since January 1, 1994, that resulted in verified and credible reductions of greenhouse gas emissions—

(1) 5 percent of the emission allowances established for calendar year 2012;

(2) 4 percent of the emission allowances established for calendar year 2013;

(3) 3 percent of the emission allowances established for calendar year 2014;

(4) 2 percent of the emission allowances established for calendar year 2015; and

(5) 1 percent of the emission allowances established for calendar year 2016.

SEC. 3302. DISTRIBUTION.

(a) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Administrator shall establish, by regulation, procedures and standards for use in distributing, to owners and operators of covered facilities, emission allowances allocated under section 3301.

(b) CONSIDERATION.—The procedures and standards established under subsection (a) shall provide for consideration of verified and credible emission reductions registered before the date of enactment of this Act under—

(1) the Climate Leaders Program, or any other voluntary greenhouse gas reduction program of the United States Environmental Protection Agency and United States Department of Energy;

(2) the Voluntary Reporting of Greenhouse Gases Program of the Energy Information Administration;

(3) State or regional greenhouse gas emission reduction programs that include systems for tracking and verifying the greenhouse gas emission reductions; and

(4) voluntary entity programs that resulted in entity-wide reductions in greenhouse gas emissions.

(c) DISTRIBUTION.—Not later than 4 years after the date of enactment of this Act, the Administrator shall distribute all emission allowances allocated under section 3301.

Subtitle D—States

SEC. 3401. ALLOCATION FOR ENERGY SAVINGS.

(a) ALLOCATION.—Not later than January 1, 2012, and annually thereafter through January 1, 2050, the Administrator shall allocate 1 percent of the Emission Allowance Account among States that—

(1) have adopted regulations by not later than the date on which the allowance allocations are made, that subject regulated natural gas and electric utilities that deliver gas or electricity in the State to regulations that—

(A) automatically adjust the rates charged by natural gas and electric utilities to fully recover fixed costs of service without regard to whether their actual sales are higher or lower

than the forecast of sales on which the tariffed rates were based; and

(B) make cost-effective energy-efficiency investments by investor-owned natural gas or electric utilities at least as rewarding to their shareholders, on a risk-adjusted basis for the equity capital invested, as power or energy purchases, or investments in new energy supplies or infrastructure; and

(2) have adopted, or whose political subdivisions have adopted, regulations by not later than the date on which allocations are made, that are as stringent as, or more stringent than, the most recent energy performance requirements of ASHRAE 90.1 and the International Energy Conservation Code for new buildings.

(b) ALLOCATION FOR BUILDING EFFICIENCY.—Not later than January 1, 2012, and annually thereafter through January 1, 2050, the Administrator shall allocate 1 percent of the Emission Allowance Account among States that are in compliance with section 304(c)(3) of the Energy Conservation and Production Act (as amended by section 5201).

(c) DISTRIBUTION.—Not later than 2 years after the date of enactment of this Act, the Administrator shall es-

tablish procedures and standards for the distribution of emission allowances to States in accordance with subsections (a) and (b).

(d) USE.—Any State receiving emission allowances under this section for a calendar year shall retire or use, in 1 or more of the ways described in section 3403(c)(1), not less than 90 percent of the emission allowances allocated to the State (or proceeds of the sale of those allowances) under this section for the calendar year.

SEC. 3402. ALLOCATION FOR STATES WITH PROGRAMS THAT EXCEED FEDERAL EMISSION REDUCTION TARGETS.

(a) ALLOCATION.—Not later than January 1, 2012, and annually thereafter through January 1, 2050, the Administrator shall allocate 2 percent of the Emission Allowance Account for the year among States that have—

(1) before the date of enactment of this Act, enacted statewide greenhouse gas emission reduction targets that are more stringent than the nationwide targets established under title II; and

(2) by the time of an allocation under this subsection, imposed on covered facilities within the States aggregate greenhouse gas emission limitations more stringent than those imposed on covered facilities under title II.

(b) DISTRIBUTION.—Not later than 2 years after the date of enactment of this Act, the Administrator shall establish procedures and standards for use in distributing emission allowances among States in accordance with subsection (a).

(c) USE.—Any State receiving emission allowances under this section for a calendar year shall retire or use, in 1 or more of the ways described in section 3403(c)(1), not less than 90 percent of the emission allowances allocated to the State (or proceeds of the sale of those allowances) under this section for the calendar year.

SEC. 3403. GENERAL ALLOCATION.

(a) ALLOCATION.—Subject to subsection (d)(3), not later than January 1, 2012, and annually thereafter through January 1, 2050, the Administrator shall allocate 5 percent of the Emission Allowance Account for the year among States.

(b) DISTRIBUTION.—The allowances available for allocation to States under subsection (a) for a calendar year shall be distributed as follows:

(1) For each calendar year, ⅓ of the quantity of allowances available for allocation to States under subsection (a) shall be allocated among individual States based on the proportion that—

(A) the expenditures of a State for the low-income home energy assistance program established under the Low-Income Home Energy Assistance Act of 1981 (42 U.S.C. 8621 et seq.) for the preceding calendar year; bears to

(B) the expenditures of all States for that program for the preceding calendar year.

(2) For each calendar year, ⅓ of the quantity of allowances available for allocation to States under subsection (a) shall be allocated among the States based on the proportion that—

(A) the population of a State, as determined by the most recent decennial census preceding the calendar year for which the allocation regulations are for the allocation year; bears to

(B) the population of all States, as determined by that census.

(3) For each calendar year, ⅓ of the quantity of allowances available for allocation to States under subsection (a) shall be allocated among the States based on the proportion that—

(A) the quantity of carbon dioxide that would be emitted assuming that all of the coal that is mined, natural gas that is processed,

and petroleum that is refined within the boundaries of a State during the preceding year is completely combusted and that none of the carbon dioxide emissions are captured, as determined by the Secretary of Energy; bears to

(B) the aggregate quantity of carbon dioxide that would be emitted assuming that all of the coal that is mined, natural gas that is processed, and petroleum that is refined in all States for the preceding year is completely combusted and that none of the carbon dioxide emissions are captured, as determined by the Secretary of Energy.

(c) USE.—

(1) IN GENERAL.—During any calendar year, a State shall retire or use in 1 or more of the following ways not less than 90 percent of the allowances allocated to the State (or proceeds of sale of those emission allowances) under this section for that calendar year:

(A) To mitigate impacts on low-income energy consumers.

(B) To promote energy efficiency (including support of electricity and natural gas de-

mand reduction, waste minimization, and recycling programs).

(C) To promote investment in nonemitting electricity generation technology.

(D) To improve public transportation and passenger rail service and otherwise promote reductions in vehicle miles traveled.

(E) To encourage advances in energy technology that reduce or sequester greenhouse gas emissions.

(F) To address local or regional impacts of climate change, including the relocation of communities displaced by the impacts of climate change.

(G) To mitigate obstacles to investment by new entrants in electricity generation markets and energy-intensive manufacturing sectors.

(H) To address local or regional impacts of climate change policy, including providing assistance to displaced workers.

(I) To mitigate impacts on energy-intensive industries in internationally competitive markets.

(J) To reduce hazardous fuels, and to prevent and suppress wildland fire.

(K) To fund rural, municipal, and agricultural water projects that are consistent with the sustainable use of water resources.

(2) DEADLINE.—A State shall distribute or sell allowances for use in accordance with paragraph (1) by not later than 1 year before the beginning of each allowance allocation year.

(3) RETURN OF ALLOWANCES.—Not later than 330 days before the beginning of each allowance allocation year, a State shall return to the Administrator any allowances not distributed by the deadline under paragraph (2).

(d) PROGRAM FOR TRIBAL COMMUNITIES.—

(1) ESTABLISHMENT.—Not later than 3 years after the date of enactment of this Act, the Administrator, in consultation with the Secretary of the Interior, shall by regulation establish a program for tribal communities—

(A) that is designed to deliver assistance to tribal communities within the United States that face disruption or dislocation as a result of global climate change; and

(B) under which the Administrator shall distribute 0.5 percent of the Emission Allowance Account for each calendar among tribal

governments of the tribal communities described in subparagraph (A).

(2) ALLOCATION.—Beginning in the first calendar year that begins after promulgation of the regulations referred to in paragraph (1), and annually thereafter until calendar year 2050, the Administrator shall allocate 0.5 percent of the Emission Allowance Account for each calendar year to the program established under paragraph (1).

(3) ALLOCATIONS TO STATES.—For each calendar year for which the Administrator allocates 0.5 percent of the Emission Allowance Account to the program established under paragraph (1), the general allocation for States under subsection (a) shall be 4.5 percent of the Emission Allowance Account.

Subtitle E—Electricity Consumers

SEC. 3501. ALLOCATION.

Not later than April 1, 2012, and annually thereafter through January 1, 2050, the Administrator shall allocate among load-serving entities 10 percent of the Emission Allowance Account for the year.

SEC. 3502. DISTRIBUTION.

(a) IN GENERAL.—For each calendar year, the emission allowances allocated under section 3501 shall be dis-

~~tributed by the Administrator to each load-serving entity based on the proportion that—~~

~~(1) the quantity of electricity delivered by the load-serving entity during the 3 calendar years preceding the calendar year for which the emission allowances are distributed, adjusted upward for electricity not delivered as a result of consumer energy-efficiency programs implemented by the load-serving entity and verified by the regulatory agency of the load-serving entity; bears to~~

~~(2) the total quantity of electricity delivered by all load-serving entities during those 3 calendar years.~~

~~(b) BASIS.—The Administrator shall base the determination of the quantity of electricity delivered by a load-serving entity for the purpose of subsection (a) on the most recent data available in annual reports filed with the Energy Information Administration of the Department of Energy~~

~~SEC. 3503. USE.~~

~~(a) IN GENERAL.—Any load-serving entity that accepts emission allowances distributed under section 3502 shall—~~

(1) sell each emission allowance distributed to the load-serving entity by not later than 1 year after receiving the emission allowance; and

(2) pursue fair market value for each emission allowance sold in accordance with paragraph (1).

(b) PROCEEDS.—All proceeds from the sale of emission allowances under subsection (a) shall be used solely—

(1) to mitigate economic impacts on low- and middle-income energy consumers, including by reducing transmission charges or issuing rebates; and

(2) to promote energy efficiency on the part of energy consumers.

(c) INCLUSION IN RETAIL RATES.—To facilitate the prompt pass-through of the benefits from the sale of emission allowances to retail customers—

(1) any credit from the sale of allowances shall be reflected in the retail rates of a load-serving entity not later than 90 days after the sale of the allowances;

(2) the load-serving entity shall not be required to file a retail rate case in order to pass through the credit; and

(3) the amount of the credit shall not be subject to review by any State regulatory authority.

(d) PROHIBITION ON REBATES.—No load-serving entity may use any proceeds from the sale of emission allowances under subsection (a) to provide to any consumer a rebate that is based on the quantity of electricity used by the consumer.

SEC. 3504. REPORTING.

(a) IN GENERAL.—Each load-serving entity that accepts emission allowances distributed under section 3502 shall, for each calendar year for which the load-serving entity accepts emission allowances, submit to the Administrator a report describing—

(1) the date of each sale of each emission allowance during the preceding year;

(2) the amount of revenue generated from the sale of emission allowances during the preceding year; and

(3) how, and to what extent, the load-serving entity used the proceeds of the sale of the emission allowances during the preceding year.

(b) AVAILABILITY OF REPORTS.—The Administrator shall make available to the public all reports submitted by any load-serving entity under subsection (b), including by publishing those reports on the Internet.

Subtitle F—Bonus Allowances for Carbon Capture and Geological Sequestration

SEC. 3601. ALLOCATION.

(a) IN GENERAL.—Not later than 3 years after the date of enactment of this Act, the Administrator shall—

(1) establish a Bonus Allowance Account; and

(2) allocate 4 percent of the emission allowances established for calendar years 2012 through 2035 to the Bonus Allowance Account.

(b) INITIAL NUMBER OF ALLOWANCES.—As of January 1, 2012, there shall be 3,932,160,000 emission allowances in the Bonus Allowance Account.

SEC. 3602. QUALIFYING PROJECTS.

To be eligible to receive emission allowances under this subtitle, a carbon capture and sequestration project shall—

(1) comply with such criteria and procedures as the Administrator may establish, including a requirement for a minimum of an 85-percent capture rate for carbon dioxide emissions on an annual basis from any unit for which allowances are allocated;

(2) sequester in a geological formation permitted by the Administrator for that purpose in accordance with regulations promulgated under section

1421(d) of the Safe Drinking Water Act (42 U.S.C. 300h(d)) carbon dioxide resulting from electric power generation; and

(3) have begun operation during the period beginning on January 1, 2008, and ending on December 31, 2035.

SEC. 3603. DISTRIBUTION.

Subject to section 3604, for each of calendar years 2012 through 2039, the Administrator shall distribute emission allowances from the Bonus Allowance Account to each qualifying project under this subtitle in a quantity equal to the product obtained by multiplying the number of metric tons of carbon dioxide geologically sequestered by the project and the bonus allowance rate for that calendar year, as provided in the following table:

Year	Bonus Allowance Rate
2012	4.5
2013	4.5
2014	4.5
2015	4.5
2016	4.5
2017	4.5
2018	4.2
2019	3.9
2020	3.6
2021	3.3
2022	3.0
2023	2.7
2024	2.4
2025	2.1
2026	1.8
2027	1.5
2028	1.3
2029	1.1
2030	0.9
2031	0.7

Year	Bonus Allowance Rate
2032	0.5
2033	0.5
2034	0.5
2035	0.5
2036	0.5
2037	0.5
2038	0.5
2039	0.5

SEC. 3604. 10-YEAR LIMIT.

A qualifying project may receive annual emission allowances under this subsection only for—

(1) the first 10 years of operation; or

(2) if the unit covered by the qualifying project began operating before January 1, 2012, the period of calendar years 2012 through 2021.

SEC. 3605. EXHAUSTION OF BONUS ALLOWANCE ACCOUNT.

If, at the beginning of a calendar year, the Administrator determines that the number of emission allowances remaining in the Bonus Allowance Account will be insufficient to allow the distribution, in that calendar year, of the number of allowances that otherwise would be distributed under section 3603 for the calendar year, the Administrator shall, for the calendar year—

(1) distribute the remaining bonus allowances only to qualifying projects that were already qualifying projects during the preceding calendar year;

(2) distribute the remaining bonus allowances to those qualifying projects on a pro rata basis; and

(3) discontinue the program established under this subtitle as of the date on which the Bonus Allowance Account is projected to be fully used based on projects already in operation.

Subtitle G—Domestic Agriculture and Forestry

SEC. 3701. ALLOCATION.

Not later than January 1, 2012, and annually thereafter through January 1, 2050, the Administrator shall allocate to the Secretary of Agriculture 5 percent of the Emission Allowance Account for the calendar year for use in—

(1) reducing greenhouse gas emissions from the agriculture and forestry sectors of the United States economy; and

(2) increasing greenhouse gas sequestration from those sectors.

SEC. 3702. AGRICULTURAL AND FORESTRY GREENHOUSE GAS MANAGEMENT RESEARCH.

(a) REPORT.—Not later than 1 year after the date of enactment of this Act, the Secretary of Agriculture, in consultation with scientific and agricultural and forestry experts, shall prepare and submit to Congress a report that describes the status of research on agricultural and

forestry greenhouse gas management, including a description of—

(1) research on soil carbon sequestration and other agricultural and forestry greenhouse gas management that has been carried out;

(2) any additional research that is necessary;

(3) the proposed priority for additional research;

(4) the most appropriate approaches for conducting the additional research; and

(5) the manner in which carbon credits that are specific to agricultural and forestry operations should be valued and allotted.

(b) STANDARDIZED SYSTEM OF SOIL CARBON MEASUREMENT AND CERTIFICATION FOR THE AGRICULTURAL AND FORESTRY SECTORS.—

(1) IN GENERAL.—As soon as practicable after the date of enactment of this Act, the Secretary of Agriculture shall establish a standardized system of carbon measurement and certification for the agricultural and forestry sectors.

(2) ADMINISTRATION.—In establishing the system, the Secretary of Agriculture shall—

(A) create a standardized system of measurements for agricultural and forestry greenhouse gases; and

(B) delineate the most appropriate system of certification of credit by public or private entities.

(c) RESEARCH.—After the date of submission of the report described in paragraph (1), the President and the Secretary of Agriculture (in collaboration with the member institutions of higher education of the Consortium for Agricultural Soil Mitigation of Greenhouse Gases, institutions of higher education, and research entities) shall initiate a program to conduct any additional research that is necessary.

SEC. 3703. DISTRIBUTION.

Taking into account the report prepared under subsection 3702(a), the Secretary of Agriculture shall establish, by regulation, a program under which agricultural and forestry sequestration allowances may be distributed to entities that carry out sequestration projects on agricultural and forest land that achieve long-term greenhouse gas emission mitigation benefits.

Subtitle H—International Forest Protection

SEC. 3801. FINDINGS.

Congress finds that—

(1) land-use change and forest sector emissions account for approximately 20 percent of global greenhouse gas emissions;

(2) land conversion and deforestation are 2 of the largest sources of greenhouse gas emissions in the developing world, amounting to roughly 40 percent of the total greenhouse gas emissions of the developing world;

(3) with sufficient data, deforestation rates and forest carbon stocks can be measured with an acceptable level of uncertainty; and

(4) encouraging reduced deforestation and other forest carbon activities in other countries can—

(A) provide critical leverage to encourage voluntary developing country participation in emission limitation regimes;

(B) facilitate greater overall reductions in greenhouse gas emissions than would otherwise be practicable; and

(C) substantially benefit biodiversity, conservation, and indigenous and other forest-dependent people in developing countries.

SEC. 3802. DEFINITION OF FOREST CARBON ACTIVITIES.

In this subtitle, the term ''forest carbon activities'' means—

(1) activities directed at reducing greenhouse gas emissions from deforestation and forest degradation in countries other than the United States; and

(2) activities directed at increasing sequestration of carbon through restoration of forests, and degraded land in countries other than the United States that has not been forested prior to restoration, afforestation, and improved forest management, that meet the eligibility requirements promulgated under section 3804(a).

SEC. 3803. ALLOCATION.

Not later than January 1, 2012, and annually thereafter through January 1, 2050, the Administrator shall allocate and distribute 3 percent of the Emission Allowance Account for the calendar year for use in carrying out forest carbon activities in countries other than the United States.

SEC. 3804. DEFINITION AND ELIGIBILITY REQUIREMENTS.

(a) ELIGIBILITY REQUIREMENTS FOR FOREST CARBON ACTIVITIES.—Not later than 2 years after the date of enactment of this Act, the Administrator, in consultation with the Secretary of the Interior, the Secretary of State, and the Secretary of Agriculture, shall promulgate eligibility requirements for forest carbon activities directed at sequestration of carbon through restoration of forests and degraded land, afforestation, and improved forest management in countries other than the United States, including requirements that those activities be—

(1) carried out and managed in accordance with widely-accepted environmentally sustainable forestry practices; and

(2) designed—

(A) to promote native species and restoration of native forests, where practicable; and

(B) to avoid the introduction of invasive nonnative species.

(b) QUALITY CRITERIA FOR FOREST CARBON ALLOCATIONS.—Not later than 2 years after the date of enactment of this Act, the Administrator, in consultation with the Secretary of the Interior, the Secretary of State, and the Secretary of Agriculture, shall promulgate regulations establishing the requirements for eligibility to receive allowances under this section, including requirements that

ensure that the emission reductions or sequestrations are real, permanent, additional, and verifiable, with reliable measuring and monitoring and appropriate accounting for leakage.

SEC. 3805. INTERNATIONAL FOREST CARBON ACTIVITIES.

(a) IN GENERAL.—The Administrator, in consultation with the Secretary of State, shall identify and periodically update a list of countries that have—

(1) demonstrated capacity to participate in international forest carbon activities, including—

(A) sufficient historical data on changes in national forest carbon stocks;

(B) technical capacity to monitor and measure forest carbon fluxes with an acceptable level of uncertainty; and

(C) institutional capacity to reduce emissions from deforestation and degradation;

(2) capped greenhouse gas emissions or otherwise established a national emission reference scenario based on historical data; and

(3) commenced an emission reduction program for the forest sector.

(b) CREDITING AND ADDITIONALITY.—

(1) REDUCTION IN DEFORESTATION AND FOREST DEGRADATION.—A verified reduction in green-

house gas emissions from deforestation and forest degradation under a cap or from a nationwide emissions reference scenario described in subsection (a) shall be—

(A) eligible for crediting; and

(B) considered to satisfy the additionality criterion.

(2) PERIODIC REVIEW OF NATIONAL LEVEL REDUCTIONS IN DEFORESTATION AND DEGRADATION.—The Administrator, in consultation with the Secretary of State, shall identify and periodically update a list of countries described in subsection (a) that have—

(A) achieved national-level reductions of deforestation and degradation below a historical reference scenario, taking into consideration the average annual deforestation and degradation rates of the country and of all countries during a period of at least 5 years; and

(B) demonstrated those reductions using remote sensing technology that meets international standards.

(3) OTHER FOREST CARBON ACTIVITIES.—A forest carbon activity, other than a reduction in deforestation or forest degradation, shall be eligible for

crediting, subject to the quality criteria for forest carbon credits identified in this Act or in regulations promulgated under this Act.

(c) RECOGNITION OF CREDITS.—With respect to countries other than countries described in subsection (a), the Administrator—

(1) shall recognize credits from forest carbon activities, subject to the quality criteria for forest carbon credits identified in this Act and regulations promulgated under this Act; and

(2) is encouraged to identify other incentives, including economic and market-based incentives, to encourage developing countries with largely-intact native forests to protect those forests.

SEC. 3806. REVIEWS AND DISCOUNT.

(a) REVIEWS.—Not later than 3 years after the date of enactment of this Act, and 5 years thereafter, the Administrator shall conduct a review of the credit program under this subtitle.

(b) DISCOUNT.—If, after the date that is 10 years after the date of enactment of this Act, the Administrator determines that foreign countries that, in the aggregate, generate greenhouse gas emissions accounting for more than 0.5 percent of global greenhouse gas emissions have not capped those emissions, established emissions ref-

erence scenarios based on historical data, or otherwise reduced total forest emissions, the Administrator may apply a discount to forest carbon credits imported into the United States from those countries.

Subtitle I—Covered Facilities

SEC. 3901. ALLOCATION.

Not later than April 1, 2012, and annually thereafter through January 1, 2035, the Administrator shall allocate percentages of the Emission Allowance Account for the calendar year to owners or operators of covered facilities within the electric power sector and the industrial sector, as follows:

Calendar	Percentage of Emission Allowance Account Allocated to the Electric Power Sector	Percentage of Emission Allowance Account Allocated to the Industrial Sector
2012	20	20
2013	20	20
2014	20	20
2015	20	20
2016	20	20
2017	19	19
2018	18	18
2019	17	17
2020	16	16
2021	15	15
2022	14	14
2023	13	13
2024	12	12
2025	11	11
2026	10	10

Calendar	Percentage of Emission Allowance Account Allocated to the Electric Power Sector	Percentage of Emission Allowance Account Allocated to the Industrial Sector
2027	9	9
2028	8	8
2029	7	7
2030	6	6
2031	5	5
2032	4	4
2033	3	3
2034	2	2
2035	1	1

SEC. 3902. DISTRIBUTION SYSTEM.

Not later than 1 year after the date of enactment of this Act, the Administrator shall establish a system for distributing to covered facilities within the electric power and industrial sectors the emission allowances allocated under section 3901.

SEC. 3903. DISTRIBUTING EMISSION ALLOWANCES WITHIN THE ELECTRIC POWER SECTOR.

(a) NEW ENTRANTS.—

(1) IN GENERAL.—As part of the system established under section 3902, the Administrator shall, for each calendar year, set aside, from the quantity of emission allowances represented by the percentages described in the table contained in section 3901 for the electric power sector, a quantity of emission

allowances for distribution to new entrant covered electric power sector facilities.

(2) CALCULATION OF ALLOWANCES.—The quantity of emission allowances distributed by the Administrator for a calendar year to a new covered electric power sector facility under paragraph (1) shall be equal to the product obtained by multiplying—

(A) the average greenhouse gas emission rate of all covered electric power sector facilities that commenced operations during the 5 years preceding the date of enactment of this Act; and

(B) the electricity generated by the facility during the calendar year, adjusted downward on a pro rata basis for each new facility in the event that insufficient allowances are available under section 3901 for a calendar year.

(b) FACILITIES OWNED BY A RURAL ELECTRIC CO-OPERATIVE.—

(1) IN GENERAL.—As part of the system established under section 3902, the Administrator shall, for each calendar year, set aside, from the quantity of emission allowances represented by the percentages described in the table contained in section 3901

for the electric power sector, a quantity of emission allowances for distribution to covered electric power sector facilities that are owned or operated by a rural electric cooperative.

(2) CALCULATION OF ALLOWANCES.—The quantity of emission allowances distributed by the Administrator in a calendar year under paragraph (1) to a covered electric power sector facility that is owned or operated by a rural electric cooperative shall be equal to the quantity of carbon dioxide equivalents that the covered electric power sector facility emitted during calendar year 2006.

(c) INCUMBENTS.—

(1) IN GENERAL.—As part of the system established under section 3902, the Administrator shall, for each calendar year, distribute to covered electric power sector facilities (other than facilities owned or operated by a rural electric cooperative) that were operating during the calendar year preceding the year in which this Act was enacted the emission allowances represented by the percentages described in the table contained in section 3901 for the electric power sector that remain after the distribution of emission allowances under subsections (a) and (b).

(2) CALCULATION OF ALLOWANCES.—The quantity of emission allowances distributed to a covered electric power sector facility under paragraph (1) shall be equal to the product obtained by multiplying—

(A) the quantity of emission allowances available for distribution under paragraph (1); and

(B) the quotient obtained by dividing—

(i) the annual average quantity of carbon dioxide equivalents emitted by the covered electric power sector facility during the 3 calendar years preceding the date of enactment of this Act; by

(ii) the annual average of the aggregate quantity of carbon dioxide equivalents emitted by all covered electric power sector facilities during those 3 calendar years.

SEC. 3904. DISTRIBUTING EMISSION ALLOWANCES WITHIN THE INDUSTRIAL SECTOR.

(a) NEW ENTRANTS.—

(1) IN GENERAL.—As part of the system established under section 3902, the Administrator shall, for each calendar year, set aside, from the quantity of emission allowances represented by the percent-

ages described in the table contained in section 3901 for the industrial sector, a quantity of emission allowances for distribution to new entrant covered industrial sector facilities.

(2) CALCULATION OF ALLOWANCES.—The quantity of emission allowances distributed by the Administrator in a calendar year to a new covered industrial sector facility under paragraph (1) shall be calculated pursuant to such formula as shall be established under the system established under section 3902.

(b) INCUMBENTS.—

(1) IN GENERAL.—As part of the system established under section 3902, the Administrator shall, for each calendar year, distribute to covered industrial sector facilities that were operating during the calendar year preceding the year in which this Act was enacted the emission allowances represented by the percentages described in the table contained in section 3901 for the industrial sector that remain after the distribution of emission allowances under subsection (a).

(2) CALCULATION OF ALLOWANCES.—The quantity of emission allowances distributed to a covered industrial sector facility under paragraph (1)

shall be equal to the product obtained by multiplying—

(A) the quantity of emission allowances available for distribution under paragraph (1); and

(B) the quotient obtained by dividing—

(i) the annual average quantity of carbon dioxide equivalents emitted by the covered industrial sector facility during the 3 calendar years preceding the date of enactment of this Act; by

(ii) the annual average of the aggregate quantity of carbon dioxide equivalents emitted by all covered industrial sector facilities during those 3 calendar years.

(c) REVOCATION OF DISTRIBUTION UPON FACILITY SHUTDOWN.—If a covered facility within the industrial sector receives a distribution of emission allowances under this section for a calendar year and is subsequently permanently shut down during that calendar year, the owner or operator of the facility shall promptly return to the Administrator a number of emission allowances equal to the difference between—

(1) the number of carbon dioxide equivalents emitted by the facility in that calendar year prior to the shutdown; and

(2) the number of emission allowances distributed to the facility by the Administrator for that calendar year.

TITLE IV—AUCTIONS AND USES OF AUCTION PROCEEDS

Subtitle A—Funds

SEC. 4101. ESTABLISHMENT.

There are established in the Treasury of the United States the following funds:

(1) The Energy Assistance Fund.

(2) The Climate Change Worker Training Fund.

(3) The Adaptation Fund.

(4) The Climate Change and National Security Fund.

SEC. 4102. AMOUNTS IN FUNDS.

Each Fund established by section 4101 shall consist of such amounts as are appropriated to the respective Fund under section 4103.

SEC. 4103. TRANSFERS TO FUNDS.

There are appropriated to each Fund established by section 4101, out of funds of the Treasury not otherwise

appropriated, amounts equivalent to amounts deposited in each respective Fund under section 4302(b)(2).

Subtitle B—Climate Change Credit Corporation

SEC. 4201. ESTABLISHMENT.

(a) IN GENERAL.—There is established, as a nonprofit corporation without stock, a corporation to be known as the ''Climate Change Credit Corporation''.

(b) TREATMENT.—The Corporation shall not be considered to be an agency or establishment of the Federal Government.

SEC. 4202. APPLICABLE LAWS.

The Corporation shall be subject to this title and, to the extent consistent with this title, the District of Columbia Business Corporation Act (D.C. Code section 29-301 et seq.).

SEC. 4203. BOARD OF DIRECTORS.

(a) IN GENERAL.—The Corporation shall have a board of directors composed of 5 individuals who are citizens of the United States, of whom 1 shall be elected annually by the board to serve as Chairperson.

(b) POLITICAL AFFILIATION.—Not more than 3 members of the board serving at any time may be affiliated with the same political party.

(c) APPOINTMENT AND TERM.—A member of the board shall be appointed by the President, by and with the advice and consent of the Senate, for a term of 5 years.

(d) QUORUM.—Three members of the board shall constitute a quorum for a meeting of the board of directors.

Subtitle C—Auctions

SEC. 4301. EARLY AUCTIONS.

(a) INITIATION OF AUCTIONING.—Not later than 1 year after the date of enactment of this Act, the Corporation shall begin auctioning the emission allowances allocated to the Corporation under section 3101.

(b) COMPLETION OF AUCTIONING.—Not later than December 31, 2011, the Corporation shall complete auctioning of all allowances allocated to the Corporation under section 3101.

(c) PROCEEDS FROM EARLY AUCTIONING.—The Corporation shall use to carry out programs established under subtitle D all proceeds of early auctioning conducted by the Corporation under this section.

SEC. 4302. ANNUAL AUCTIONS.

(a) IN GENERAL.—Not later than 30 days after the beginning of a calendar year identified in the table contained in section 3201, and annually thereafter through

calendar year 2050, the Corporation shall auction all of the allowances allocated to the Corporation for that year by the Administrator under section 3201.

(b) PROCEEDS FROM ANNUAL AUCTIONING.—

(1) IN GENERAL.—For each of calendar years 2012 through 2050, the Corporation shall use to carry out the programs established under subtitle D 55 percent of the proceeds from annual auctions that the Corporation conducts for the calendar year under this section.

(2) DEPOSIT OF FUNDS.—For each of calendar years 2012 through 2050, the Corporation shall, subject to subtitle H, deposit into the following Funds established by section 4101 the following percentages of the proceeds from auctions that the Corporation conducts for the calendar year under this section:

Energy Assistance Fund	20
Climate Change Worker Training Fund	5
Adaptation Fund	20

Subtitle D—Energy Technology Deployment

SEC. 4401. IN GENERAL.

For each calendar year, the Corporation shall use the amounts described in section 4301(c) and 4302(b) to

carry out the programs established under this subtitle, as follows:

(1) Not more than 45 percent of the funds shall be used to carry out the zero- or low-carbon energy technologies program under section 4402.

(2) Not more than 35 percent of the funds shall be used as follows:

(A) Not more than 28 percent shall be used to carry out the advanced coal and sequestration technologies program under section 4403.

(B) Not more than 7 percent shall be used to carry out the cellulosic biomass ethanol technology deployment programs under section 4404.

(3) Not more than 20 percent shall be used to carry out the advanced technology vehicles manufacturing incentive program under section 4405.

SEC. 4402. ZERO- OR LOW-CARBON ENERGY TECHNOLOGIES DEPLOYMENT.

(a) DEFINITIONS.—In this section:

(1) ENERGY SAVINGS.—The term ''energy savings'' means megawatt-hours of electricity or million British thermal units of natural gas saved by a product, in comparison to projected energy consump-

tion under an energy-efficiency standard applicable to the product.

(2) HIGH-EFFICIENCY CONSUMER PRODUCT.—The term ''high-efficiency consumer product'' means a covered product to which an energy conservation standard applies under section 325 of the Energy Policy and Conservation Act (42 U.S.C. 6295), if the energy efficiency of the product exceeds the energy efficiency required under the standard.

(3) ZERO- OR LOW-CARBON GENERATION.—The term ''zero- or low-carbon generation'' means generation of electricity by an electric generation unit that—

(A) emits no carbon dioxide into the atmosphere, or is fossil-fuel fired and emits into the atmosphere not more than 250 pounds of carbon dioxide per megawatt-hour (after adjustment for any carbon dioxide from the unit that is geologically sequestered); and

(B) was placed into commercial service after the date of enactment of this Act.

(b) FINANCIAL INCENTIVES PROGRAM.—During each fiscal year beginning on or after October 1, 2008, the Corporation shall competitively award financial incentives under this subsection in the technology categories of—

(1) the production of electricity from new zero- or low-carbon generation; and

(2) the manufacture of high-efficiency consumer products.

(c) REQUIREMENTS.—

(1) IN GENERAL.—The Corporation shall make awards under this section to producers of new zero- or low-carbon generation and to manufacturers of high-efficiency consumer products—

(A) in the case of producers of new zero- or low-carbon generation, based on the bid of each producer in terms of dollars per megawatt-hour of electricity generated; and

(B) in the case of manufacturers of high-efficiency consumer products, based on the bid of each manufacturer in terms of dollars per megawatt-hour or million British thermal units saved.

(2) ACCEPTANCE OF BIDS.—

(A) IN GENERAL.—In making awards under this subsection, the Corporation shall—

(i) solicit bids for reverse auction from appropriate producers and manufacturers, as determined by the Corporation; and

(ii) award financial incentives to the producers and manufacturers that submit the lowest bids that meet the requirements established by the Corporation.

(B) FACTORS FOR CONVERSION.—

(i) IN GENERAL.—For the purpose of assessing bids under subparagraph (A), the Corporation shall specify a factor for converting megawatt-hours of electricity and million British thermal units of natural gas to common units.

(ii) REQUIREMENT.—The conversion factor shall be based on the relative greenhouse gas emission benefits of electricity and natural gas conservation.

(d) FORMS OF AWARDS.—

(1) ZERO- AND LOW-CARBON GENERATORS.—An award for zero- or low-carbon generation under this subsection shall be in the form of a contract to provide a production payment for each year during the first 10 years of commercial service of the generation unit in an amount equal to the product obtained by multiplying—

(A) the amount bid by the producer of the zero- or low-carbon generation; and

(B) the megawatt-hours estimated to be generated by the zero- or low-carbon generation unit each year.

(2) HIGH-EFFICIENCY CONSUMER PRODUCTS.—An award for a high-efficiency consumer product under this subsection shall be in the form of a lump sum payment in an amount equal to the product obtained by multiplying—

(A) the amount bid by the manufacturer of the high-efficiency consumer product; and

(B) the energy savings during the projected useful life of the high-efficiency consumer product, not to exceed 10 years, as determined by the Corporation.

SEC. 4403. ADVANCED COAL AND SEQUESTRATION TECHNOLOGIES PROGRAM.

(a) ADVANCED COAL TECHNOLOGIES.—

(1) DEFINITION OF ADVANCED COAL GENERATION TECHNOLOGY.—In this subsection, the term ''advanced coal generation technology'' means advanced a coal-fueled power plant technology that—

(A) achieves a minimum efficiency of 30 percent with respect to higher heating value of the feedstock, after all parasitic requirements for carbon dioxide capture and compression to

~~2,000 pounds per square inch absolute have been subtracted;~~

~~(B) provides for the capture and geological sequestration of at least 85 percent of carbon dioxide produced at the facility, as determined by the Corporation; and~~

~~(C) has an emission rate of not more than 250 pounds of carbon dioxide per megawatt-hour of net electricity generation, after subtracting the carbon dioxide that is captured and sequestered.~~

~~(2) DEMONSTRATION PROJECTS.—The Corporation shall use not less than ¼ of the amounts made available to carry out this section for each fiscal year to support demonstration projects using advanced coal generation technology, including retrofit technology that could be deployed on existing coal generation facilities.~~

~~(3) DEPLOYMENT INCENTIVES.—~~

~~(A) IN GENERAL.—The Corporation shall use not less than ¼ of the amounts made available to carry out this subsection for each fiscal year to provide Federal financial incentives to facilitate the deployment of not more than 20~~

gigawatts of advanced coal generation technologies.

(B) ADMINISTRATION.—In providing incentives under this paragraph, the Corporation shall—

(i) provide appropriate incentives for regulated investor-owned utilities, municipal utilities, electric cooperatives, and independent power producers, as determined by the Secretary of Energy; and

(ii) ensure that a range of the domestic coal types is employed in the facilities that receive incentives under this paragraph.

(C) FUNDING REQUIREMENTS.—

(i) SEQUESTRATION ACTIVITIES.—The Corporation shall provide incentives only to projects that will capture and sequester at least 85 percent of the carbon dioxide produced by the project facilities.

(ii) STORAGE AGREEMENT REQUIRED.—The Corporation shall require a binding storage agreement for the carbon dioxide captured in a project under this subsection, in a geological storage project

permitted by the Administrator under regulations promulgated pursuant to section 1421(d) of the Safe Drinking Water Act (42 U.S.C. 300h(d)).

(iii) PROJECTS USING CERTAIN COALS.—In providing incentives under this paragraph, the Corporation shall set aside not less than 25 percent of any amounts made available to carry out this subsection for projects using lower-rank coals, such as subbituminous coal and lignite.

(4) DISTRIBUTION OF FUNDS.—A project that receives an award under this subsection may elect 1 of the following Federal financial incentives:

(A) A loan guarantee.

(B) A cost-sharing grant to cover the incremental cost of installing and operating carbon capture and storage equipment (for which utilization costs may be covered for the first 10 years of operation).

(C) Production payments of not more than 1.5 cents per kilowatt-hour of electric output during the first 10 years of commercial service of the project.

(5) LIMITATION.—A project may not receive an award under this subsection if the project receives an award under section 4402.

(b) SEQUESTRATION.—

(1) IN GENERAL.—The Corporation shall use not less than ½ of the amounts made available to carry out this subsection for each fiscal year for large-scale geological carbon storage demonstration projects that store carbon dioxide captured from facilities for the generation of electricity using coal gasification or other advanced coal combustion processes, including facilities that receive assistance under subsection (a).

(2) PROJECT CAPITAL AND OPERATING COSTS.—The Corporation shall provide assistance under this paragraph to reimburse the project owner for a percentage of the incremental project capital and operating costs of the project that are attributable to carbon capture and sequestration, as the Secretary determines to be appropriate.

SEC. 4404. FUEL FROM CELLULOSIC BIOMASS.

(a) IN GENERAL.—The Corporation shall provide deployment incentives under this section to encourage a variety of projects to produce transportation fuels from cel-

lulosic biomass, relying on different feedstocks in different regions of the United States.

(b) PROJECT ELIGIBILITY.—Incentives under this section shall be provided on a competitive basis to projects that produce fuels that—

(1) meet United States fuel and emission specifications;

(2) help diversify domestic transportation energy supplies; and

(3) improve or maintain air, water, soil, and habitat quality, and protect scarce water supplies.

(c) INCENTIVES.—Incentives under this section may consist of—

(1) loan guarantees for the construction of production facilities and supporting infrastructure; or

(2) production payments through a reverse auction in accordance with subsection (d).

(d) REVERSE AUCTION.—

(1) IN GENERAL.—In providing incentives under this section, the Corporation shall—

(A) prescribe rules under which producers of fuel from cellulosic biomass may bid for production payments under subsection (c)(2); and

(B) solicit bids from producers of different classes of transportation fuel, as the Corporation determines to be appropriate.

(2) REQUIREMENT.—The rules under section 4402 shall require that incentives shall be provided to the producers that submit the lowest bid (in terms of cents per gallon gasoline equivalent) for each class of transportation fuel from which the Corporation solicits a bid.

SEC. 4405. ADVANCED TECHNOLOGY VEHICLES MANUFACTURING INCENTIVE PROGRAM.

(a) DEFINITIONS.—In this section:

(1) ADVANCED TECHNOLOGY VEHICLE.—The term ''advanced technology vehicle'' means a hybrid or advanced diesel light duty motor vehicle that meets—

(A) the Tier II Bin 5 emission standard established in rules prescribed by the Administrator under section 202(i) of the Clean Air Act (42 U.S.C. 7521(i)), or a lower-numbered Bin emission standard;

(B) any new emission standard for fine particulate matter prescribed by the Administrator under that Act; and

(C) at least 125 percent of the average base year combined fuel economy, calculated on an energy-equivalent basis, for vehicles of a substantially similar footprint.

(2) COMBINED FUEL ECONOMY.—The term ''combined fuel economy'' means—

(A) the combined city-highway miles per gallon values, as reported in accordance with section 32908 of title 49, United States Code; and

(B) in the case of an electric drive vehicle with the ability to recharge from an off-board source, the reported mileage, as determined in a manner consistent with the Society of Automotive Engineers recommended practice for that configuration, or a similar practice recommended by the Secretary of Energy, using a petroleum equivalence factor for the off-board electricity (as defined by the Secretary of Energy).

(3) ENGINEERING INTEGRATION COSTS.—The term ''engineering integration costs'' includes the cost of engineering tasks relating to—

(A) incorporating qualifying components into the design of advanced technology vehicles; and

(B) designing new tooling and equipment for production facilities that produce qualifying components or advanced technology vehicles.

(4) QUALIFYING COMPONENT.—The term ''qualifying component'' means a component that the Secretary of Energy determines to be—

(A) specially designed for advanced technology vehicles; and

(B) installed for the purpose of meeting the performance requirements of advanced technology vehicles as specified in subparagraphs (A), (B), and (C) of paragraph (1).

(b) MANUFACTURER FACILITY CONVERSION AWARDS.—The Corporation shall provide facility conversion funding awards under this subsection to automobile manufacturers and component suppliers to pay up to 30 percent of the cost of—

(1) recequipping or expanding an existing manufacturing facility to produce—

(A) qualifying advanced technology vehicles; or

(B) qualifying components; and

(2) engineering integration of qualifying vehicles and qualifying components.

(c) PERIOD OF AVAILABILITY.—An award under subsection (b) shall apply to—

(1) facilities and equipment placed in service after the date of enactment of this Act and before January 1, 2016; and

(2) engineering integration costs incurred after the date of enactment of this Act.

Subtitle E—Energy Consumers

SEC. 4501. PROPORTIONS OF FUNDING AVAILABILITY.

All funds deposited into the Energy Assistance Fund established by section 4101 shall be made available, without further appropriation or fiscal year limitation, to the following programs in the following proportions:

(1) 50 percent of the funds to the low-income home energy assistance program established under the Low Income Home Energy Assistance Act of 1981 (42 U.S.C. 8621 et seq.).

(2) 25 percent of the funds to the Weatherization Assistance Program for Low-Income Persons established under part A of title IV of the Energy Conservation and Production Act (42 U.S.C. 6861 et seq.).

(3) 25 percent of the funds to the rural energy assistance program described in section 4502.

SEC. 4502. RURAL ENERGY ASSISTANCE PROGRAM.

The Secretary of Energy shall carry out a program to use the funds made available under section 4501(3) to provide financial assistance to promote the availability of reasonably-priced electricity in off-grid rural regions in which electricity prices exceed 150 percent of the national average, as determined by the Secretary of Energy.

Subtitle F—Climate Change Worker Training Program

SEC. 4601. FUNDING.

All funds deposited into the Climate Change Worker Training Fund established by section 4101 shall be made available, without further appropriation or fiscal year limitation, to carry out the programs established under this subtitle.

SEC. 4602. PURPOSES.

The purposes of this subtitle are—

(1) to provide quality job training to any workers displaced by this Act;

(2) to provide assistance in the form of temporary wages and health care benefits to workers in training;

(3) to transition workers into jobs created as a result of this Act;

(4) to provide skilled workers to enterprises developing and marketing advanced technologies and practices that reduce greenhouse gas emissions of the United States; and

(5) to provide funding for State worker training programs.

SEC. 4603. ESTABLISHMENT.

Not later than 180 days after the date of enactment of this Act, the Secretary of Labor, in consultation with the Administrator and the Secretary of Energy, shall establish a climate change worker training program that achieves the purposes of this subtitle.

SEC. 4604. GRANTS TO STATES.

Not later than 1 year after the date of enactment of this Act, the Secretary of Labor shall establish a program to award grants to States, for use in funding State worker training programs, based on the impact of this Act on the workforce of each State, as determined by the Secretary of Labor.

SEC. 4605. TYPES OF ASSISTANCE.

The types of assistance that workers may receive under the climate change worker training program shall include, as determined by the Secretary of Labor—

(1) income replacement;

(2) health care credits;

(3) travel costs incidental to participation in a training program under this subtitle; and

(4) a portion of the cost of relocating to a new job.

Subtitle G—Adaptation Program for Natural Resources in United States and Territories

SEC. 4701. DEFINITIONS.

In this subtitle:

(1) ECOLOGICAL PROCESS.—

(A) IN GENERAL.—The term ''ecological process'' means a biological, chemical, or physical interaction between the biotic and abiotic components of an ecosystem.

(B) INCLUSIONS.—The term ''ecological process'' includes—

(i) nutrient cycling;

(ii) pollination;

(iii) predator-prey relationships;

(iv) soil formation;

(v) gene flow;

(vi) larval dispersal and settlement;

(vii) hydrological cycling;

(viii) decomposition; and

(ix) disturbance regimes, such as fire and flooding.

(2) FISH AND WILDLIFE.—The term ''fish and wildlife'' means—

(A) any species of wild fauna, including fish and other aquatic species; and

(B) any fauna in a captive breeding program the object of which is to reintroduce individuals of a depleted indigenous species into previously occupied range.

(3) HABITAT.—The term ''habitat'' means the physical, chemical, and biological properties that are used by wildlife (including aquatic and terrestrial plant communities) for growth, reproduction, and survival, food, water, cover, and space, on a tract of land, in a body of water, or in an area or region.

(4) INDIAN TRIBE.—The term ''Indian tribe'' has the meaning given the term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b).

(5) PLANT.—The term ''plant'' means any species of wild flora.

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

(7) STATE.—The term ''State'' means—

(A) a State;

(B) the District of Columbia;

(C) the Commonwealth of Puerto Rico; and

(D) any other territory or possession of the United States.

SEC. 4702. ADAPTATION FUND.

(a) IN GENERAL.—All amounts deposited in the Adaptation Fund established by section 4101 shall be made available, without further appropriation or fiscal year limitation, to carry out activities (including research and education activities) that assist fish and wildlife, fish and wildlife habitat, plants, and associated ecological processes in adapting to and surviving the impacts of climate change (referred to in this subtitle as ''adaptation activities'') pursuant to this subtitle.

(b) DEPARTMENT OF THE INTERIOR.—Of the amounts made available to carry out this subtitle—

(1) 40 percent shall be allocated to the Secretary, and subsequently made available to States through the Wildlife Conservation and Restoration Account established under section 3(a)(2) of the Pittman-Robertson Wildlife Restoration Act (16 U.S.C. 669b(a)(2)), to carry out adaptation activi-

ties in accordance with comprehensive wildlife conservation strategies and, where appropriate, other fish and wildlife conservation strategies, including—

(A) plans under the National Fish Habitat Initiative of the National Fish and Wildlife Foundation;

(B) North American Wetlands Conservation Act (16 U.S.C. 4401 et seq.);

(C) the Federal, State, and local partnership known as ''Partners in Flight'';

(D) coastal zone management plans;

(E) regional fishery management plans; and

(F) recovery plans for threatened and endangered species under section 6 of the Endangered Species Act of 1973 (16 U.S.C. 1535);

(2) 20 percent shall be allocated to the Secretary for use in funding adaptation activities carried out—

(A) under endangered species, migratory bird, and other fish and wildlife programs administered by the United States Fish and Wildlife Service;

(B) on wildlife refuges and other public land under the jurisdiction of the United States

Fish and Wildlife Service, Bureau of Land Management, or National Park Service; or

(C) within Federal water managed by the Bureau of Reclamation; and

(3) 5 percent shall be allocated to the Secretary for adaptation activities carried out under cooperative grant programs, including—

(A) the Tribal Wildlife Grants program of the United States Fish and Wildlife Service;

(B) the cooperative endangered species conservation fund authorized under section 6(i) of the Endangered Species Act of 1973 (16 U.S.C. 1535(i));

(C) programs under the North American Wetlands Conservation Act (16 U.S.C. 4401 et seq.);

(D) the Land and Water Conservation Fund established under section 2 of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l–5);

(E) the multinational species conservation fund established under the heading "MULTINATIONAL SPECIES CONSERVATION FUND" of title I of the Department of the Interior and

Related Agencies Appropriations Act, 1999 (16 U.S.C. 4246);

(F) the Neotropical Migratory Bird Conservation Fund established by section 9(a) of the Neotropical Migratory Bird Conservation Act (16 U.S.C. 6108(a));

(G) the Coastal Program of the United States Fish and Wildlife Service; and

(H) the National Fish Habitat Action Plan.

(c) FOREST SERVICE.—Of the amounts made available each fiscal year to carry out this subtitle, 5 percent shall be allocated to the Secretary of Agriculture for use in funding adaptation activities carried out on National Forests and National Grasslands under the jurisdiction of the Forest Service.

(d) ENVIRONMENTAL PROTECTION AGENCY.—Of the amounts made available to carry out this subtitle, 12.5 percent shall be allocated to the Administrator for use in restoring and protecting—

(1) large-scale freshwater aquatic ecosystems, such as the Everglades, the Great Lakes, Flathead Lake, the Missouri River, and the Yellowstone River; and

(2) large-scale estuarine ecosystems, such as Chesapeake Bay and Long Island Sound.

(c) CORPS OF ENGINEERS.—Of the amounts made available to carry out this subtitle, 12.5 percent shall be allocated to the Corps of Engineers for use in restoring—

(1) large-scale freshwater aquatic ecosystems, such as the ecosystems described in subsection (d)(1); and

(2) large-scale estuarine ecosystems, such as Chesapeake Bay, California Bay Delta, Coastal Louisiana, Long Island Sound, and Puget Sound.

(f) DEPARTMENT OF COMMERCE.—Of the amounts made available to carry out this subtitle, 5 percent shall be allocated to the Secretary of Commerce for use in funding adaptation activities carried out in protecting and restoring coastal, estuarine, coral, and marine species and habitats, including adaptation activities in cooperative grant programs such as—

(1) the Coastal and Estuarine Land Conservation Program and the Community-Based Restoration Program of the National Oceanic and Atmospheric Administration; and

(2) programs under the Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.).

(g) COST SHARING.—Notwithstanding any other provision of law, a State or Indian tribe that receives a grant under this section shall be required to provide 10 percent of the costs of each activity carried out using funds from the grant.

(h) COMPREHENSIVE ADAPTATION STRATEGY.—

(1) IN GENERAL.—Effective beginning on the date that is 18 months after the date of enactment of this Act, funds made available to the Federal agencies under this subtitle shall be used only for activities that are consistent with a comprehensive adaptation strategy that—

(A) is jointly approved by the head of each of the Federal agencies, after—

(i) consultation with States and Indian tribes; and

(ii) solicitation of public and independent scientific input; and

(B) describes the manner in which the Federal Government will assist fish and wildlife, fish and wildlife habitat, plants, and associated ecological processes in adapting to and surviving the impacts of climate change.

(2) UPDATING.—Each adaptation strategy described in paragraph (1) shall be updated at least every 5 years.

Subtitle H—Climate Change and National Security Program

SEC. 4801. INTERAGENCY CLIMATE CHANGE AND NATIONAL SECURITY COUNCIL.

(a) ESTABLISHMENT.—There is established a Climate Change and National Security Council (referred to in this subtitle as the ''Council'').

(b) MEMBERSHIP.—The Council shall include—

(1) the Secretary of State, who shall serve as Chairperson of the Council;

(2) the Administrator;

(3) the Secretary of Defense; and

(4) the Director of National Intelligence.

(c) DUTIES.—The Council shall—

(1) submit annual reports to the President, the Committees on Environment and Public Works and Foreign Relations of the Senate, and the Committees on Energy and Commerce and Foreign Relations of the House of Representatives that describe—

(A) the extent to which other countries are committing to reducing greenhouse gas emissions through mandatory programs;

(B) the extent to which global climate change, through the potential negative impacts of climate change on sensitive populations and natural resources in different regions of the world, may threaten, cause, or exacerbate political instability or international conflict in those regions; and

(C) the ramifications of any potentially destabilizing impacts climate change may have on the national security of the United States, including—

(i) the creation of refugees; and

(ii) international or intranational conflicts over water, food, land, or other resources; and

(2) include in each annual report submitted under paragraph (1) recommendations on whether it is necessary to enhance the national security of the United States by funding programs with amounts made available under section 4802 that the Council determines would assist in avoiding the politically

destabilizing impacts of climate change in volatile regions of the world.

SEC. 4802. FUNDING.

Upon a determination for any calendar year by the President, based on any report and recommendations submitted by the Council under section 4801, that funds should be made available to carry out the recommendations—

(1) notwithstanding section 4302(b)(2), the Corporation shall deposit 5 percent of the proceeds from auctions that the Corporation conducts for that calendar year under section 4302(a) into the Climate Change and National Security Fund established by section 4101; and

(2) the President shall use those funds to implement the recommendations.

Subtitle I—Audits

SEC. 4901. REVIEW AND AUDIT BY COMPTROLLER GENERAL OF THE UNITED STATES.

Not later than January 1, 2014, and at least every 3 years thereafter, the Comptroller General of the United States shall review and audit the expenditures under this title to determine the efficacy of the programs, expenditures, and projects funded under this title.

TITLE V—ENERGY EFFICIENCY

Subtitle A—Appliance Efficiency

SEC. 5101. RESIDENTIAL BOILERS.

Section 325(f) of the Energy Policy and Conservation Act (42 U.S.C. 6925(f)) is amended—

(1) in the subsection heading, by inserting ''AND BOILERS'' after ''FURNACES'';

(2) in paragraph (1), by striking ''except that'' and all that follows through subparagraph (A) and inserting ''except that'';

(3) in subparagraph (B)—

(A) by striking ''(B) the Secretary'' and inserting ''the Secretary''; and

(B) by redesignating clauses (i) through (iii) as subparagraphs (A) through (C), respectively, and indenting appropriately;

(4) by redesignating paragraph (3) as paragraph (4); and

(5) by inserting after paragraph (2) the following:

''(3) BOILERS.—

''(A) IN GENERAL.—Subject to subparagraphs (B) and (C), boilers manufactured on or after September 1, 2012, shall meet the following requirements:

Boiler Type Requirements	Minimum Annual Fuel Utilization Efficiency	Design
Gas hot water	82 percent	No constant burning pilot, automatic means for adjusting water temperature
Gas steam	80 percent	No constant burning pilot
Oil hot water	84 percent	Automatic means for adjusting temperature
Oil steam	82 percent	None
Electric hot water	None	Automatic means for adjusting temperature
Electric steam	None	None

"(B) AUTOMATIC MEANS FOR ADJUSTING WATER TEMPERATURE.—

"(i) IN GENERAL.—The manufacturer shall equip each gas, oil, and electric hot water boiler (other than a boiler equipped with tankless domestic water heating coils) with an automatic means for adjusting the temperature of the water supplied by the boiler to ensure that an incremental change in inferred heat load produces a corresponding incremental change in the temperature of water supplied.

"(ii) CERTAIN BOILERS.—For a boiler that fires at 1 input rate, the requirements of this subparagraph may be satisfied by providing an automatic means that allows the burner or heating element to fire only when the means has determined that the

inferred heat load cannot be met by the residual heat of the water in the system.

''(iii) NO INFERRED HEAT LOAD.—When there is no inferred heat load with respect to a hot water boiler, the automatic means described in clauses (i) and (ii) shall limit the temperature of the water in the boiler to not more than 140 degrees Fahrenheit.

''(iv) OPERATION.—A boiler described in clause (i) or (ii) shall be operable only when the automatic means described in clauses (i), (ii), and (iii) is installed.

''(C) EXCEPTION.—A boiler that is manufactured to operate without any need for electricity, any electric connection, any electric gauges, electric pumps, electric wires, or electric devices of any sort, shall not be required to meet the requirements of this subsection.''.

SEC. 5102. REGIONAL VARIATIONS IN HEATING OR COOLING STANDARDS.

(a) IN GENERAL.—Section 327 of the Energy Policy and Conservation Act (42 U.S.C. 6297) is amended—

(1) by redesignating subsections (e), (f), and (g) as subsections (f), (g), and (h), respectively; and

(2) by inserting after subsection (d) the following:

''(e) REGIONAL STANDARDS FOR SPACE HEATING AND AIR CONDITIONING PRODUCTS.—

''(1) STANDARDS.—

''(A) IN GENERAL.—The Secretary may establish regional standards for space heating and air conditioning products, other than window-unit air-conditioners and portable space heaters.

''(B) NATIONAL MINIMUM AND REGIONAL STANDARDS.—For each space heating and air conditioning product, the Secretary may establish—

''(i) a national minimum standard; and

''(ii) 2 more stringent regional standards for regions determined to have significantly differing climatic conditions.

''(C) MAXIMUM SAVINGS.—Any standards established for a region under subparagraph (B)(ii) shall achieve the maximum level of energy savings that are technically feasible and economically justified within that region.

''(D) ECONOMIC JUSTIFIABILITY STUDY.—

‘‘(i) IN GENERAL.—As a preliminary step in determining the economic justifiability of establishing a regional standard under subparagraph (B)(ii), the Secretary shall conduct a study involving stakeholders, including—

‘‘(I) a representative from the National Institute of Standards and Technology;

‘‘(II) representatives of nongovernmental advocacy organizations;

‘‘(III) representatives of product manufacturers, distributors, and installers;

‘‘(IV) representatives of the gas and electric utility industries; and

‘‘(V) such other individuals as the Secretary may designate.

‘‘(ii) REQUIREMENTS.—The study under this subparagraph—

‘‘(I) shall determine the potential benefits and consequences of prescribing regional standards for heating and cooling products; and

"(II) may, if favorable to the standards, constitute the evidence of economic justifiability required under this Act.

"(E) REGIONAL BOUNDARIES.—Regional boundaries used in establishing regional standards under subparagraph (B)(ii) shall—

"(i) conform to State borders; and

"(ii) include only contiguous States (other than Alaska and Hawaii), except that on the request of a State, the Secretary may divide the State to include a part of the State in each of 2 regions.

"(2) NONCOMPLYING PRODUCTS.—If the Secretary establishes standards for a region, it shall be unlawful under section 332 to offer for sale at retail, sell at retail, or install within the region products that do not comply with the applicable standards.

"(3) DISTRIBUTION IN COMMERCE.—

"(A) IN GENERAL.—Except as provided in subparagraph (B), no product manufactured in a manner that complies with a regional standard established under paragraph (1) shall be distributed in commerce without a prominent label affixed to the product that includes—

‘‘(i) at the top of the label, in print of not less than 14-point type, the following statement: ‘It is a violation of Federal law for this product to be installed in any State outside the region shaded on the map printed on this label.’;

‘‘(ii) below the notice described in clause (i), an image of a map of the United States with clearly defined State boundaries and names, and with all States in which the product meets or exceeds the standard established pursuant to paragraph (1) shaded in a color or a manner as to be easily visible without obscuring the State boundaries and names; and

‘‘(iii) below the image of the map required under clause (ii), the following statement: ‘It is a violation of Federal law for this label to be removed, except by the owner and legal resident of any single-family home in which this product is installed.’.

‘‘(B) ENERGY-EFFICIENCY RATING.—A product manufactured that meets or exceeds all regional standards established under this para-

graph shall bear a prominent label affixed to the product that includes at the top of the label, in print of not less than 14-point type, the following statement: 'This product has achieved an energy-efficiency rating under Federal law allowing its installation in any State.'.

''(4) RECORDKEEPING.—A manufacturer of space heating or air conditioning equipment subject to regional standards established under this subsection shall—

''(A) obtain and retain records on the intended installation locations of the equipment sold; and

''(B) make such records available to the Secretary on request.''.

(b) CONFORMING AMENDMENTS.—Section 327 of the Energy Policy and Conservation Act (42 U.S.C. 6297) is amended—

(1) in subsection (b)—

(A) in paragraph (2), by striking ''subsection (c)'' and inserting ''subsection (f)''; and

(B) in paragraph (3)—

(i) by striking ''subsection (f)(1)'' and inserting ''subsection (g)(1)''; and

(ii) by striking ''subsection (f)(2)'' and inserting ''subsection (g)(2)''; and

(2) in subsection (e)(3), by striking ''subsection (f)(3)'' and inserting ''subsection (g)(3)''.

Subtitle B—Building Efficiency

SEC. 5201. UPDATING STATE BUILDING ENERGY EFFICIENCY CODES.

Section 304 of the Energy Conservation and Production Act (42 U.S.C. 6833) is amended to read as follows:

''SEC. 304. UPDATING STATE BUILDING ENERGY EFFICIENCY CODES.

''(a) UPDATES.—

''(1) IN GENERAL.—The Secretary shall support updating the national model building energy codes and standards not later than 3 years after the date of enactment of the America's Climate Security Act of 2007, and not less frequently every 3 years thereafter, to achieve overall energy savings, as compared to the IECC (2006) for residential buildings and ASHRAE Standard 90.1 (2004) for commercial buildings, of at least—

''(A) 30 percent by 2010;

''(B) 50 percent by 2020; and

''(C) goals to be established by the Secretary in intermediate and subsequent years, at

the maximum level of energy efficiency that is technologically feasible and lifecycle cost effective.

''(2) REVISIONS TO IECC AND ASHRAE.—

''(A) IN GENERAL.—If the IECC or ASHRAE Standard 90.1 regarding building energy use is revised, not later than 180 days after the date of the revision, the Secretary shall determine whether the revision will—

''(i) improve energy efficiency in buildings; and

''(ii) meet the energy savings goals described in paragraph (1).

''(B) MODIFICATIONS.—

''(i) IN GENERAL.—If the Secretary makes a determination under subparagraph (A)(ii) that a code or standard does not meet the energy savings goals established under paragraph (1) or if a national model code or standard is not updated for more than 3 years, not later than 1 year after the determination or the expiration of the 3-year period, the Secretary shall propose a modified code or standard that meets the energy savings goals.

‘‘(ii) REQUIREMENTS.—

‘‘(I) ENERGY SAVINGS.—A modification to a code or standard under clause (i) shall—

‘‘(aa) achieve the maximum level of energy savings that is technically feasible and economically justified; and

‘‘(bb) incorporate available appliances, technologies, and construction practices.

‘‘(II) TREATMENT AS BASELINE.—A modification to a code or standard under clause (i) shall serve as the baseline for the next applicable determination of the Secretary under subparagraph (A)(i).

‘‘(C) PUBLIC PARTICIPATION.—The Secretary shall—

‘‘(i) publish in the Federal Register a notice relating to each goal, determination, and modification under this paragraph; and

~~"(ii) provide an opportunity for public comment regarding the goals, determinations, and modifications.~~

~~"(b) STATE CERTIFICATION OF BUILDING ENERGY CODE UPDATES.—~~

~~"(1) GENERAL CERTIFICATION.—~~

~~"(A) IN GENERAL.—Not later than 2 years after the date of enactment of the America's Climate Security Act of 2007, each State shall certify to the Secretary that the State has reviewed and updated the provisions of the residential and commercial building codes of the State regarding energy efficiency.~~

~~"(B) ENERGY SAVINGS.—A certification under subparagraph (A) shall include a demonstration that the applicable provisions of the State code meet or exceed, as applicable—~~

~~"(i)(I) the IECC (2006) for residential buildings; or~~

~~"(II) the ASHRAE Standard 90.1 (2004) for commercial buildings; or~~

~~"(ii) the quantity of energy savings represented by the provisions referred to in clause (i).~~

~~"(2) REVISION OF CODES AND STANDARDS.—~~

‘‘(A) IN GENERAL.—If the Secretary makes an affirmative determination under subsection (a)(2)(A)(i) or proposes a modified code or standard under subsection (a)(2)(B), not later than 2 years after the determination or proposal, each State shall certify that the State has reviewed and updated the provisions of the residential and commercial building codes of the State regarding energy efficiency.

‘‘(B) ENERGY SAVINGS.—A certification under subparagraph (A) shall include a demonstration that the applicable provisions of the State code meet or exceed—

‘‘(i) the modified code or standard; or

‘‘(ii) the quantity of energy savings represented by the modified code or standard.

‘‘(C) FAILURE TO DETERMINE.—If the Secretary fails to make a determination under subsection (a)(2)(A)(i) by the date specified in subsection (a)(2), or if the Secretary makes a negative determination, not later than 2 years after the specified date or the date of the determination, each State shall certify that the State has—

"(i) reviewed the revised code or standard; and

"(ii) updated the provisions of the residential and commercial building codes of the State as necessary to meet or exceed, as applicable—

"(I) any provisions of a national code or standard determined to improve energy efficiency in buildings; or

"(II) energy savings achieved by those provisions through other means.

"(c) ACHIEVEMENT OF COMPLIANCE BY STATES.—

"(1) IN GENERAL.—Not later than 3 years after the date on which a State makes a certification under subsection (b), the State shall certify to the Secretary that the State has achieved compliance with the national building energy code that is the subject of the certification.

"(2) RATE OF COMPLIANCE.—The certification shall include documentation of the rate of compliance based on independent inspections of a random sample of the new and renovated buildings covered by the State code during the preceding calendar year.

‘‘(3) COMPLIANCE.—A State shall be considered to achieve compliance for purposes of paragraph (1) if—

‘‘(A) at least 90 percent of new and renovated buildings covered by the State code during the preceding calendar year substantially meet all the requirements of the code; or

‘‘(B) the estimated excess energy use of new and renovated buildings that did not meet the requirements of the State code during the preceding calendar year, as compared to a baseline of comparable buildings that meet the requirements of the code, is not more than 10 percent of the estimated energy use of all new and renovated buildings covered by the State code during the preceding calendar year.

‘‘(d) FAILURE TO CERTIFY.—

‘‘(1) EXTENSION OF DEADLINES.—The Secretary shall extend a deadline for certification by a State under subsection (b) or (c) for not more than 1 additional year, if the State demonstrates to the satisfaction of the Secretary that the State has made—

‘‘(A) a good faith effort to comply with the certification requirement; and

‘‘(B) significant progress with respect to the compliance.

‘‘(2) NONCOMPLIANCE BY STATE.—

‘‘(A) IN GENERAL.—A State that fails to submit a certification required under subsection (b) or (c), and to which an extension is not provided under paragraph (1), shall be considered to be out of compliance with this section.

‘‘(B) EFFECT ON LOCAL GOVERNMENTS.—A local government of a State that is out of compliance with this section may be considered to be in compliance with this section if the local government meets each applicable certification requirement of this section.

‘‘(c) TECHNICAL ASSISTANCE.—

‘‘(1) IN GENERAL.—The Secretary shall provide technical assistance (including building energy analysis and design tools, building demonstrations, and design assistance and training) to ensure that national model building energy codes and standards meet the goals described in subsection (a)(1).

‘‘(2) ASSISTANCE TO STATES.—The Secretary shall provide technical assistance to States—

‘‘(A) to implement this section, including procedures for States to demonstrate that the

codes of the States achieve equivalent or greater energy savings than the national model codes and standards;

''(B) to improve and implement State residential and commercial building energy efficiency codes; and

''(C) to otherwise promote the design and construction of energy-efficient buildings.

''(f) INCENTIVE FUNDING.—

''(1) IN GENERAL.—The Secretary shall provide incentive funding to States—

''(A) to implement this section; and

''(B) to improve and implement State residential and commercial building energy efficiency codes, including increasing and verifying compliance with the codes.

''(2) AMOUNT.—In determining whether, and in what amount, to provide incentive funding under this subsection, the Secretary shall take into consideration actions proposed by the State—

''(A) to implement this section;

''(B) to implement and improve residential and commercial building energy efficiency codes; and

‘‘(C) to promote building energy efficiency through use of the codes.

‘‘(3) ADDITIONAL FUNDING.—The Secretary shall provide additional funding under this subsection for implementation of a plan to demonstrate a rate of compliance with applicable residential and commercial building energy efficiency codes at a rate of not less than 90 percent, based on energy performance—

‘‘(A) to a State that has adopted and is implementing, on a statewide basis—

‘‘(i) a residential building energy efficiency code that meets or exceeds the requirements of the IECC (2006) (or a successor code that is the subject of an affirmative determination by the Secretary under subsection (a)(2)(A)(i)); and

‘‘(ii) a commercial building energy efficiency code that meets or exceeds the requirements of the ASHRAE Standard 90.1 (2004) (or a successor standard that is the subject of an affirmative determination by the Secretary under subsection (a)(2)(A)(i)); or

''(B) in the case of a State in which no statewide energy code exists for residential buildings or commercial buildings, or in which the State code fails to comply with subparagraph (A), to a local government that has adopted and is implementing residential and commercial building energy efficiency codes, as described in subparagraph (A).

''(4) TRAINING.—Of the amounts made available to carry out this subsection, the Secretary may use not more than $500,000 for each State to train State and local officials to implement State or local energy codes in accordance with a plan described in paragraph (3).''.

SEC. 5202. CONFORMING AMENDMENT.

Section 303 of the Energy Conservation and Production Act (42 U.S.C. 6832) is amended by adding at the end the following new paragraph:

''(17) IECC.—The term 'IECC' means the International Energy Conservation Code.''.

TITLE VI—GLOBAL EFFORT TO REDUCE GREENHOUSE GAS EMISSIONS

SEC. 6001. DEFINITIONS.

In this title:

(1) BASELINE EMISSION LEVEL.—The term ''baseline emission level'' means, as determined by the Administrator, the total average annual greenhouse gas emissions attributed to a category of covered goods of a foreign country during the period beginning on January 1, 2012, and ending on December 31, 2014, based on—

(A) relevant data available for that period; and

(B) to the extent necessary with respect to a specific category of covered goods, economic and engineering models and best available information on technology performance levels for the manufacture of that category of covered goods.

(2) COMPARABLE ACTION.—The term ''comparable action'' means any greenhouse gas regulatory programs, requirements, and other measures adopted by a foreign country that, in combination, are comparable in effect to actions carried out by the United States to limit greenhouse gas emissions pursuant to this Act, as determined by the President, taking into consideration the level of economic development of the foreign country.

(3) COMPLIANCE YEAR.—The term ''compliance year'' means each calendar year for which the re-

quirements of this title apply to a category of covered goods of a covered foreign country that is imported into the United States.

(4) COVERED FOREIGN COUNTRY.—The term ''covered foreign country'' means a foreign country that is included on the covered list prepared under section 6006(b)(3).

(5) COVERED GOOD.—The term ''covered good'' means a good that (as identified by the Administrator by rule)—

(A) is a primary product;

(B) generates, in the course of the manufacture of the good, a substantial quantity of direct greenhouse gas emissions and indirect greenhouse gas emissions; and

(C) is closely related to a good the cost of production of which in the United States is affected by a requirement of this Act.

(6) FOREIGN COUNTRY.—The term ''foreign country'' means a member of, or observer government to, the World Trade Organization (WTO), other than the United States.

(7) INDIRECT GREENHOUSE GAS EMISSIONS.—The term ''indirect greenhouse gas emissions'' means any emissions of a greenhouse gas resulting

from the generation of electricity that is consumed during the manufacture of a good.

(8) INTERNATIONAL AGREEMENT.—The term ''international agreement'' means any international agreement to which the United States is a party, including the Marrakesh agreement establishing the World Trade Organization, done at Marrakesh on April 15, 1994.

(9) INTERNATIONAL RESERVE ALLOWANCE.—The term ''international reserve allowance'' means an allowance (denominated in units of metric tons of carbon dioxide equivalent) that is—

(A) purchased from a special reserve of allowances pursuant to section 6006(a)(2); and

(B) used for purposes of meeting the requirements of section 6006.

(10) PRIMARY PRODUCT.—The term ''primary product'' means—

(A) iron, steel, aluminum, cement, bulk glass, or paper; or

(B) any other manufactured product that—

(i) is sold in bulk for purposes of further manufacture; and

(ii) generates, in the course of the manufacture of the product, direct greenhouse gas emissions and indirect greenhouse gas emissions that are comparable (on an emissions-per-dollar basis) to emissions generated in the manufacture of products by covered facilities in the industrial sector.

SEC. 6002. PURPOSES.

The purposes of this title are—

(1) to promote a strong global effort to significantly reduce greenhouse gas emissions;

(2) to ensure, to the maximum extent practicable, that greenhouse gas emissions occurring outside the United States do not undermine the objectives of the United States in addressing global climate change; and

(3) to encourage effective international action to achieve those objectives through—

(A) agreements negotiated between the United States and foreign countries; and

(B) measures carried out by the United States that comply with applicable international agreements.

SEC. 6003. INTERNATIONAL NEGOTIATIONS.

(a) FINDING.—Congress finds that the purposes described in section 6002 can be most effectively addressed and achieved through agreements negotiated between the United States and foreign countries.

(b) NEGOTIATING OBJECTIVE.—

(1) STATEMENT OF POLICY.—It is the policy of the United States to work proactively under the United Nations Framework Convention on Climate Change and, in other appropriate forums, to establish binding agreements committing all major greenhouse gas-emitting nations to contribute equitably to the reduction of global greenhouse gas emissions.

(2) INTENT OF CONGRESS REGARDING OBJECTIVE.—To the extent that the agreements described in subsection (a) involve measures that will affect international trade in any good or service, it is the intent of Congress that the negotiating objective of the United States shall be to focus multilateral and bilateral international agreements on the reduction of greenhouse gas emissions to advance achievement of the purposes described in section 6002.

SEC. 6004. INTERAGENCY REVIEW.

(a) INTERAGENCY GROUP.—

(1) ESTABLISHMENT.—The President shall establish an interagency group to carry out this section.

(2) CHAIRPERSON.—The chairperson of the interagency group established under paragraph (1) shall be the Secretary of State.

(3) REQUIREMENT.—The Administrator shall be a member of the interagency group.

(b) DETERMINATIONS.—

(1) IN GENERAL.—Subject to paragraph (2), the interagency group established under subsection (a)(1) shall determine whether, and the extent to which, each foreign country has taken comparable action to limit the greenhouse gas emissions of the foreign country.

(2) EXEMPTION.—The interagency group may exempt from a determination under paragraph (1) any foreign country on the excluded list under section 6006(b)(2).

(c) REPORT TO PRESIDENT.—Not later than January 1, 2018, and annually thereafter, the interagency group shall submit to the President a report describing the determinations of the interagency group under subsection (b).

SEC. 6005. PRESIDENTIAL DETERMINATIONS.

(a) IN GENERAL.—Not later than January 1, 2019, and annually thereafter, the President shall determine whether each foreign country that is subject to interagency review under section 6004(b) has taken comparable action to limit the greenhouse gas emissions of the foreign country, taking into consideration—

(1) the baseline emission levels of the foreign country; and

(2) applicable reports submitted under section 6004(c).

(b) REPORTS.—The President shall—

(1) submit to Congress an annual report describing the determinations of the President under subsection (a) for the most recent calendar year; and

(2) publish the determinations in the Federal Register.

SEC. 6006. INTERNATIONAL RESERVE ALLOWANCE PROGRAM.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—The Administrator shall establish a program under which the Administrator, during the 1-year period beginning on January 1, 2019, and annually thereafter, shall offer for sale to United States importers international reserve allowances in accordance with this subsection.

(2) SOURCE.—International reserve allowances under paragraph (1) shall be issued from a special reserve of allowances that is separate from, and established in addition to, the quantity of allowances established under section 1201.

(3) PRICE.—

(A) IN GENERAL.—Subject to subparagraph (B), the Administrator shall establish, by rule, a methodology for determining the price of international reserve allowances for each compliance year at a level that does not exceed the market price of allowances established under section 1201 for the compliance year.

(B) MAXIMUM PRICE.—The price for an international reserve allowance under subparagraph (A) shall not exceed the clearing price for current compliance year allowances established at the most recent auction of allowances by the Corporation.

(4) SERIAL NUMBER.—The Administrator shall assign a unique serial number to each international reserve allowance issued under this subsection.

(5) TRADING SYSTEM.—The Administrator may establish, by rule, a system for the sale, exchange,

purchase, transfer, and banking of international reserve allowances.

(6) REGULATED ENTITIES.—International reserve allowances may not be submitted by regulated entities to comply with the allowance submission requirements of section 1202.

(7) PROCEEDS.—All proceeds from the sale of international reserve allowances under this subsection shall be allocated to a program that the Administrator, in coordination with the Secretary of State, shall establish to mitigate the negative impacts of global climate change on disadvantaged communities in other countries.

(b) FOREIGN COUNTRY LISTS.—

(1) IN GENERAL.—Not later than January 1, 2020, and annually thereafter, the President shall develop and publish in the Federal Register 2 lists of foreign countries, in accordance with this subsection.

(2) EXCLUDED LIST.—

(A) IN GENERAL.—The President shall identify and publish in a list, to be known as the ''excluded list'', each foreign country the share of total global greenhouse gas emissions

of which is below the de minimis percentage described in subparagraph (B).

(B) DE MINIMIS PERCENTAGE.—The de minimis percentage referred to in subparagraph (A) is a percentage of total global greenhouse gas emissions of not more than 0.5, as determined by the President, for the most recent calendar year for which emissions and other relevant data is available, taking into consideration, as necessary, the annual average deforestation rate during a representative period for a foreign country that is a developing country.

(3) COVERED LIST.—

(A) IN GENERAL.—The President shall identify and publish in a list, to be known as the ''covered list'', each foreign country the covered goods of which are subject to the requirements of this section.

(B) REQUIREMENT.—The covered list shall include each foreign country that is not included on the excluded list under paragraph (2).

(c) WRITTEN DECLARATIONS.—

(1) IN GENERAL.—Effective beginning January 1, 2020, a United States importer of any covered

good shall, as a condition of importation or withdrawal for consumption from a warehouse of the covered good, submit to the Administrator and the appropriate office of the U.S. Customs and Border Protection a written declaration with respect to each such importation or withdrawal.

(2) CONTENTS.—A written declaration under paragraph (1) shall contain a statement that—

(A) the applicable covered good is accompanied by a sufficient number of international reserve allowances, as determined under subsection (d); or

(B) the covered good is from a foreign country on the excluded list under subsection (b)(2).

(3) INCLUSION.—A written declaration described in paragraph (2)(A) shall include the unique serial number of each emission allowance associated with the importation of the applicable covered good.

(4) FAILURE TO DECLARE.—

(A) IN GENERAL.—Except as provided in subparagraph (B), an imported covered good that is not accompanied by a written declaration under this subsection shall not be per-

mitted to enter the customs territory of the United States.

(B) EXCEPTION FOR CERTAIN IMPORTS.—Subparagraph (A) shall not apply to a covered good of a foreign country if the President determines that—

(i) the foreign country has taken comparable action to limit the greenhouse gas emissions of the foreign country, in accordance with section 6005;

(ii) the United Nations has identified the foreign country as among the least-developed of developing countries; or

(iii) the foreign country is on the excluded list under subsection (b)(2).

(5) CORRECTED DECLARATION.—

(A) IN GENERAL.—If, after making a declaration required under this subsection, an importer has reason to believe that the declaration contains information that is not correct, the importer shall provide a corrected declaration by not later than 30 days after the date of discovery of the error, in accordance with subparagraph (B).

(B) METHOD.—A corrected declaration under subparagraph (A) shall be in the form of a letter or other written statement to the Administrator and the office of the U.S. Customs and Border Protection to which the original declaration was submitted.

(d) QUANTITY OF ALLOWANCES REQUIRED.—

(1) METHODOLOGY.—

(A) IN GENERAL.—The Administrator shall establish, by rule, a method for calculating the required number of international reserve allowances that a United States importer must submit, together with a written declaration under subsection (c), for each category of covered goods of each covered foreign country.

(B) FORMULA.—The Administrator shall develop a general formula for calculating the international reserve allowance requirement that applies, on a per unit basis, to each covered good of a covered foreign country that is imported during each compliance year.

(2) INITIAL COMPLIANCE YEAR.—

(A) IN GENERAL.—Subject to subparagraph (B), the methodology under paragraph (1) shall establish an international reserve al-

lowance requirement (per unit imported into the United States) for the initial compliance year for each category of covered goods of each covered foreign country that is equal to the quotient obtained by dividing—

(i) the excess, if any, of the total emissions from the covered foreign country that are attributable to the category of covered goods produced during the most recent year for which data are available, over the baseline emission level of the covered foreign country for that category; and

(ii) the total quantity of the covered good produced in the covered foreign country during the most recent calendar year.

(B) ADJUSTMENTS.—The Administrator shall adjust the requirement under subparagraph (A)—

(i) in accordance with the ratio that—

(I) the quantity of allowances that were allocated at no cost to entities within the industry sector manufacturing the covered goods for the compliance year during which the cov-

ered goods were imported into the United States; bears to

(II) the greenhouse gas emissions of that industry sector; and

(ii) to take into account the level of economic development of the covered foreign country in which the covered goods were produced.

(3) SUBSEQUENT COMPLIANCE YEARS.—For each subsequent compliance year, the Administrator shall revise, as appropriate, the international reserve allowance requirement applicable to each category of imported covered goods of each covered foreign country to reflect changes in the factors described in paragraph (2)(B).

(4) PUBLICATION.—Not later than 90 days before the beginning of each compliance year, the Administrator shall publish in the Federal Register a schedule describing the required number of international reserve allowances for each category of imported covered goods of each covered foreign country, as calculated under this subsection.

(c) FOREIGN ALLOWANCES AND CREDITS.—

(1) FOREIGN ALLOWANCES.—

(A) IN GENERAL.—A United States importer may submit, in lieu of an international reserve allowance issued under this section, a foreign allowance or similar compliance instrument distributed by a foreign country pursuant to a cap and trade program that represents a comparable action.

(B) COMMENSURATE CAP AND TRADE PROGRAM.—For purposes of subparagraph (A), a cap and trade program that represents a comparable action shall include any greenhouse gas regulatory program adopted by a covered foreign country to limit the greenhouse gas emissions of the covered foreign country, if the President certifies that the program—

(i)(I) places a quantitative limitation on the total quantity of greenhouse gas emissions of the covered foreign country (expressed in terms of tons emitted per calendar year); and

(II) achieves that limitation through an allowance trading system;

(ii) satisfies such criteria as the President may establish for requirements relating to the enforceability of the cap and

trade program, including requirements for monitoring, reporting, verification procedures, and allowance tracking, and

(iii) is a comparable action.

(2) FOREIGN CREDITS.—

(A) IN GENERAL.—A United States importer may submit, in lieu of an international reserve allowance issued under this section, a foreign credit or a credit for an international offset project that the Administrator has authorized for use under subtitle E of title II.

(B) APPLICATION.—The limitation on the use of international reserve allowances by regulated entities under subsection (a)(6) shall not apply to a United States importer for purposes of this paragraph.

(f) RETIREMENT OF ALLOWANCES.—The Administrator shall retire each international reserve allowance, foreign allowance, and foreign credit submitted to achieve compliance with this section.

(g) CONSISTENCY WITH INTERNATIONAL AGREEMENTS.—The Administrator, in consultation with the Secretary of State, shall adjust the international reserve allowance requirements established under this section (including the quantity of international reserve allowances re-

quired for each category of covered goods of a covered foreign country) as the Administrator determines to be necessary to ensure that the United States complies with all applicable international agreements.

(h) TERMINATION.—The international reserve allowance requirements of this section shall not apply to a covered good of a covered foreign country in any case in which the President makes a determination described in subsection (b)(2) with respect to the covered goods of that covered foreign country.

(i) FINAL REGULATIONS.—Not later than January 1, 2019, the Administrator shall promulgate such regulations as the Administrator determines to be necessary to carry out this section.

SEC. 6007. ADJUSTMENT OF INTERNATIONAL RESERVE ALLOWANCE REQUIREMENTS.

(a) IN GENERAL.—Not later than January 1, 2023, and annually thereafter, the President shall prepare and submit to Congress a report that assesses the effectiveness of the applicable international reserve allowance requirements under section 6006 with respect to the covered goods of each covered foreign country.

(b) INADEQUATE REQUIREMENTS.—If the President determines that an applicable international reserve allowance requirement is not adequate to achieve the purposes

of this title, the President, simultaneously with the submission of the report under subsection (a), shall—

(1) adjust the requirement; or

(2) take such other action as the President determines to be necessary to improve the effectiveness of the requirement, in accordance with all applicable international agreements.

(c) EFFECTIVE DATE.—An adjustment under subsection (b)(1) shall take effect beginning on January 1 of the compliance year immediately following the date on which the adjustment is made.

TITLE VII—REVIEWS

SEC. 7001. NATIONAL ACADEMY OF SCIENCES REVIEW.

(a) REPORT.—

(1) IN GENERAL.—Not later than January 1, 2012, and every 3 years thereafter, the Administrator shall offer to enter into a contract with the National Academy of Sciences under which the Academy shall submit to Congress and the Administrator reports evaluating the implementation of this Act.

(2) CONTENTS OF REPORT.—Each report submitted to Congress under paragraph (1) shall include an analysis of—

(A) the extent to which the emission reductions required under this Act are being achieved;

(B) the extent to which the emission reductions achieved under this Act, taken together with actual steps taken by other countries to reduce greenhouse gas emissions, is predicted to stabilize atmospheric greenhouse gas concentrations at a level adequate to forestall dangerous anthropogenic interference with the climate system;

(C) whether an increase of global average temperature in excess of 3.6 degrees Fahrenheit (2 degrees Celsius) above the preindustrial average has occurred or is more likely than not to occur in the foreseeable future as a result of anthropogenic climate change;

(D)(i) predicted changes in ocean acidity, the extent of coral reefs, and other indicators of ocean ecosystem health due to anthropogenic carbon dioxide; and

(ii) any additional actions that should be taken by the United States or other countries to protect the health of the oceans;

(E) the status of the best available science and the status of technologies to reduce, sequester, or avoid greenhouse gas emissions;

(F) whether the percentage of allowances for any calendar year that are auctioned, allocated, or devoted to other purposes under this Act should be modified;

(G) the effectiveness of auction revenues in meeting the stated purposes of this Act; and

(H) whether additional measures, including an increase in the earned income tax credit, a reduction in payroll taxes, or the implementation of electronic benefit transfers by State health and human services agencies to reach low-income individuals who are not required to file Federal income tax returns, are needed to help low- and moderate-income individuals respond to changes in the cost of energy-related goods and services.

(b) TECHNOLOGY REPORTS.—

(1) DEFINITION.—In this subsection, the term ''technologically infeasible,'' with respect to a technology, means that the technology—

(A) will not be demonstrated beyond laboratory-scale conditions;

(B) would be unsafe;

(C) would not reliably reduce greenhouse gas emissions; or

(D) would prevent the activity to which the technology applies from meeting or performing the primary purpose of the activity (such as generating electricity or transporting goods or individuals).

(2) REPORTS.—Not later than 180 days after the date of enactment of this Act, the Administrator shall offer to enter into a contract with the National Academy of Sciences under which the Academy, not later than 2 years after the date of enactment of this Act and every 3 years thereafter, shall submit to Congress and the Administrator a report that describes or analyzes—

(A) the status of current greenhouse gas emission reduction technologies, including—

(i) technologies for capture and disposal of greenhouse gases;

(ii) efficiency improvement technologies;

(iii) zero-greenhouse gas emitting energy technologies; and

(iv) above- and below-ground biological sequestration technologies;

(B) whether the requirements of this Act (including regulations promulgated under this Act)—

(i) promote the development and deployment of greenhouse gas emission reduction technologies; or

(ii) mandate a level of emission control or reduction that, based on available or expected technology, will be technologically infeasible at the time at which the requirements become effective;

(C) the projected date on which any technology determined to be technologically infeasible will become technologically feasible;

(D) whether any technology determined to be technologically infeasible cannot reasonably be expected to become technologically feasible prior to calendar year 2050; and

(E) the costs of available alternative greenhouse gas emission reduction strategies that could be used or pursued in lieu of any technologies that are determined to be technologically infeasible.

SEC. 7002. TRANSPORTATION SECTOR REVIEW.

(a) REVIEW.—Not later than January 1, 2010, the Administrator shall conduct a comprehensive review and analysis to determine whether any of the following have occurred:

(1)(A) The motor vehicle fuel and motor vehicle and nonroad regulations within the scope of Executive Order 13432 (72 Fed. Reg. 27717; relating to cooperation among agencies in protecting the environment with respect to greenhouse gas emissions from motor vehicles, nonroad vehicles, and nonroad engines) have been finalized and implemented by Federal agencies and departments.

(B) Any other transportation-related programs, including corporate average fuel economy standard reform, greenhouse gas vehicle emissions standards, renewable fuel volume mandates, low carbon fuel standards, and activities to reduce vehicle miles traveled have been finalized and implemented by a Federal agency or department.

(2) Any regulation or program described in paragraph (1) is expected to achieve at least 1 of the following, as compared to the baseline greenhouse gas emissions consistent with the reference case contained in the report of the Energy Information Ad-

ministration entitled ''Annual Energy Outlook 2006''.

(A) At least a 6.2-percent reduction in cumulative greenhouse gas emissions from the light-duty motor vehicle sector, including light-duty vehicles and light-duty trucks, during the period beginning on January 1, 2010, and ending on December 31, 2020.

(B) A cumulative reduction of approximately 1,140,000 metric tons of carbon dioxide equivalent, measured on a full fuel cycle basis.

(b) REPORT.—If the Administrator determines that a reduction described in subsection (a)(2)(A) will not be achieved, the Administrator shall submit to Congress, not later than January 1, 2010, a report describing—

(1) any additional action of the Administrator that will be necessary to reduce greenhouse gas emissions from the light-duty motor vehicle sector; and

(2) recommendations of the Administrator with respect to actions that could be established by Congress to ensure that the United States transportation sector will achieve—

(A) the reductions described in subsection (a)(2)(B); and

(B) any additional reductions necessary for that sector to assume an equitable share of responsibility for reducing greenhouse gas emissions.

SEC. 7003. ADAPTATION REVIEW.

(a) REGIONAL ESTIMATES.—

(1) ESTIMATES.—

(A) IN GENERAL.—The Administrator, in consultation with the officials described in paragraph (2) and relevant State agencies, shall conduct 6 regional infrastructure cost assessments in various regions of the United States, and a national cost assessment, to provide estimates of the range of costs that should be anticipated for adaptation to the impacts of climate change.

(B) VARIOUS PROBABILITIES.—The Administrator shall develop the estimates under subparagraph (A) for low, medium, and high probabilities of climate change and the potential impacts of climate change.

(2) DESCRIPTION OF OFFICIALS.—The officials referred to in paragraph (1) are—

(A) the Secretary of Agriculture;

(B) the Secretary of Commerce;

(C) the Secretary of Defense;

(D) the Secretary of Energy;

(E) the Secretary of Health and Human Services;

(F) the Secretary of Homeland Security;

(G) the Secretary of Housing and Urban Development;

(H) the Secretary of the Interior;

(I) the Secretary of Transportation;

(J) the Director of United States Geological Survey; and

(K) the heads of such other Federal agencies and departments as the Administrator determines to be necessary.

(3) SUBMISSION TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, the Administrator shall submit to Congress a report describing the results of the assessments conducted under this subsection.

(b) ADAPTATION PLAN.—

(1) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Administrator shall submit to Congress a climate change adaptation plan for the United States, based on—

(A) assessments performed by the United Nations Intergovernmental Panel on Climate Change in accordance with the Global Change Research Act of 1990 (15 U.S.C. 2921 et seq.); and

(B) any other scientific, peer-reviewed regional assessments.

(2) INCLUSIONS.—The adaptation plan under paragraph (1) shall include—

(A) a prioritized list of vulnerable systems and regions in the United States;

(B) requirements for coordination between Federal, State, and local governments to ensure that key public infrastructure, safety, health, and land use planning and control issues are addressed;

(C) requirements for coordination among the Federal Government, industry, and communities;

(D) an assessment of climate change science research needs, including probabilistic assessments as an aid to planning;

(E) an assessment of climate change technology needs; and

(F) regional and national cost assessments for the range of costs that should be anticipated for adapting to the impacts of climate change.

(c) IMPACTS OF CLIMATE CHANGE ON LOW-INCOME POPULATIONS.—

(1) IN GENERAL.—The Administrator shall conduct research on the impact of climate change on low-income populations in all countries, including—

(A) an assessment of the adverse impact of climate change on—

(i) low-income populations in the United States; and

(ii) developing countries;

(B)(i) an identification of appropriate climate change adaptation measures and programs for developing countries and low-income populations;

(ii) an assessment of the impact of the measures and programs on low-income populations; and

(C) an estimate of the costs of developing and implementing those climate change adaptation and mitigation programs.

(2) REPORT.—Not later than 1 year after the date of enactment of this Act, the Administrator

shall submit to Congress a report describing the results of the research conducted under paragraph (1).

TITLE VIII—FRAMEWORK FOR GEOLOGICAL SEQUESTRATION OF CARBON DIOXIDE

SEC. 8001. NATIONAL DRINKING WATER REGULATIONS.

(a) IN GENERAL.—Section 1421 of the Safe Drinking Water Act (42 U.S.C. 300h) is amended—

(1) in subsection (b)(1), by striking ''subsection (d)(2)'' and inserting ''subsection (e)(2)'';

(2) by redesignating subsection (d) as subsection (e); and

(3) by inserting after subsection (c) the following:

''(d) CARBON DIOXIDE.—

''(1) REGULATIONS.—Not later than 1 year after the date of enactment of the America's Climate Security Act of 2007, the Administrator shall promulgate regulations for permitting commercial-scale underground injection of carbon dioxide for purposes of geological sequestration to address climate change, including provisions—

''(A) for monitoring and controlling the long-term storage of carbon dioxide and avoiding, to the maximum extent practicable, any re-

lease of carbon dioxide into the atmosphere, and for ensuring protection of underground sources of drinking water, human health, and the environment; and

''(B) relating to long-term liability associated with commercial-scale geological sequestration.

''(2) SUBSEQUENT REPORTS.—Not later than 5 years after the date on which regulations are promulgated pursuant to paragraph (1), and not less frequently than once every 5 years thereafter, the Administrator shall submit to Congress a report that contains an evaluation of the effectiveness of the regulations, based on current knowledge and experience, with particular emphasis on any new information on potential impacts of commercial-scale geological sequestration on drinking water, human health, and the environment.

''(3) REVISION.—If the Administrator determines, based on a report under paragraph (2), that regulations promulgated pursuant to paragraph (1) require revision, the Administrator shall promulgate revised regulations not later than 1 year after the date on which the applicable report is submitted to Congress under paragraph (2).''.

(b) CONFORMING AMENDMENT.—Section 1447(a)(4) of the Safe Drinking Water Act (42 U.S.C. 300j–6(a)(4)) is amended by striking ''section 1421(d)(2)'' and inserting ''section 1421(e)(2)''.

SEC. 8002. ASSESSMENT OF GEOLOGICAL STORAGE CAPACITY FOR CARBON DIOXIDE.

(a) DEFINITIONS.—In this section:

(1) ASSESSMENT.—The term ''assessment'' means the national assessment of capacity for carbon dioxide completed under subsection (f).

(2) CAPACITY.—The term ''capacity'' means the portion of a storage formation that can retain carbon dioxide in accordance with the requirements (including physical, geological, and economic requirements) established under the methodology developed under subsection (b).

(3) ENGINEERED HAZARD.—The term ''engineered hazard'' includes the location and completion history of any well that could affect a storage formation or capacity.

(4) RISK.—The term ''risk'' includes any risk posed by a geomechanical, geochemical, hydrogeological, structural, or engineered hazard.

(5) SECRETARY.—The term ''Secretary'' means the Secretary of the Interior, acting through the Director of the United States Geological Survey.

(6) STORAGE FORMATION.—The term ''storage formation'' means a deep saline formation, unmineable coal seam, or oil or gas reservoir that is capable of accommodating a volume of industrial carbon dioxide.

(b) METHODOLOGY.—Not later than 1 year after the date of enactment of this Act, the Secretary shall develop a methodology for conducting an assessment under subsection (f), taking into consideration—

(1) the geographical extent of all potential storage formations in all States;

(2) the capacity of the potential storage formations;

(3) the injectivity of the potential storage formations;

(4) an estimate of potential volumes of oil and gas recoverable by injection and storage of industrial carbon dioxide in potential storage formations;

(5) the risk associated with the potential storage formations; and

(6) the work performed to develop the Carbon Sequestration Atlas of the United States and Can-

~~ada completed by the Department of Energy in April 2006.~~

~~(c) COORDINATION.—~~

~~(1) FEDERAL COORDINATION.—~~

~~(A) CONSULTATION.—The Secretary shall consult with the Secretary of Energy and the Administrator regarding data sharing and the format, development of methodology, and content of the assessment to ensure the maximum usefulness and success of the assessment.~~

~~(B) COOPERATION.—The Secretary of Energy and the Administrator shall cooperate with the Secretary to ensure, to the maximum extent practicable, the usefulness and success of the assessment.~~

~~(2) STATE COORDINATION.—The Secretary shall consult with State geological surveys and other relevant entities to ensure, to the maximum extent practicable, the usefulness and success of the assessment.~~

~~(d) EXTERNAL REVIEW AND PUBLICATION.—On completion of the methodology under subsection (b), the Secretary shall—~~

(1) publish the methodology and solicit comments from the public and the heads of affected Federal and State agencies;

(2) establish a panel of individuals with expertise in the matters described in paragraphs (1) through (5) of subsection (b) composed, as appropriate, of representatives of Federal agencies, institutions of higher education, nongovernmental organizations, State organizations, industry, and international geosciences organizations to review the methodology and comments received under paragraph (1); and

(3) on completion of the review under paragraph (2), publish in the Federal Register the revised final methodology.

(e) PERIODIC UPDATES.—The methodology developed under this section shall be updated periodically (including not less frequently than once every 5 years) to incorporate new data as the data becomes available.

(f) NATIONAL ASSESSMENT.—

(1) IN GENERAL.—Not later than 2 years after the date of publication of the methodology under subsection (d)(3), the Secretary, in consultation with the Secretary of Energy and State geological surveys, shall complete a national assessment of the ca-

pacity for carbon dioxide storage in accordance with the methodology.

(2) GEOLOGICAL VERIFICATION.—As part of the assessment, the Secretary shall carry out a drilling program to supplement the geological data relevant to determining storage capacity in carbon dioxide in geological storage formations, including—

(A) well log data;

(B) core data; and

(C) fluid sample data.

(3) PARTNERSHIP WITH OTHER DRILLING PROGRAMS.—As part of the drilling program under paragraph (2), the Secretary shall enter into partnerships, as appropriate, with other entities to collect and integrate data from other drilling programs relevant to the storage of carbon dioxide in geologic formations.

(4) INCORPORATION INTO NATCARB.—

(A) IN GENERAL.—On completion of the assessment, the Secretary shall incorporate the results of the assessment using, to the maximum extent practicable—

(i) the NatCarb database; or

(ii) a new database developed by the Secretary, as the Secretary determines to be necessary.

(B) RANKING.—The database shall include the data necessary to rank potential storage sites—

(i) for capacity and risk;

(ii) across the United States;

(iii) within each State;

(iv) by formation; and

(v) within each basin.

(5) REPORT.—Not later than 180 days after the date on which the assessment is completed, the Secretary shall submit to the Committee on Energy and Natural Resources of the Senate and the Committee on Science and Technology of the House of Representatives a report describing the results of the assessment.

(6) PERIODIC UPDATES.—The assessment shall be updated periodically (including not less frequently than once every 5 years) as necessary to support public and private sector decisionmaking, as determined by the Secretary.

SEC. 8003. STUDY OF THE FEASIBILITY RELATING TO CONSTRUCTION OF PIPELINES AND GEOLOGICAL CARBON DIOXIDE SEQUESTRATION ACTIVITIES.

(a) IN GENERAL.—The Secretary of Energy, in coordination with the Administrator, the Federal Energy Regulatory Commission, the Secretary of Transportation, and the Secretary of the Interior, shall conduct a study to assess the feasibility of the construction of—

(1) pipelines to be used for the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery; and

(2) geological carbon dioxide sequestration facilities.

(b) SCOPE.—The study shall consider—

(1) any barrier or potential barrier in existence as of the date of enactment of this Act, including any technical, siting, financing, or regulatory barrier, relating to—

(A) the construction of pipelines to be used for the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery; or

(B) the geological sequestration of carbon dioxide;

(2) any market risk (including throughput risk) relating to—

(A) the construction of pipelines to be used for the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery; or

(B) the geological sequestration of carbon dioxide;

(3) any regulatory, financing, or siting option that, as determined by the Secretary of Energy, would—

(A) mitigate any market risk described in paragraph (2); or

(B) help ensure the construction of pipelines dedicated to the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery;

(4) the means by which to ensure the safe handling and transportation of carbon dioxide;

(5) any preventive measure to ensure the integration of pipelines to be used for the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery; and

(6) any other appropriate use, as determined by the Secretary of Energy, in coordination with the

~~Administrator, the Federal Energy Regulatory Commission, the Secretary of Transportation, and the Secretary of the Interior.~~

~~(c) REPORT.—Not later than 180 days after the date of enactment of this Act, the Secretary of Energy shall submit to the Congress a report describing the results of the study.~~

~~SEC. 8004. LIABILITIES FOR CLOSED GEOLOGICAL STORAGE SITES.~~

~~(a) ESTABLISHMENT OF TASK FORCE.—As soon as practicable after the date of enactment of this Act, the Administrator shall establish a task force, to be composed of an equal number of stakeholders, the public, subject matter experts, and members of the private sector, to conduct a study of the legal framework, environmental and safety considerations, and cost implications of potential Federal assumption of liability with respect to closed geological storage sites.~~

~~(b) REPORT.—Not later than 18 months after the date of enactment of this Act, the task force established under subsection (a) shall submit to Congress a report describing the results of the study conducted under subsection (a), including recommendations of the task force, if any, with respect to the framework described in that subsection.~~

TITLE IX—MISCELLANEOUS

SEC. 9001. PARAMOUNT INTEREST WAIVER.

(a) IN GENERAL.—If the President determines that a national security emergency exists and, in light of information that was not available as of the date of enactment of this Act, it is in the paramount interest of the United States to modify any requirement under this Act to minimize the effects of the emergency, the President may, after opportunity for public notice and comment, temporarily adjust, suspend, or waive any regulations promulgated pursuant to this Act to achieve that minimization.

(b) CONSULTATION.—In making an emergency determination under subsection (a), the President shall, to the maximum extent practicable, consult with and take into account any advice received from—

(1) the National Academy of Sciences;

(2) the Secretary of Energy; and

(3) the Administrator.

(c) JUDICIAL REVIEW.—An emergency determination under subsection (a) shall be subject to judicial review in accordance with section 307 of the Clean Air Act (42 U.S.C. 7607).

SEC. 9002. CORPORATE ENVIRONMENTAL DISCLOSURE OF CLIMATE CHANGE RISKS.

(a) REGULATIONS.—Not later than 2 years after the date of enactment of this Act, the Securities and Exchange Commission (referred to in this section as the ''Commission'') shall promulgate regulations in accordance with section 13 of the Securities Exchange Act of 1934 (15 U.S.C. 78m) directing each issuer of securities under that Act, to inform, based on the current expectations and projections and knowledge of facts of the issuer, securities investors of material risks relating to—

(1) the financial exposure of the issuer because of the net global warming pollution emissions of the issuer; and

(2) the potential economic impacts of global warming on the interests of the issuer.

(b) UNIFORM FORMAT FOR DISCLOSURE.—In carrying out subsection (a), the Commission shall enter into an agreement with the Financial Accounting Standards Board, or another appropriate organization that establishes voluntary standards, to develop a uniform format for disclosing to securities investors information on the risks described in subsection (a).

(c) INTERIM INTERPRETIVE RELEASE.—

(1) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Commission

shall issue an interpretive release clarifying that under items 101 and 303 of Regulation S–K of the Commission under part 229 of title 17, Code of Federal Regulations (as in effect on the date of enactment of this Act)—

(A) the commitments of the United States to reduce emissions of global warming pollution under the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992, are considered to be a material effect, and

(B) global warming constitutes a known trend.

(2) PERIOD OF EFFECTIVENESS.—The interpretive release issued under paragraph (1) shall remain in effect until the effective date of the final regulations promulgated under subsection (a).

SEC. 9003. ADMINISTRATIVE PROCEDURE AND JUDICIAL REVIEW.

(a) RULEMAKING PROCEDURES.—Any rule, requirement, regulation, method, standard, program, determination, or final action made or promulgated pursuant to any title of this Act, with the exception of sections 3101, 3201, 3301, and 3901, shall be subject to the rulemaking proce-

dures described in sections 551 through 557 of title 5, United States Code.

(b) ENFORCEMENT.—Each provision of this Act (including provisions relating to mandatory duties of the Administrator) shall be fully enforceable pursuant to sections 113, 303, and 304 of the Clean Air Act (42 U.S.C. 7413, 7603, 7604).

(c) RECORDKEEPING, INSPECTIONS, MONITORING, ENTRY, AND SUBPOENAS.—The Administrator shall have the same powers and authority provided under sections 114 and 307(a) of the Clean Air Act (42 U.S.C. 7414, 7607(a)) in carrying out, administering, and enforcing this Act.

(d) JUDICIAL REVIEW.—A petition for judicial review of any regulation promulgated, or final action carried out, by the Administrator pursuant to this Act may be filed only—

(1) in the United States Court of Appeals for the District of Columbia; and

(2) in accordance with section 307(b) of the Clean Air Act (42 U.S.C. 7607(b)).

SEC. 9004. RETENTION OF STATE AUTHORITY.

(a) IN GENERAL.—Except as provided in subsection (b), in accordance with section 116 of the Clean Air Act (42 U.S.C. 7416) and section 510 of the Federal Water

~~Pollution Control Act (33 U.S.C. 1370), nothing in this Act precludes or abrogates the right of any State to adopt or enforce—~~

~~(1) any standard, cap, limitation, or prohibition relating to emissions of greenhouse gas; or~~

~~(2) any requirement relating to control, abatement, or avoidance of emissions of greenhouse gas.~~

~~(b) EXCEPTION.—Notwithstanding subsection (a), no State may adopt a standard, cap, limitation, prohibition, or requirement that is less stringent than the applicable standard, cap, limitation, prohibition, or requirement under this Act.~~

~~SEC. 9005. TRIBAL AUTHORITY.~~

~~For purposes of this Act, the Administrator may treat any federally recognized Indian tribe as a State, in accordance with section 301(d) of the Clean Air Act (42 U.S.C. 7601(d)).~~

~~SEC. 9006. AUTHORIZATION OF APPROPRIATIONS.~~

~~There are authorized to be appropriated such sums as are necessary to carry out this Act.~~

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Lieberman-Warner Climate Security Act of 2008".

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

Sec. 1. Short title; table of contents.

Sec. 2. Findings.
Sec. 3. Purposes.
Sec. 4. Definitions.

TITLE I—CAPPING GREENHOUSE GAS EMISSIONS

Subtitle A—Tracking Emissions

Sec. 1101. Purpose.
Sec. 1102. Definitions.
Sec. 1103. Reporting requirements.
Sec. 1104. Data quality and verification.
Sec. 1105. Federal greenhouse gas registry.
Sec. 1106. Enforcement.

Subtitle B—Reducing Emissions

Sec. 1201. Emission allowance account.
Sec. 1202. Compliance obligation.
Sec. 1203. Penalty for noncompliance.
Sec. 1204. Rulemaking.

TITLE II—MANAGING AND CONTAINING COSTS EFFICIENTLY

Subtitle A—Trading

Sec. 2101. Sale, exchange, and retirement of emission allowances.
Sec. 2102. No restriction on transactions.
Sec. 2103. Allowance transfer system.
Sec. 2104. Allowance tracking system.

Subtitle B—Banking

Sec. 2201. Indication of calendar year.
Sec. 2202. Effect of time.

Subtitle C—Borrowing

Sec. 2301. Regulations.
Sec. 2302. Term.
Sec. 2303. Repayment with interest.

Subtitle D—Offsets

Sec. 2401. Outreach initiative on revenue enhancement for agricultural producers.
Sec. 2402. Establishment of domestic offset program.
Sec. 2403. Eligible offset project types.
Sec. 2404. Project initiation and approval.
Sec. 2405. Offset verification and issuance of allowances.
Sec. 2406. Tracking of reversals for sequestration projects.
Sec. 2407. Examinations.
Sec. 2408. Timing and the provision of offset allowances.
Sec. 2409. Offset registry.
Sec. 2410. Environmental considerations.
Sec. 2411. Program review.
Sec. 2412. Retail carbon offsets.

Subtitle E—International Emission Allowances

Sec. 2501. Use of international emission allowances.
Sec. 2502. Regulations.
Sec. 2503. Facility certification.

Subtitle F—Carbon Market Efficiency Board

Sec. 2601. Purposes.
Sec. 2602. Establishment of Carbon Market Efficiency Board.
Sec. 2603. Duties.
Sec. 2604. Powers.
Sec. 2605. Estimate of costs to economy of limiting greenhouse gas emissions.

TITLE III—ALLOCATING AND DISTRIBUTING ALLOWANCES

Subtitle A—Auctions

Sec. 3101. Allocation for early auctions.
Sec. 3102. Allocation for annual auctions.

Subtitle B—Early Action

Sec. 3201. Allocation.
Sec. 3202. Distribution.

Subtitle C—States

Sec. 3301. Allocation for energy savings.
Sec. 3302. Allocation for States with programs that exceed Federal emission reduction targets.
Sec. 3303. General allocation.
Sec. 3304. Allocation for mass transit.

Subtitle D—Electricity Consumers

Sec. 3401. Allocation.
Sec. 3402. Distribution.
Sec. 3403. Use.
Sec. 3404. Reporting.

Subtitle E—Natural Gas Consumers

Sec. 3501. Allocation.
Sec. 3502. Distribution.
Sec. 3503. Use.
Sec. 3504. Reporting.

Subtitle F—Bonus Allowances for Carbon Capture and Geological Sequestration

Sec. 3601. Allocation.
Sec. 3602. Qualifying projects.
Sec. 3603. Distribution.
Sec. 3604. 10-Year limit.
Sec. 3605. Exhaustion of bonus allowance account.

Subtitle G—Domestic Agriculture and Forestry

Sec. 3701. Allocation.

Sec. 3702. Agricultural and forestry greenhouse gas management research.
Sec. 3703. Distribution.

Subtitle H—International Forest Protection

Sec. 3801. Findings.
Sec. 3802. Definition of forest carbon activities.
Sec. 3803. Allocation.
Sec. 3804. Definition and eligibility requirements.
Sec. 3805. International forest carbon activities.
Sec. 3806. Reviews and discount.

Subtitle I—Transition Assistance

Sec. 3901. General allocation and distribution.
Sec. 3902. Distributing emission allowances to owners and operators of fossil fuel-fired electric power generating facilities.
Sec. 3903. Distributing additional emission allowances to rural electric cooperatives.
Sec. 3904. Distributing emission allowances to owners and operators of energy intensive manufacturing facilities.
Sec. 3905. Distributing emission allowances to owners and operators of facilities and other entities that produce or import petroleum-based fuel.
Sec. 3906. Distributing emission allowances to hydrofluorocarbon producers and importers.

Subtitle J—Reducing Methane Emissions From Landfills and Coal Mines

Sec. 3907. Allocation.
Sec. 3908. Distribution.

TITLE IV—AUCTIONS AND USES OF AUCTION PROCEEDS

Subtitle A—Funds

Sec. 4101. Establishment.
Sec. 4102. Amounts in Funds.

Subtitle B—Climate Change Credit Corporation

Sec. 4201. Establishment.
Sec. 4202. Applicable laws.
Sec. 4203. Board of directors.
Sec. 4204. Review and audit by Comptroller General.

Subtitle C—Auctions

Sec. 4301. Early auctions.
Sec. 4302. Annual auctions.

Subtitle D—Energy Technology Deployment

Sec. 4401. General allocations.
Sec. 4402. Zero- or low-carbon energy technologies deployment.
Sec. 4403. Advanced coal and sequestration technologies program.
Sec. 4404. Fuel from cellulosic biomass.
Sec. 4405. Advanced technology vehicles manufacturing incentive program.
Sec. 4406. Sustainable energy program.

Subtitle E—Energy Consumers

Sec. 4501. Proportions of funding availability.
Sec. 4502. Rural energy assistance program.

Subtitle F—Climate Change Worker Training Program

Sec. 4601. Funding.
Sec. 4602. Purposes.
Sec. 4603. Establishment.
Sec. 4604. Activities.
Sec. 4605. Worker protections and nondiscrimination requirements.
Sec. 4606. Workforce training and safety.

Subtitle G—Adaptation Program for Natural Resources in United States and Territories

Sec. 4701. Definitions.
Sec. 4702. Adaptation fund.

Subtitle H—International Climate Change Adaptation and National Security Program

Sec. 4801. Findings.
Sec. 4802. Purposes.
Sec. 4803. Establishment.
Sec. 4804. Funding.

Subtitle I—Emergency Firefighting Programs

Sec. 4901. Findings.
Sec. 4902. Bureau of Land Management emergency firefighting program.
Sec. 4903. Forest Service emergency firefighting program.

TITLE V—ENERGY EFFICIENCY

Subtitle A—Appliance Efficiency

Sec. 5101. Residential boilers.
Sec. 5102. Regional variations in heating or cooling standards.

Subtitle B—Building Efficiency

Sec. 5201. Updating State building energy efficiency codes.
Sec. 5202. Conforming amendment.

TITLE VI—GLOBAL EFFORT TO REDUCE GREENHOUSE GAS EMISSIONS

Sec. 6001. Definitions.
Sec. 6002. Purposes.
Sec. 6003. International negotiations.
Sec. 6004. Interagency review.
Sec. 6005. Presidential determinations.
Sec. 6006. International reserve allowance program.
Sec. 6007. Adjustment of international reserve allowance requirements.

TITLE VII—REVIEWS AND RECOMMENDATIONS

Sec. 7001. National Academy of Sciences Reviews.
Sec. 7002. Environmental Protection Agency review.
Sec. 7003. Environmental Protection Agency recommendations.
Sec. 7004. Presidential recommendations.
Sec. 7005. Adaptation assessments and plan.
Sec. 7006. Study by Administrator of aviation sector greenhouse gas emissions.

TITLE VIII—FRAMEWORK FOR GEOLOGICAL SEQUESTRATION OF CARBON DIOXIDE

Sec. 8001. National drinking water regulations.
Sec. 8002. Assessment of geological storage capacity for carbon dioxide.
Sec. 8003. Study of the feasibility relating to construction of pipelines and geological carbon dioxide sequestration activities.
Sec. 8004. Liabilities for closed geological storage sites.

TITLE IX—MISCELLANEOUS

Sec. 9001. Paramount interest waiver.
Sec. 9002. Administrative procedure and judicial review.
Sec. 9003. Retention of State authority.
Sec. 9004. Tribal authority.
Sec. 9005. Rocky Mountain Centers for Study of Coal Utilization.
Sec. 9006. Sun grant center research on compliance with Clean Air Act.
Sec. 9007. Authorization of appropriations.

TITLE X—CONTROL OF HYDROFLUOROCARBON CONSUMPTION

Sec. 10001. Applicability.
Sec. 10002. Definitions.
Sec. 10003. Cap on hydrofluorocarbon consumption and importation into United States.
Sec. 10004. Hydrofluorocarbon consumption allowance account.
Sec. 10005. Allocation of hydrofluorocarbon consumption allowances.
Sec. 10006. Compliance obligation.
Sec. 10007. Sale, exchange, and other uses of hydrofluorocarbon consumption allowances.
Sec. 10008. Allowance transfer system.
Sec. 10009. Banking and borrowing.
Sec. 10010. Hydrofluorocarbon destruction allowances.

TITLE XI—AMENDMENTS TO CLEAN AIR ACT

Sec. 11001. National recycling and emission reduction program.
Sec. 11002. Servicing of motor vehicle air conditioners.
Sec. 11003. Carbon dioxide reduction.

SEC. 2. FINDINGS.

Congress finds that—

(1) unchecked global warming poses a significant threat to—

(A) the national security and economy of the United States;

(B) public health and welfare in the United States;

(C) the well-being of other countries; and

(D) the global environment;

(2) under the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992, the United States is committed to stabilizing greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic interference with the climate system;

(3) according to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, stabilizing greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous interference with the climate system will require a global effort to reduce anthropogenic greenhouse gas emissions worldwide by 50 to 85 percent below 2000 levels by 2050;

(4) prompt, decisive action is critical, since global warming pollutants can persist in the atmosphere for more than a century;

(5) the ingenuity of the people of the United States will allow the United States to become a leader in curbing global warming;

(6) it is possible and desirable to cap greenhouse gas emissions, from sources that together account for the majority of those emissions in the United States, at or slightly below the current level in 2012, and to lower the cap each year between 2012 and 2050, on the condition that the system includes—

(A) cost containment measures;

(B) periodic review of requirements;

(C) an aggressive program for deploying advanced energy technology;

(D) programs to assist low- and middle-income energy consumers; and

(E) programs to mitigate the impacts of any unavoidable global climate change;

(7) Congress may need to update the emissions caps in order to account for continuing scientific data and steps taken, or not taken, by foreign countries;

(8) accurate emission data and timely compliance with the requirements of the greenhouse gas emission reduction and trading program established under this Act are needed to ensure that reductions are achieved and to provide equity, efficiency, and

openness in the market for allowances subject to the program;

(9) additional policies external to a cap-and-trade program may be required, including with respect to—

(A) the transportation sector, where reducing greenhouse gas emissions requires changes in vehicles, in fuels, and in consumer behavior; and

(B) the built environment, where reducing direct and indirect greenhouse gas emissions requires changes in buildings, appliances, lighting, heating, cooling, and consumer behavior;

(10) significant and sustained domestic investments are required to support an aggressive program for developing and deploying advanced technologies to reduce greenhouse gas emissions;

(11) all, or virtually all, emissions of greenhouse gases from the combustion of natural gas in the United States should be reduced through the inclusion in a cap-and-trade system of entities that sell natural gas in the United States;

(12) including natural gas in a cap-and-trade system in the United States should be carried out in a way that minimizes, to the extent feasible, the num-

ber of entities required to submit emission allowances for the natural gas sold by the entities;

(13) including natural gas in a cap-and-trade system in the United States promotes substantial reductions in total United States greenhouse gas emissions while also minimizing, to the extent feasible, the activities within the industrial sector that necessitate the submission of emission allowances;

(14) emissions of sulfur dioxide, nitrogen oxides, and mercury to the atmosphere from coal-fired electric power generating facilities in the United States inflicts harm on the public health, economy, and natural resources of the United States;

(15) fossil fuel-fired electric power generating facilities emit approximately 67 percent of the total sulfur dioxide emissions, 23 percent of the total nitrogen oxide emissions, 40 percent of the total carbon dioxide emissions, and 40 percent of the total mercury emissions in the United States;

(16) while the reductions in emissions of sulfur dioxide, nitrogen oxides, and mercury that will occur in the presence of a declining cap on the greenhouse gas emissions from coal-fired electric power generating facilities are larger than those that would occur in the absence of such a cap, new, stricter Federal

limits on emissions of sulfur dioxide, nitrogen oxides, and mercury may still be needed to protect public health; and

(17) many existing fossil fuel-fired electric power generating facilities were exempted by Congress from emissions limitations applicable to new and modified units based on an expectation by Congress that, over time, the units would be retired or updated with new pollution control equipment, but many of the exempted facilities nevertheless continue to operate and emit pollutants at relatively high rates and without new pollution control equipment.

SEC. 3. PURPOSES.

The purposes of this Act are—

(1) to establish the core of a Federal program that will reduce United States greenhouse gas emissions substantially enough between 2007 and 2050 to avert the catastrophic impacts of global climate change; and

(2) to accomplish that purpose while preserving robust growth in the United States economy, creating new jobs, and avoiding the imposition of hardship on United States citizens.

SEC. 4. DEFINITIONS.

In this Act:

(1) ADDITIONAL; ADDITIONALITY.—The terms "additional" and "additionality" mean the extent to which reductions in greenhouse gas emissions or increases in sequestration are incremental to business-as-usual, measured as the difference between—

(A) baseline greenhouse gas fluxes of an offset project; and

(B) greenhouse gas fluxes of the offset project.

(2) ADMINISTRATOR.—The term "Administrator" means the Administrator of the Environmental Protection Agency.

(3) BASELINE.—The term "baseline" means the greenhouse gas flux or carbon stock that would have occurred in the absence of an offset project.

(4) BIOLOGICAL SEQUESTRATION; BIOLOGICALLY SEQUESTERED.—The terms "biological sequestration" and "biologically sequestered" mean—

(A) the removal of greenhouse gases from the atmosphere by biological means, such as by growing plants; and

(B) the storage of those greenhouse gases in the plants or related soils.

(5) CARBON DIOXIDE EQUIVALENT.—The term "carbon dioxide equivalent" means, for each green-

house gas, the quantity of the greenhouse gas that the Administrator determines makes the same contribution to global warming as 1 metric ton of carbon dioxide.

(6) CORPORATION.—The term "Corporation" means the Climate Change Credit Corporation established by section 4201(a).

(7) COVERED FACILITY.—The term "covered facility" means—

(A) any facility that uses more than 5,000 tons of coal in a calendar year;

(B) any facility that is a natural gas processing plant or that produces natural gas in the State of Alaska, or any entity that imports natural gas (including liquefied natural gas);

(C) any facility that in any year produces, or any entity that in any year imports, petroleum- or coal-based liquid or gaseous fuel, the combustion of which will emit a group I greenhouse gas, assuming no capture and sequestration of that gas;

(D) any facility that in any year produces for sale or distribution, or any entity that in any year imports, more than 10,000 carbon dioxide equivalents of chemicals that are group I

greenhouse gas, assuming no capture and destruction or sequestration of that gas; or

(E) any facility that in any year emits as a byproduct of the production of hydrochlorofluorocarbons more than 10,000 carbon dioxide equivalents of hydrofluorocarbons.

(8) DESTRUCTION.—The term "destruction" means the conversion of a greenhouse gas by thermal, chemical, or other means—

(A) to another gas with a low- or zero-global warming potential; and

(B) for which credit given reflects the extent of reduction in global warming potential actually achieved.

(9) EMISSION ALLOWANCE.—The term "emission allowance" means an authorization to emit 1 carbon dioxide equivalent of greenhouse gas.

(10) EMISSION ALLOWANCE ACCOUNT.—The term "Emission Allowance Account" means the aggregate of emission allowances that the Administrator establishes for a calendar year.

(11) FACILITY.—The term "facility" means—

(A) 1 or more buildings, structures, or installations located on 1 or more contiguous or

adjacent properties of an entity in the United States; and

(B) at the option of the Administrator, any activity or operation that—

(i) emits 10,000 carbon dioxide equivalents in any year; and

(ii) has a technical connection with the activities carried out at a facility, such as use of transportation fleets, pipelines, transmission lines, and distribution lines, but that is not conducted or located on the property of the facility.

(12) FAIR MARKET VALUE.—The term "fair market value" means the average market price, in a particular calendar year, of an emission allowance.

(13) GEOLOGICAL SEQUESTRATION; GEOLOGICALLY SEQUESTERED.—The terms "geological sequestration" and "geologically sequestered" mean the permanent isolation of greenhouse gases, without reversal, in geological formations, in accordance with part C of the Safe Drinking Water Act (42 U.S.C. 300h et seq.), as determined by the Administrator.

(14) GROUP I GREENHOUSE GAS.——The term "group I greenhouse gas" means any of—

(A) carbon dioxide;

(B) methane;

(C) nitrous oxide;

(D) sulfur hexafluoride; or

(E) a perfluorocarbon.

(15) GROUP II GREENHOUSE GAS.—The term "group II greenhouse gas" means a hydrofluorocarbon.

(16) LEAKAGE.—The term "leakage" means—

(A) a significant unaccounted increase in greenhouse gas emissions by a facility or entity caused by an offset project that produces an accounted reduction in greenhouse gas emissions, as determined by the Administrator; or

(B) a significant unaccounted decrease in sequestration that is caused by an offset project that results in an accounted increase in sequestration, as determined by the Administrator.

(17) LOAD-SERVING ENTITY.—The term "load-serving entity" means an entity, whether public or private—

(A) that has a legal, regulatory, or contractual obligation to deliver electricity to retail consumers; and

(B) whose rates and costs are, except in the case of a registered electric cooperative, regulated

by a State agency, regulatory commission, municipality, or public utility district.

(18) NATURAL GAS PROCESSING PLANT.—The term "natural gas processing plant" means a facility in the United States that is designed to separate natural gas liquids from natural gas.

(19) NEW ENTRANT.—The term "new entrant" means any facility that commences operation on or after January 1, 2008.

(20) OFFSET ALLOWANCE.—The term "offset allowance" means a unit of reduction in the quantity of emissions or an increase in sequestration equal to 1 carbon dioxide equivalent at an entity that is not a covered facility, where the reduction in emissions or increase in sequestration is eligible to be used as an additional means of compliance for the submission requirements established under section 1202.

(21) OFFSET PROJECT.—The term "offset project" means a domestic project, other than a project at a covered facility, that reduces greenhouse gas emissions or increases terrestrial sequestration of carbon dioxide.

(22) PROJECT DEVELOPER.—The term "project developer" means an individual or entity implementing an offset project.

(23) RETAIL RATE FOR DISTRIBUTION SERVICE.—

(A) IN GENERAL.—The term "retail rate for distribution service" means the rate that a load-serving entity charges for the use of the system of the load-serving entity.

(B) EXCLUSION.—The term "retail rate for distribution service" does not include any energy component of the rate.

(24) RETIRE AN EMISSION ALLOWANCE.—The term "retire an emission allowance" means to disqualify an emission allowance for any subsequent use, regardless of whether the use is a sale, exchange, or submission of the allowance in satisfying a compliance obligation.

(25) REVERSAL.—The term "reversal" means an intentional or unintentional loss of sequestered carbon dioxide to the atmosphere in significant quantities, as determined by the Administrator, in order to accomplish the purposes of this Act in an effective and efficient manner.

(26) RURAL ELECTRIC COOPERATIVE.—The term "rural electric cooperative" means a cooperatively-owned association that was in existence as of October 18, 2007, and is eligible to receive loans under section

4 of the Rural Electrification Act of 1936 (7 U.S.C. 904).

(27) SEQUESTERED AND SEQUESTRATION.—The terms "sequestered" and "sequestration" mean the capture, permanent separation, isolation, or removal of greenhouse gases from the atmosphere, as determined by the Administrator.

(28) STATE REGULATORY AUTHORITY.—The term "State regulatory authority" means any State agency that has ratemaking authority with respect to the retail rate for distribution service.

TITLE I—CAPPING GREENHOUSE GAS EMISSIONS

Subtitle A—Tracking Emissions

SEC. 1101. PURPOSE.

The purpose of this subtitle is to establish a Federal greenhouse gas registry that—

(1) is complete, consistent, transparent, and accurate;

(2) will collect reliable and accurate data that can be used by public and private entities to design efficient and effective energy security initiatives and greenhouse gas emission reduction strategies; and

(3) will provide appropriate high-quality data to be used for implementing greenhouse gas reduction policies.

SEC. 1102. DEFINITIONS.

In this subtitle:

(1) AFFECTED FACILITY.—

(A) IN GENERAL.—The term "affected facility" means—

(i) a covered facility;

(ii) another facility that emits a greenhouse gas, as determined by the Administrator; and

(iii) at the option of the Administrator, a vehicle fleet with emissions of more than 10,000 carbon dioxide equivalents in any year, assuming no double-counting of emissions.

(B) EXCLUSIONS.—The term "affected facility" does not include any facility that—

(i) is not a covered facility;

(ii) is owned or operated by a small business (as described in part 121 of title 13, Code of Federal Regulations (or a successor regulation)); and

(iii) emits fewer than 10,000 carbon dioxide equivalents in any year.

(2) CARBON CONTENT.—The term "carbon content" means the quantity of carbon (in carbon dioxide equivalent) contained in a fuel.

(3) CLIMATE REGISTRY.—The term "Climate Registry" means the greenhouse gas emissions registry jointly established and managed by more than 40 States and Indian tribes to collect high-quality greenhouse gas emission data from facilities, corporations, and other organizations to support various greenhouse gas emission reporting and reduction policies for the member States and Indian tribes.

(4) FEEDSTOCK FOSSIL FUEL.—The term "feedstock fossil fuel" means fossil fuel used as raw material in a manufacturing process.

(5) GREENHOUSE GAS EMISSIONS.—The term "greenhouse gas emissions" means emissions of a greenhouse gas, including—

(A) stationary combustion source emissions emitted as a result of combustion of fuels in stationary equipment, such as boilers, furnaces, burners, turbines, heaters, incinerators, engines, flares, and other similar sources;

(B) process emissions consisting of emissions from chemical or physical processes other than combustion;

(C) fugitive emissions consisting of intentional and unintentional emissions from equipment leaks, such as joints, seals, packing, and gaskets, or from piles, pits, cooling towers, and other similar sources; and

(D) biogenic emissions resulting from biological processes, such as anaerobic decomposition, nitrification, and denitrification.

(6) INDIAN TRIBE.—The term "Indian tribe" has the meaning given the term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b).

(7) REGISTRY.—The term "Registry" means the Federal greenhouse gas registry established under section 1105(a).

(8) SOURCE.—The term "source" means any building, structure, installation, unit, point, operation, vehicle, land area, or other item that emits or may emit a greenhouse gas.

SEC. 1103. REPORTING REQUIREMENTS.

(a) IN GENERAL.—Subject to this section, each affected facility shall submit to the Administrator, for inclusion in

the Registry, periodic reports, including annual and quarterly data, that—

(1) include the quantity and type of fossil fuels, including feedstock fossil fuels, that are extracted, produced, refined, imported, exported, or consumed at or by the facility;

(2) include the quantity of hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, nitrous oxide, carbon dioxide that has been captured and sequestered, and other greenhouse gases generated, produced, imported, exported, or consumed at or by the facility;

(3) include the quantity of electricity generated, imported, exported, or consumed by or at the facility, and information on the quantity of greenhouse gases emitted when the imported, exported, or consumed electricity was generated, as determined by the Administrator;

(4) include the aggregate quantity of all greenhouse gas emissions from sources at the facility, including stationary combustion source emissions, process emissions, and fugitive emissions;

(5) include greenhouse gas emissions expressed in metric tons of each greenhouse gas emitted and in the quantity of carbon dioxide equivalents of each greenhouse gas emitted;

(6) include a list and description of sources of greenhouse gas emissions at the facility;

(7) quantify greenhouse gas emissions in accordance with the measurement standards established under section 1104;

(8) include other data necessary for accurate and complete accounting of greenhouse gas emissions, as determined by the Administrator;

(9) include an appropriate certification regarding the accuracy and completeness of reported data, as determined by the Administrator; and

(10) are submitted electronically to the Administrator, in such form and to such extent as may be required by the Administrator.

(b) DE MINIMIS EXEMPTIONS.—

(1) IN GENERAL.—The Administrator may determine—

(A) whether certain sources at a facility should be considered to be eligible for a de minimis exemption from a requirement for reporting under subsection (a); and

(B) the level of greenhouse gases emitted from a source that would qualify for such an exemption.

(2) FACTORS.—In making a determination under paragraph (1), the Administrator shall consider the availability and suitability of simplified techniques and tools for quantifying emissions and the cost to measure those emissions relative to the purposes of this title, including the goal of collecting complete and consistent facility-wide data.

(c) VERIFICATION OF REPORT REQUIRED.—Before including the information from a report required under this section in the Registry, the Administrator shall verify the completeness and accuracy of the report using information provided under this section, obtained under section 9002(c), or obtained under other provisions of law.

(d) TIMING.—

(1) CALENDAR YEARS 2004 THROUGH 2007.—For a baseline period of calendar years 2004 through 2007, each affected facility shall submit required annual data described in this section to the Administrator not later than March 31, 2009.

(2) SUBSEQUENT CALENDAR YEARS.—For calendar year 2008 and each subsequent calendar year, each affected facility shall submit quarterly data described in this section to the Administrator not later than 60 days after the end of the applicable quarter.

(e) NO EFFECT ON OTHER REQUIREMENTS.—Nothing in this title affects any requirement in effect as of the date of enactment of this Act relating to the reporting of—

(1) fossil fuel production, refining, importation, exportation, or consumption data;

(2) greenhouse gas emission data; or

(3) other relevant data.

SEC. 1104. DATA QUALITY AND VERIFICATION.

(a) PROTOCOLS AND METHODS.—

(1) IN GENERAL.—The Administrator shall establish by regulation, taking into account the work done by the Climate Registry, comprehensive protocols and methods to ensure the accuracy, completeness, consistency, and transparency of data on greenhouse gas emissions and fossil fuel production, refining, importation, exportation, and consumption submitted to the Registry that include—

(A) accounting and reporting standards for fossil fuel production, refining, importation, exportation, and consumption;

(B) a requirement that, where technically feasible, submitted data are monitored using monitoring systems for fuel flow or emissions, such as continuous emission monitoring systems

or equivalent systems of similar rigor, accuracy, quality, and timeliness;

(C) a requirement that, if a facility has already been directed to monitor emissions of a greenhouse gas using a continuous emission monitoring system under existing law, that system be used in complying with this Act with respect to the greenhouse gas;

(D) for cases in which the Administrator determines that monitoring emissions with the precision, reliability, accessibility, and timeliness similar to that provided by a continuous emission monitoring system are not technologically feasible, standardized methods for calculating greenhouse gas emissions in specific industries using other readily available and reliable information, such as fuel consumption, materials consumption, production, or other relevant activity data, on the condition that those methods do not underreport emissions, as compared with the continuous emission monitoring system;

(E) information on the accuracy of measurement and calculation methods;

(F) methods to avoid double-counting of greenhouse gas emissions;

(G) protocols to prevent an affected facility from avoiding the reporting requirements of this title (such as by reorganizing into multiple entities or outsourcing activities that result in greenhouse gas emissions); and

(H) protocols for verification of data submitted by affected facilities.

(2) BEST PRACTICES.—The protocols and methods developed under paragraph (1) shall incorporate and conform to the best practices from the most recent Federal, State, and international protocols for the measurement, accounting, reporting, and verification of greenhouse gas emissions to ensure the accuracy, completeness, and consistency of the data.

(b) VERIFICATION; INFORMATION BY REPORTING ENTITIES.—Each affected facility shall—

(1) provide information sufficient for the Administrator to verify, in accordance with the protocols and methods developed under subsection (a), that the fossil fuel data and greenhouse gas emission data of the affected facility have been completely and accurately reported; and

(2) ensure the submission or retention, for the 5-year period beginning on the date of provision of the information, of—

(A) data sources;

(B) information on internal control activities;

(C) information on assumptions used in reporting emissions and fuels;

(D) uncertainty analyses; and

(E) other relevant data and information to facilitate the verification of reports submitted to the Registry.

(c) WAIVER OF REPORTING REQUIREMENTS.—The Administrator may waive reporting requirements for specific facilities if the Administrator determines that sufficient and equally or more reliable data are available under other provisions of law.

(d) MISSING DATA.—If information, satisfactory to the Administrator, is not provided for an affected facility, the Administrator shall—

(1) prescribe methods to estimate emissions for the facility for each period for which data are missing, reflecting the highest emission levels that may reasonably have occurred during the period for which data are missing; and

(2) take appropriate enforcement action pursuant to this section and section 9002(b).

SEC. 1105. FEDERAL GREENHOUSE GAS REGISTRY.

(a) ESTABLISHMENT.—The Administrator shall establish a Federal greenhouse gas registry.

(b) ADMINISTRATION.—In establishing the Registry, the Administrator shall—

(1) design and operate the Registry;

(2) establish an advisory body that is broadly representative of private enterprise, agriculture, environmental groups, and State, tribal, and local governments to guide the development and management of the Registry;

(3) provide coordination and technical assistance for the development of proposed protocols and methods, taking into account the duties carried out by the Climate Registry, to be published by the Administrator;

(4)(A) develop an electronic format for reporting under guidelines established under section 1104(a)(1); and

(B) make the electronic format available to reporting entities;

(5) verify and audit the data submitted by reporting entities;

(6) establish consistent policies for calculating carbon content and greenhouse gas emissions for each type of fossil fuel reported under section 1103;

(7) calculate carbon content and greenhouse gas emissions associated with the combustion of fossil fuel data reported by reporting entities;

(8) immediately publish on the Internet all information contained in the Registry, except in any case in which publishing the information would result in a disclosure of—

(A) information vital to national security, as determined by the President; or

(B) confidential business information that cannot be derived from information that is otherwise publicly available and that would cause significant calculable competitive harm if published (except that information relating to greenhouse gas emissions shall not be considered to be confidential business information).

(c) THIRD-PARTY VERIFICATION.—The Administrator may use the services of third parties that have no conflicts of interest to verify reports required under section 1103.

(d) REGULATIONS.—The Administrator shall—

(1) not later than 180 days after the date of enactment of this Act, propose regulations to carry out this section; and

(2) not later than July 1, 2008, promulgate final regulations to carry out this section.

SEC. 1106. ENFORCEMENT.

(a) CIVIL ACTIONS.—The Administrator may bring a civil action in United States district court against the owner or operator of an affected facility that fails to comply with any requirement of this subtitle.

(b) PENALTY.—Any person that has violated or is violating this subtitle shall be subject to a civil penalty of not more than $25,000 per day of each violation.

Subtitle B—Reducing Emissions

SEC. 1201. EMISSION ALLOWANCE ACCOUNT.

(a) IN GENERAL.—The Administrator shall establish a separate quantity of emission allowances for each of calendar years 2012 through 2050.

(b) IDENTIFICATION NUMBERS.—The Administrator shall assign to each emission allowance established under subsection (a) a unique identification number that includes the calendar year for which that emission allowance was established.

(c) LEGAL STATUS OF EMISSION ALLOWANCES.—

(1) IN GENERAL.—An emission allowance shall not be a property right.

(2) TERMINATION OR LIMITATION.—Nothing in this Act or any other provision of law limits the authority of the United States to terminate or limit an emission allowance.

(3) OTHER PROVISIONS UNAFFECTED.—Nothing in this Act relating to emission allowances shall affect the application of, or compliance with, any other provision of law to or by a covered facility.

(d) ALLOWANCES FOR EACH CALENDAR YEAR.—The numbers of emission allowances established by the Administrator for each of calendar years 2012 through 2050 shall be as follows:

Calendar Year	*Number of Emission Allowances (in Millions)*
2012	*5,775*
2013	*5,669*
2014	*5,562*
2015	*5,456*
2016	*5,349*
2017	*5,243*
2018	*5,137*
2019	*5,030*
2020	*4,924*
2021	*4,817*
2022	*4,711*

Calendar Year	*Number of Emission Allowances (in Millions)*
2023	*4,605*
2024	*4,498*
2025	*4,392*
2026	*4,286*
2027	*4,179*
2028	*4,073*
2029	*3,966*
2030	*3,860*
2031	*3,754*
2032	*3,647*
2033	*3,541*
2034	*3,435*
2035	*3,328*
2036	*3,222*
2037	*3,115*
2038	*3,009*
2039	*2,903*
2040	*2,796*
2041	*2,690*
2042	*2,584*
2043	*2,477*
2044	*2,371*
2045	*2,264*
2046	*2,158*
2047	*2,052*
2048	*1,945*
2049	*1,839*

Calendar Year	*Number of Emission Allowances (in Millions)*
2050	*1,732*

SEC. 1202. COMPLIANCE OBLIGATION.

(a) IN GENERAL.—Not later than 90 days after the end of a calendar year, the owner or operator of a covered facility shall submit to the Administrator an emission allowance, an offset allowance awarded pursuant to subtitle D of title II, or an international emission allowance obtained in compliance with regulations promulgated under section 2502, for each carbon dioxide equivalent of—

(1) group I greenhouse gas that was emitted by the use of coal by that covered facility during the preceding year;

(2) group I greenhouse gas that will, assuming no capture and sequestration of that gas, be emitted from the use of any petroleum- or coal-based liquid or gaseous fuel that was produced or imported by that covered facility during the preceding year;

(3) group I greenhouse gas that was produced for sale or distribution or imported by that facility during the preceding year;

(4) group II greenhouse gas that was emitted as a byproduct of hydrochlorofluorocarbon production; and

(5) group I greenhouse gas that will, assuming no capture and destruction or sequestration of that gas, be emitted—

(A) from the use of natural gas that was, by that covered facility, processed, imported, or produced and not reinjected into the field; or

(B) from the use of natural gas liquids that were processed or imported by that covered facility during the preceding year.

(b) REQUIREMENTS.—

(1) ASSUMPTIONS.—For the purpose of calculating the submission requirement under paragraphs (2) through (5) of subsection (a), the Administrator shall, subject to subsections (e) through (g), assume that no capture, sequestration, chemical retention, or other retention of a greenhouse gas has occurred or will occur.

(2) FACTORS FOR CONSIDERATION.—For the purpose of calculating the submission requirement under paragraph (1) of subsection (a), the Administrator shall take into account any metric tons of carbon dioxide that the owner or operator has geologically sequestered during the preceding calendar year.

(c) RETIREMENT OF ALLOWANCES.—Immediately upon receipt of an emission allowance under subsection (a), the Administrator shall retire the emission allowance.

(d) DETERMINATION OF COMPLIANCE.—Not later than July 1 of each year, the Administrator shall determine whether the owners and operators of all covered facilities are in full compliance with subsection (a) for the preceding year.

(e) FEEDSTOCK CREDIT.—If the Administrator determines that an entity has used a petroleum- or coal-based product, natural gas, or a natural gas liquid as a feedstock during any of calendar years 2012 through 2050, such that no group I greenhouse gas associated with that feedstock will be emitted, the Administrator shall establish and distribute to that entity a quantity of emission allowances equal to the quantity of emission allowances, offset allowances, or international emission allowances submitted under subsection (a) for that petroleum- or coal-based product, natural gas, or natural gas liquid.

(f) SEQUESTRATION CREDIT.—If the Administrator determines that the owner or operator of a covered facility that is subject to the submission requirement under any of paragraphs (2) through (5) of subsection (a) has geologically sequestered carbon dioxide during any of calendar years 2012 through 2050, the Administrator shall establish

and distribute to that owner or operator a quantity of emission allowances equal to the number of metric tons of carbon dioxide that the owner or operator geologically sequestered during that calendar year.

(g) DESTRUCTION CREDIT.—If the Administrator determines that an entity has destroyed greenhouse gas during any of calendar years 2012 through 2050, the Administrator shall establish and distribute to that entity a quantity of emission allowances equal to the number of carbon dioxide equivalents of greenhouse gas that the owner or operator destroyed during that calendar year.

SEC. 1203. PENALTY FOR NONCOMPLIANCE.

(a) EXCESS EMISSIONS PENALTY.—

(1) IN GENERAL.—The owner or operator of any covered facility that fails for any year to submit to the Administrator by the deadline described in section 1202(a) or 2303, 1 or more of the emission allowances due pursuant to either of those sections shall be liable for the payment to the Administrator of an excess emissions penalty.

(2) AMOUNT.—The amount of an excess emissions penalty required to be paid under paragraph (1) shall be, as determined by the Administrator, an amount equal to the product obtained by multiplying—

(A) the number of excess emission allowances that the owner or operator failed to submit; and

(B) the greater of—

(i) $200; or

(ii) a dollar figure representing 3 times the mean market value of an emission allowance during the calendar year for which the emission allowances were due.

(3) TIMING.—An excess emissions penalty required under this subsection shall be immediately due and payable to the Administrator, without demand, in accordance with such regulations as shall be promulgated by the Administrator by the date that is 1 year after the date of enactment of this Act.

(4) DEPOSIT.—The Administrator shall deposit each excess emissions penalty paid under this subsection in the Treasury of the United States.

(5) NO EFFECT ON LIABILITY.—An excess emissions penalty due and payable by the owner or operator of a covered facility under this subsection shall not diminish the liability of the owner or operator for any fine, penalty, or assessment against the owner or operator for the same violation under any other provision of this Act or any other law.

(b) EXCESS EMISSION ALLOWANCE.—

(1) IN GENERAL.—The owner or operator of a covered facility that fails for any year to submit to the Administrator by the deadline described in section 1202(a) or 2303 1 or more of the emission allowances due pursuant to either of those sections shall be liable to offset the excess emissions by an equal quantity, in tons, during—

(A) the following calendar year; or

(B) such longer period as the Administrator may prescribe.

(2) PLAN.—

(A) IN GENERAL.—Not later than 60 days after the end of the calendar year during which a covered facility emits excess emissions, the owner or operator of the covered facility shall submit to the Administrator, and to the State in which the covered facility is located, a proposed plan to achieve the required offsets for the excess emissions.

(B) CONDITION OF OPERATION.—Upon approval of a proposed plan described in subparagraph (A) by the Administrator, the plan, as submitted, modified, or conditioned, shall be considered to be a condition of the operating permit

for the covered facility, without further review or revision of the permit.

(C) DEDUCTION OF ALLOWANCES.—For each covered facility that, in any calendar year, emits excess emissions, the Administrator shall deduct, from emission allowances allocated to the covered facility for the calendar year, or for succeeding years during which offsets are required, emission allowances equal to the excess quantity, in tons, of the excess emissions.

(c) PROHIBITION.—It shall be unlawful for the owner or operator of any facility liable for a penalty and offset under this section to fail—

(1) to pay the penalty in accordance with this section;

(2) to provide, and thereafter comply with, a proposed plan for compliance as required by subsection (b)(2); and

(3) to offset excess emissions as required by subsection (b)(1).

(d) NO EFFECT ON OTHER SECTION.—Nothing in this subtitle limits or otherwise affects the application of section 9002(b).

SEC. 1204. RULEMAKING.

Not later than 2 years after the date of enactment of this Act, the Administrator shall, by rule, expand the definition of the term "covered facility" to ensure the inclusion of all greenhouse gas emissions from natural gas emitted, flared during production or processing, or sold for use in the United States.

TITLE II—MANAGING AND CONTAINING COSTS EFFICIENTLY

Subtitle A—Trading

SEC. 2101. SALE, EXCHANGE, AND RETIREMENT OF EMISSION ALLOWANCES.

Except as otherwise provided in this Act, the lawful holder of an emission allowance may, without restriction, sell, exchange, transfer, submit for compliance in accordance with section 1202, or retire the emission allowance.

SEC. 2102. NO RESTRICTION ON TRANSACTIONS.

The privilege of purchasing, holding, selling, exchanging, and retiring emission allowances shall not be restricted to the owners and operators of covered facilities.

SEC. 2103. ALLOWANCE TRANSFER SYSTEM.

(a) IN GENERAL.—Not later than 18 months after the date of enactment of this Act, the Administrator shall promulgate regulations to carry out the provisions of this Act relating to emission allowances, including regulations providing that the transfer of emission allowances shall not be

effective until such date as a written certification of the transfer, signed by a responsible official of each party to the transfer, is received and recorded by the Administrator in accordance with those regulations.

(b) TRANSFERS.—

(1) IN GENERAL.—The regulations promulgated under subsection (a) shall permit the transfer of allowances prior to the issuance of the allowances.

(2) DEDUCTION AND ADDITION OF TRANSFERS.—A recorded pre-allocation transfer of allowances shall be—

(A) deducted by the Administrator from the number of allowances that would otherwise be distributed to the transferor; and

(B) added to those allowances distributed to the transferee.

SEC. 2104. ALLOWANCE TRACKING SYSTEM.

The regulations promulgated under section 2103(a) shall include a system for issuing, recording, and tracking emission allowances that shall specify all necessary procedures and requirements for an orderly and competitive functioning of the emission allowance system.

Subtitle B—Banking

SEC. 2201. INDICATION OF CALENDAR YEAR.

An emission allowance submitted to the Administrator by the owner or operator of a covered facility in accordance with section 1202(a) shall not be required to indicate in the identification number of the emission allowance the calendar year for which the emission allowance is submitted.

SEC. 2202. EFFECT OF TIME.

The passage of time shall not, by itself, cause an emission allowance to be retired or otherwise diminish the compliance value of the emission allowance.

Subtitle C—Borrowing

SEC. 2301. REGULATIONS.

(a) IN GENERAL.—Not later than 3 years after the date of enactment of this Act, the Administrator shall promulgate regulations under which, subject to subsection (b), the owner or operator of a covered facility may—

(1) borrow emission allowances from the Administrator; and

(2) for a calendar year, submit borrowed emission allowances to the Administrator in satisfaction of up to 15 percent of the compliance obligation under section 1202(a).

(b) LIMITATION.—An emission allowance borrowed under subsection (a) shall be an emission allowance estab-

lished by the Administrator for a specific future calendar year under subsection 1201(a).

SEC. 2302. TERM.

The owner or operator of a covered facility shall not submit, and the Administrator shall not accept, a borrowed emission allowance in partial satisfaction of the compliance obligation under section 1202(a) for any calendar year that is more than 5 years earlier than the calendar year included in the identification number of the borrowed emission allowance.

SEC. 2303. REPAYMENT WITH INTEREST.

For each borrowed emission allowance submitted in partial satisfaction of the compliance obligation under subsection 1202(a) for a particular calendar year (referred to in this section as the "use year"), the number of emission allowances that the owner or operator is required to submit under section 1202(a) for the year from which the borrowed emission allowance was taken (referred to in this section as the "source year") shall be increased by an amount equal to the product obtained by multiplying—

(1) 1.1; and

(2) the number of years beginning after the use year and before the source year.

Subtitle D—Offsets

SEC. 2401. OUTREACH INITIATIVE ON REVENUE ENHANCEMENT FOR AGRICULTURAL PRODUCERS.

(a) ESTABLISHMENT.—The Secretary of Agriculture, acting through the Chief of the Natural Resources Conservation Service, the Chief of the Forest Service, the Administrator of the Cooperative State Research, Education, and Extension Service, and land-grant colleges and universities, in consultation with the Administrator and the heads of other appropriate departments and agencies, shall establish an outreach initiative to provide information to agricultural producers, agricultural organizations, foresters, and other landowners about opportunities under this subtitle to earn new revenue.

(b) COMPONENTS.—The initiative under this section—

(1) shall be designed to ensure that, to the maximum extent practicable, agricultural organizations and individual agricultural producers, foresters, and other landowners receive detailed practical information about—

(A) opportunities to earn new revenue under this subtitle;

(B) measurement protocols, monitoring, verifying, inventorying, registering, insuring, and marketing offsets under this title;

(C) emerging domestic and international markets for energy crops, allowances, and offsets; and

(D) local, regional, and national databases and aggregation networks to facilitate achievement, measurement, registration, and sales of offsets;

(2) shall provide—

(A) outreach materials, including the handbook published under subsection (c), to interested parties;

(B) workshops; and

(C) technical assistance; and

(3) may include the creation and development of regional marketing centers or coordination with existing centers (including centers within the Natural Resources Conservation Service or the Cooperative State Research, Education, and Extension Service or at land-grant colleges and universities).

(c) HANDBOOK.—

(1) IN GENERAL.—Not later than 2 years after the date of enactment of this Act, the Secretary of Agriculture, in consultation with the Administrator and after an opportunity for public comment, shall publish a handbook for use by agricultural producers, ag-

ricultural cooperatives, foresters, other landowners, offset buyers, and other stakeholders that provides easy-to-use guidance on achieving, reporting, registering, and marketing offsets.

(2) DISTRIBUTION.—The Secretary of Agriculture shall ensure, to the maximum extent practicable, that the handbook—

(A) is made available through the Internet and in other electronic media;

(B) includes, with respect to the electronic form of the handbook described in subparagraph (A), electronic forms and calculation tools to facilitate the petition process described in section 2404; and

(C) is distributed widely through land-grant colleges and universities and other appropriate institutions.

SEC. 2402. ESTABLISHMENT OF DOMESTIC OFFSET PROGRAM.

(a) ALTERNATIVE MEANS OF COMPLIANCE.—Beginning with calendar year 2012, the owner or operator of a covered entity may satisfy up to 15 percent of the total allowance submission requirement of the covered entity under section 1202(a) by submitting offset allowances generated in accordance with this subtitle.

(b) REGULATIONS REQUIRED.—

(1) IN GENERAL.—Not later than 18 months after the date of enactment of this Act, the Administrator, in conjunction with the Secretary of Agriculture, shall promulgate regulations authorizing the issuance and certification of offset allowances.

(2) CERTAIN SOURCES.—

(A) IN GENERAL.—For offsets from sources of greenhouse gases not linked to agricultural, forestry, or other land use-related projects, the regulations promulgated under this subsection shall require that the owner of the project establish the project baseline and register emissions under the Federal Greenhouse Gas Registry established under section 1105.

(B) REQUIREMENT.—The regulations described in subparagraph (A) shall—

(i) authorize the issuance and certification of offset allowances for greenhouse gas emission reductions below the project baseline; and

(ii) ensure that those offsets represent real, verifiable, additional, permanent, and enforceable reductions in greenhouse gas emissions or increases in sequestration.

(3) AGRICULTURAL, FORESTRY, AND OTHER LAND USE-RELATED PROJECTS.—For offsets from certain agricultural, forestry, and other land use-related projects undertaken within the United States, the regulations promulgated under this subsection shall include provisions that—

(A) ensure that those offsets represent real, verifiable, additional, permanent, and enforceable reductions in greenhouse gas emissions or increases in biological sequestration;

(B) specify the types of offset projects eligible to generate offset allowances, in accordance with section 2403;

(C) establish procedures for project initiation and approval, in accordance with section 2404;

(D) establish procedures to monitor, quantify, and discount reductions in greenhouse gas emissions or increases in biological sequestration, in accordance with subsections (d) through (g) of section 2404;

(E) establish procedures for third-party verification, registration, and issuance of offset allowances, in accordance with section 2405;

(F) ensure permanence of offsets by mitigating and compensating for reversals, in accordance with section 2406; and

(G) assign a unique serial number to each offset allowance issued under this section.

(c) OFFSET ALLOWANCES AWARDED.—The Administrator shall issue offset allowances for qualifying emission reductions and biological sequestrations from offset projects that satisfy the applicable requirements of this subtitle.

(d) OWNERSHIP.—Initial ownership of an offset allowance shall lie with a project developer, unless otherwise specified in a legally-binding contract or agreement.

(e) TRANSFERABILITY.—An offset allowance generated pursuant to this subtitle may be sold, traded, or transferred, on the conditions that—

(1) the offset allowance has not expired or been retired or canceled; and

(2) liability and responsibility for mitigating and compensating for reversals of registered offset allowances is specified in accordance with section 2406(b).

SEC. 2403. ELIGIBLE OFFSET PROJECT TYPES.

(a) IN GENERAL.—Offset allowances from agricultural, forestry, and other land use-related projects shall be limited to those allowances achieving an offset of 1 or more

greenhouse gases by a method other than a reduction of combustion of greenhouse gas-emitting fuel.

(b) CATEGORIES OF ELIGIBLE OFFSET PROJECTS.—Subject to the requirements promulgated pursuant to section 2402(b), the types of operations eligible to generate offset allowances under this subtitle include—

(1) agricultural and rangeland sequestration and management practices, including—

(A) altered tillage practices;

(B) winter cover cropping, continuous cropping, and other means to increase biomass returned to soil in lieu of planting followed by fallowing;

(C) conversion of cropland to rangeland or grassland, on the condition that the land has been in nonforest use for at least 10 years before the date of initiation of the project;

(D) reduction of nitrogen fertilizer use or increase in nitrogen use efficiency;

(E) reduction in the frequency and duration of flooding of rice paddies; and

(F) reduction in carbon emissions from organic soils;

(2) changes in carbon stocks attributed to land use change and forestry activities limited to—

(A) afforestation or reforestation of acreage not forested as of October 18, 2007; and

(B) forest management resulting in an increase in forest stand volume;

(3) manure management and disposal, including—

(A) waste aeration; and

(B) methane capture and combustion;

(4) subject to the requirements of this subtitle, any other terrestrial offset practices identified by the Administrator, including—

(A) the capture or reduction of fugitive greenhouse gas emissions for which no covered facility is required under section 1202(a) to submit any emission allowances, offset allowances, or international emission allowances;

(B) methane capture and combustion at nonagricultural facilities; and

(C) other actions that result in the avoidance or reduction of greenhouse gas emissions in accordance with section 2402; and

(5) combinations of any of the offset practices described in paragraphs (1) through (4).

SEC. 2404. PROJECT INITIATION AND APPROVAL.

(a) PROJECT APPROVAL.—A project developer—

(1) may submit a petition for offset project approval at any time following the effective date of regulations promulgated under section 2402(b); but

(2) may not register or issue offset allowances until such approval is received and until after the emission reductions or sequestrations supporting the offset allowances have actually occurred.

(b) PETITION PROCESS.—Prior to offset registration and issuance of offset allowances, a project developer shall submit a petition to the Administrator, consisting of—

(1) a copy of the monitoring and quantification plan prepared for the offset project, as described under subsection (d);

(2) a greenhouse gas initiation certification, as described under subsection (e); and

(3) subject to the requirements of this subtitle, any other information identified by the Administrator in the regulations promulgated under section 2402 as necessary to meet the objectives of this subtitle.

(c) APPROVAL AND NOTIFICATION.—

(1) IN GENERAL.—Not later than 180 days after the date on which the Administrator receives a complete petition under subsection (b), the Administrator shall—

(A) determine whether the monitoring and quantification plan satisfies the applicable requirements of this subtitle;

(B) determine whether the greenhouse gas initiation certification indicates a significant deviation in accordance with subsection (e)(3);

(C) notify the project developer of the determinations under subparagraphs (A) and (B); and

(D) issue offset allowances for approved projects.

(2) APPEAL.—The Administrator shall establish mechanisms for appeal and review of determinations made under this subsection.

(d) MONITORING AND QUANTIFICATION.—

(1) IN GENERAL.—A project developer shall make use of the standardized tools and methods described in this section to monitor, quantify, and discount reductions in greenhouse gas emissions or increases in sequestration.

(2) MONITORING AND QUANTIFICATION PLAN.—A monitoring and quantification plan shall be used to monitor, quantify, and discount reductions in greenhouse gas emissions or increases in sequestration as described by this subsection.

(3) PLAN COMPLETION AND RETENTION.—A monitoring and quantification plan shall be—

(A) completed for all offset projects prior to offset project initiation; and

(B) retained by the project developer for the duration of the offset project.

(4) PLAN REQUIREMENTS.—Subject to section 2402, the Administrator, in conjunction with the Secretary of Agriculture, shall specify the required components of a monitoring and quantification plan, including—

(A) a description of the offset project, including project type;

(B) a determination of accounting periods;

(C) an assignment of reporting responsibility;

(D) the contents and timing of public reports, including summaries of the original data, as well as the results of any analyses;

(E) a delineation of project boundaries, based on acceptable methods and formats;

(F) a description of which of the monitoring and quantification tools developed under subsection (f) are to be used to monitor and quan-

tify changes in greenhouse gas fluxes or carbon stocks associated with a project;

(G) a description of which of the standardized methods developed under subsection (g) to be used to determine additionality, estimate the baseline carbon, and discount for leakage;

(H) based on the standardized methods chosen in subparagraphs (F) and (G), a determination of uncertainty in accordance with subsection (h);

(I) what site-specific data, if any, will be used in monitoring, quantification, and the determination of discounts;

(J) a description of procedures for use in managing and storing data, including quality-control standards and methods, such as redundancy in case records are lost;

(K) subject to the requirements of this subtitle, any other information identified by the Administrator or the Secretary of Agriculture as being necessary to meet the objectives of this subtitle; and

(L) a description of the risk of reversals for the project, including any way in which the pro-

posed project may alter the risk of reversal for the project or other projects in the area.

(e) GREENHOUSE GAS INITIATION CERTIFICATION.—

(1) IN GENERAL.—In reviewing a petition submitted under subsection (b), the Administrator shall seek to exclude each activity that undermines the integrity of the offset program established under this subtitle, such as the conversion or clearing of land, or marked change in management regime, in anticipation of offset project initiation.

(2) GREENHOUSE GAS INITIATION CERTIFICATION REQUIREMENTS.—A greenhouse gas initiation certification developed under this subsection shall include—

(A) the estimated greenhouse gas flux or carbon stock for the offset project for each of the 4 complete calendar years preceding the effective date of the regulations promulgated under section 2402(b); and

(B) the estimated greenhouse gas flux or carbon stock for the offset project, averaged across each of the 4 calendar years preceding the effective date of the regulations promulgated under section 2402(b).

(3) DETERMINATION OF SIGNIFICANT DEVIATION.—Based on standards developed by the Administrator, in conjunction with the Secretary of Agriculture—

(A) each greenhouse gas initiation certification submitted pursuant to this section shall be reviewed; and

(B) a determination shall be made as to whether, as a result of activities or behavior inconsistent with the purposes of this title, a significant deviation exists between the average annual greenhouse gas flux or carbon stock and the greenhouse gas flux or carbon stock for a given year.

(4) ADJUSTMENT FOR PROJECTS WITH SIGNIFICANT DEVIATION.—In the case of a significant deviation, the Administrator shall adjust the number of allowances awarded in order to account for the deviation.

(f) DEVELOPMENT OF MONITORING AND QUANTIFICATION TOOLS FOR OFFSET PROJECTS.—

(1) IN GENERAL.—Subject to section 2402(b), the Administrator, in conjunction with the Secretary of Agriculture, shall develop standardized tools for use in the monitoring and quantification of changes in

greenhouse gas fluxes or carbon stocks for each offset project type listed under section 2403(b).

(2) TOOL DEVELOPMENT.—The tools used to monitor and quantify changes in greenhouse gas fluxes or carbon stocks shall, for each project type, include applicable—

(A) statistically-sound field and remote sensing sampling methods, procedures, techniques, protocols, or programs;

(B) models, factors, equations, or look-up tables; and

(C) any other process or tool considered to be acceptable by the Administrator, in conjunction with the Secretary of Agriculture.

(g) DEVELOPMENT OF ACCOUNTING AND DISCOUNTING METHODS.—

(1) IN GENERAL.—The Administrator, in consultation with the Secretary of Agriculture, shall—

(A) develop standardized methods for use in accounting for additionality and uncertainty, estimating the baseline, and discounting for leakage for each offset project type listed under section 2403(b); and

(B) require that leakage be subtracted from reductions in greenhouse gas emissions or increases in sequestration attributable to a project.

(2) ADDITIONALITY DETERMINATION AND BASELINE ESTIMATION.—The standardized methods used to determine additionality and establish baselines shall, for each project type, at a minimum—

(A) in the case of a sequestration project, determine the greenhouse gas flux and carbon stock on comparable land identified on the basis of—

(i) similarity in current management practices;

(ii) similarity of regional, State, or local policies or programs; and

(iii) similarity in geographical and biophysical characteristics;

(B) in the case of an emission reduction project, use as a basis emissions from comparable land or facilities; and

(C) in the case of a sequestration project or emission reduction project, specify a selected time period.

(3) LEAKAGE.—The standardized methods used to determine and discount for leakage shall, at a minimum, take into consideration—

(A) the scope of the offset system in terms of activities and geography covered;

(B) the markets relevant to the offset project;

(C) emission intensity per unit of production, both inside and outside of the offset project; and

(D) a time period sufficient in length to yield a stable leakage rate.

(h) UNCERTAINTY FOR AGRICULTURAL AND FORESTRY PROJECTS.—

(1) IN GENERAL.—The Administrator, in conjunction with the Secretary of Agriculture, shall develop standardized methods for use in determining and discounting for uncertainty for each offset project type listed under section 2403(b).

(2) BASIS.—The standardized methods used to determine and discount for uncertainty shall be based on—

(A) the robustness and rigor of the methods used by a project developer to monitor and quan-

tify changes in greenhouse gas fluxes or carbon stocks;

(B) the robustness and rigor of methods used by a project developer to determine additionality and leakage; and

(C) an exaggerated proportional discount that increases relative to uncertainty, as determined by the Administrator, in conjunction with the Secretary of Agriculture, to encourage better measurement and accounting.

(i) ACQUISITION OF NEW DATA AND REVIEW OF METHODS FOR AGRICULTURAL AND FORESTRY PROJECTS.—The Administrator, in conjunction with the Secretary of Agriculture, shall—

(1) establish a comprehensive field sampling program to improve the scientific bases on which the standardized tools and methods developed under this section are based; and

(2) review and revise the standardized tools and methods developed under this section, based on—

(A) validation of existing methods, protocols, procedures, techniques, factors, equations, or models;

(B) development of new methods, protocols, procedures, techniques, factors, equations, or models;

(C) increased availability of field data or other datasets; and

(D) any other information identified by the Administrator, in conjunction with the Secretary of Agriculture, that is necessary to meet the objectives of this subtitle.

(j) EXCLUSION.—No activity for which any emission allowances are received under subtitle G of title III shall generate offset allowances under this subtitle.

SEC. 2405. OFFSET VERIFICATION AND ISSUANCE OF ALLOWANCES.

(a) IN GENERAL.—Offset allowances may be claimed for net emission reductions or increases in sequestration annually, after accounting for any necessary discounts in accordance with section 2404, by submitting a verification report for an offset project to the Administrator.

(b) OFFSET VERIFICATION.—

(1) SCOPE OF VERIFICATION.—A verification report for an offset project shall—

(A) be completed by a verifier accredited in accordance with paragraph (3); and

(B) shall be developed taking into consideration—

(i) the information and methodology contained within a monitoring and quantification plan;

(ii) data and subsequent analysis of the offset project, including—

(I) quantification of net emission reductions or increases in sequestration;

(II) determination of additionality;

(III) calculation of leakage;

(IV) assessment of permanence;

(V) discounting for uncertainty; and

(VI) the adjustment of net emission reductions or increases in sequestration by the discounts determined under clauses (II) through (V); and

(iii) subject to the requirements of this subtitle, any other information identified by the Administrator as being necessary to achieve the purposes of this subtitle.

(2) VERIFICATION REPORT REQUIREMENTS.—The Administrator shall specify the required components of a verification report, including—

(A) the quantity of offsets generated;

(B) the amount of discounts applied;

(C) an assessment of methods (and the appropriateness of those methods);

(D) an assessment of quantitative errors or omissions (and the effect of the errors or omissions on offsets);

(E) any potential conflicts of interest between a verifier and project developer; and

(F) any other provision that the Administrator considers to be necessary to achieve the purposes of this subtitle.

(3) VERIFIER ACCREDITATION.—

(A) IN GENERAL.—Not later than 18 months after the date of enactment of this Act, the Administrator shall promulgate regulations establishing a process and requirements for accreditation by a third-party verifier that has no conflicts of interest.

(B) PUBLIC ACCESSIBILITY.—Each verifier meeting the requirements for accreditation in accordance with this paragraph shall be listed in

a publicly-accessible database, which shall be maintained and updated by the Administrator.

(c) REGISTRATION AND AWARDING OF OFFSETS.—

(1) IN GENERAL.—Not later than 90 days after the date on which the Administrator receives a verification report required under subsection (b), the Administrator shall—

(A) determine whether the offsets satisfy the applicable requirements of this subtitle; and

(B) notify the project developer of that determination.

(2) AFFIRMATIVE DETERMINATION.—In the case of an affirmative determination under paragraph (1), the Administrator shall—

(A) register the offset allowances in accordance with this subtitle; and

(B) issue the offset allowances.

(3) APPEAL AND REVIEW.—The Administrator shall establish mechanisms for the appeal and review of determinations made under this subsection.

SEC. 2406. TRACKING OF REVERSALS FOR SEQUESTRATION PROJECTS.

(a) REVERSAL CERTIFICATION.—

(1) IN GENERAL.—Subject to section 2402, the Administrator shall promulgate regulations requiring

the submission of a reversal certification for each offset project on an annual basis following the registration of offset allowances.

(2) REQUIREMENTS.—A reversal certification submitted in accordance with this subsection shall state—

(A) whether any unmitigated reversal relating to the offset project has occurred in the year preceding the year in which the certification is submitted; and

(B) the quantity of each unmitigated reversal.

(b) EFFECT ON OFFSET ALLOWANCES.—

(1) INVALIDITY.—The Administrator shall declare invalid all offset allowances issued for any offset project that has undergone a complete reversal.

(2) PARTIAL REVERSAL.—In the case of an offset project that has undergone a partial reversal, the Administrator shall render invalid offset allowances issued for the offset project in direct proportion to the degree of reversal.

(c) ACCOUNTABILITY FOR REVERSALS.—Liability and responsibility for compensation of a reversal of a registered offset allowance under subsection (a) shall lie with the owner of the offset allowance, as described in section 2402.

(d) COMPENSATION FOR REVERSALS.—The unmitigated reversal of 1 or more registered offset allowances that were submitted for the purpose of compliance with section 1202(a) shall require the submission of—

(1) an equal number of offset allowances; or

(2) a combination of offset allowances and emission allowances equal to the unmitigated reversal.

(e) PROJECT TERMINATION.—A project developer may cease participation in the domestic offset program established under this subtitle at any time, on the condition that any registered allowances awarded for increases in sequestration have been compensated for by the project developer through the submission of an equal number of any combination of offset allowances and emission allowances.

SEC. 2407. EXAMINATIONS.

(a) REGULATIONS.—Not later than 2 years after the date of enactment of this Act, the Administrator, in conjunction with the Secretary of Agriculture, shall promulgate regulations governing the examination and auditing of offset allowances.

(b) REQUIREMENTS.—The regulations promulgated under this section shall specifically consider—

(1) principles for initiating and conducting examinations;

(2) the type or scope of examinations, including—

(A) reporting and recordkeeping; and

(B) site review or visitation;

(3) the rights and privileges of an examined party; and

(4) the establishment of an appeal process.

SEC. 2408. TIMING AND THE PROVISION OF OFFSET ALLOWANCES.

(a) INITIATION OF OFFSET PROJECTS.—An offset project that commences operation on or after the effective date of regulations promulgated under section 2407(a) shall be eligible to generate offset allowances under this subtitle if the offset project meets the other applicable requirements of this subtitle.

(b) PRE-EXISTING PROJECTS.—

(1) IN GENERAL.—The Administrator may allow for the transition into the Registry of offset projects and banked offset allowances that, as of the effective date of regulations promulgated under section 2407(a), are registered under or meet the standards of the Climate Registry, the California Action Registry, the GHG Registry, the Chicago Climate Exchange, the GHG CleanProjects Registry, or any other Federal, State, or private reporting programs or registries if

the Administrator determines that such other offset projects and banked offset allowances under those other programs or registries satisfy the applicable requirements of this subtitle.

(2) EXCEPTION.—An offset allowance that is expired, retired, or canceled under any other offset program, registry, or market as of the effective date of regulations promulgated under section 2407(a) shall be ineligible for transition into the Registry.

SEC. 2409. OFFSET REGISTRY.

In addition to the requirements established by section 2404, an offset allowance registered under this subtitle shall be accompanied in the Registry by—

(1) a verification report submitted pursuant to section 2405(a);

(2) a reversal certification submitted pursuant to section 2406(b); and

(3) subject to the requirements of this subtitle, any other information identified by the Administrator as being necessary to achieve the purposes of this subtitle.

SEC. 2410. ENVIRONMENTAL CONSIDERATIONS.

(a) COORDINATION TO MINIMIZE NEGATIVE EFFECTS.—In promulgating regulations under this subtitle, the Administrator, in conjunction with the Secretary of Ag-

riculture, shall act (including by rejecting projects, if necessary) to avoid or minimize, to the maximum extent practicable, adverse effects on human health or the environment resulting from the implementation of offset projects under this subtitle.

(b) REPORT ON POSITIVE EFFECTS.—Not later than 2 years after the date of enactment of this Act, the Administrator, in conjunction with the Secretary of Agriculture, shall submit to Congress a report detailing—

(1) the incentives, programs, or policies capable of fostering improvements to human health or the environment in conjunction with the implementation of offset projects under this subtitle; and

(2) the cost of those incentives, programs, or policies.

(c) USE OF NATIVE PLANT SPECIES IN OFFSET PROJECTS.—Not later than 18 months after the date of enactment of this Act, the Administrator, in conjunction with the Secretary of Agriculture, shall promulgate regulations for the selection, use, and storage of native and nonnative plant materials—

(1) to ensure native plant materials are given primary consideration, in accordance with applicable Department of Agriculture guidance for use of native plant materials;

(2) to prohibit the use of Federal- or State-designated noxious weeds; and

(3) to prohibit the use of a species listed by a regional or State invasive plant council within the applicable region or State.

SEC. 2411. PROGRAM REVIEW.

Not later than 5 years after the date of enactment of this Act, and periodically thereafter, the Administrator, in conjunction with the Secretary of Agriculture, shall review and revise, as necessary to achieve the purposes of this Act, the regulations promulgated under this subtitle.

SEC. 2412. RETAIL CARBON OFFSETS.

(a) DEFINITION OF RETAIL CARBON OFFSET.—In this section, the term "retail carbon offset" means any carbon credit or carbon offset that cannot be used in satisfaction of any mandatory compliance obligation under a regulatory system for reducing greenhouse gas emissions.

(b) QUALIFYING LEVELS AND REQUIREMENTS.—Not later than January 1, 2009, the Administrator shall establish new qualifying levels and requirements for Energy Star certification for retail carbon offsets, effective beginning January 1, 2010.

Subtitle E—International Emission Allowances

SEC. 2501. USE OF INTERNATIONAL EMISSION ALLOWANCES.

The owner or operator of a covered facility may satisfy up to 15 percent of the allowance submission requirement of the covered facility under section 1202(a) by submitting emission allowances obtained on a foreign greenhouse gas emissions trading market, on the condition that the Administrator has certified the market in accordance with the regulations promulgated pursuant to section 2502(a).

SEC. 2502. REGULATIONS.

(a) IN GENERAL.—Not later than 2 years after the date of enactment of this Act, the Administrator shall promulgate regulations, taking into consideration protocols adopted in accordance with the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992—

(1) approving the use under this subtitle of emission allowances from such foreign greenhouse gas emissions trading markets as the regulations may establish; and

(2) permitting the use of international emission allowances from the foreign country that issued the emission allowances.

(b) REQUIREMENTS.—The regulations promulgated under subsection (a) shall require that, in order to be approved for use under this subtitle—

(1) an emission allowance shall have been issued by a foreign country pursuant to a governmental program that imposes mandatory absolute tonnage limits on greenhouse gas emissions from the foreign country, or 1 or more industry sectors in that country, pursuant to protocols described in subsection (a); and

(2) the governmental program be of comparable stringency to the program established by this Act, including comparable monitoring, compliance, and enforcement.

SEC. 2503. FACILITY CERTIFICATION.

The owner or operator of a covered facility who submits an international emission allowance under this subtitle shall certify that the allowance has not been retired from use in the registry of the applicable foreign country.

Subtitle F—Carbon Market Efficiency Board

SEC. 2601. PURPOSES.

The purposes of this subtitle are—

(1) to ensure that the imposition of limits on greenhouse gas emissions will not significantly harm the economy of the United States; and

(2) to establish a Carbon Market Efficiency Board to ensure the implementation and maintenance of a stable, functioning, and efficient market in emission allowances.

SEC. 2602. ESTABLISHMENT OF CARBON MARKET EFFICIENCY BOARD.

(a) ESTABLISHMENT.—There is established a board, to be known as the "Carbon Market Efficiency Board" (referred to in this subtitle as the "Board").

(b) PURPOSES.—The purposes of the Board are—

(1) to promote the achievement of the purposes of this Act;

(2) to observe the national greenhouse gas emission market and evaluate periods during which the cost of emission allowances provided under Federal law might pose significant harm to the economy; and

(3) to submit to the President and Congress, and publish on the Internet, quarterly reports—

(A) describing—

(i) the status of the emission allowance market established under this Act;

(ii) the economic cost and benefits of the market, regional, industrial, and consumer responses to the market;

(iii) where practicable, energy investment responses to the market;

(iv) any corrective measures that should be carried out to relieve excessive net costs of the market;

(v) plans to compensate for those measures to ensure that the long-term emission-reduction goals of this Act are achieved; and

(vi) any instances of actual or potential fraud on, or manipulation of, the market that the Board has identified, and the effects of such fraud or manipulation;

(B) that are timely and succinct to ensure regular monitoring of market trends; and

(C) that are prepared independently by the Board.

(c) MEMBERSHIP.—

(1) COMPOSITION.—The Board shall be composed of—

(A) 7 members who are citizens of the United States, to be appointed by the President, by and with the advice and consent of the Senate; and

(B) an advisor who is a scientist with expertise in climate change and the effects of cli-

mate change on the environment, to be appointed by the President, by and with the advice and consent of the Senate.

(2) REQUIREMENTS.—In appointing members of the Board under paragraph (1), the President shall—

(A) ensure fair representation of the financial, agricultural, industrial, and commercial sectors, and the geographical regions, of the United States, and include a representative of consumer interests;

(B) appoint not more than 1 member from each such geographical region; and

(C) ensure that not more than 4 members of the Board serving at any time are affiliated with the same political party.

(3) COMPENSATION.—

(A) IN GENERAL.—A member of the Board shall be compensated at a rate equal to the daily equivalent of the annual rate of basic pay prescribed for level II of the Executive Schedule under section 5313 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 Board.

(B) CHAIRPERSON.—The Chairperson of the Board shall be compensated at a rate equal to the daily equivalent of the annual rate of basic pay prescribed for level I of the Executive Schedule under section 5312 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 Board.

(4) PROHIBITIONS.—

(A) CONFLICTS OF INTEREST.—An individual employed by, or holding any official relationship (including any shareholder) with, any entity engaged in the generation, transmission, distribution, or sale of energy, an individual who has any pecuniary interest in the generation, transmission, distribution, or sale of energy, or an individual who has a pecuniary interest in the implementation of this Act, shall not be appointed to the Board under this subsection.

(B) NO OTHER EMPLOYMENT.—A member of the Board shall not hold any other employment during the term of service of the member.

(d) TERM; VACANCIES.—

(1) TERM.—

(A) IN GENERAL.—The term of a member of the Board shall be 14 years, except that the members first appointed to the Board shall be appointed for terms in a manner that ensures that—

(i) the term of not more than 1 member shall expire during any 2-year period; and

(ii) no member serves a term of more than 14 years.

(B) OATH OF OFFICE.—A member shall take the oath of office of the Board by not later than 15 days after the date on which the member is appointed under subsection (c)(1).

(C) REMOVAL.—

(i) IN GENERAL.—A member may be removed from the Board on determination of the President for cause.

(ii) NOTIFICATION.—Not later than 30 days before removing a member from the Board for cause under clause (i), the President shall provide to Congress an advance notification of the determination by the President to remove the member.

(2) VACANCIES.—

(A) IN GENERAL.—A vacancy on the Board—

(i) shall not affect the powers of the Board; and

(ii) shall be filled in the same manner as the original appointment was made.

(B) SERVICE UNTIL NEW APPOINTMENT.—A member of the Board the term of whom has expired or otherwise been terminated shall continue to serve until the date on which a replacement is appointed under subparagraph (A)(ii), if the President determines that service to be appropriate.

(e) CHAIRPERSON AND VICE-CHAIRPERSON.—Of members of the Board, the President shall appoint—

(1) 1 member to serve as Chairperson of the Board for a term of 4 years; and

(2) 1 member to serve as Vice-Chairperson of the Board for a term of 4 years.

(f) MEETINGS.—

(1) INITIAL MEETING.—The Board shall hold the initial meeting of the Board as soon as practicable after the date on which all members have been appointed to the Board under subsection (c)(1).

(2) PRESIDING OFFICER.—A meeting of the Board shall be presided over by—

(A) the Chairperson;

(B) in any case in which the Chairperson is absent, the Vice-Chairperson; or

(C) in any case in which the Chairperson and Vice-Chairperson are absent, a chairperson pro tempore, to be elected by the members of the Board.

(3) QUORUM.—Four members of the Board shall constitute a quorum for a meeting of the Board.

(4) OPEN MEETINGS.—The Board shall be subject to section 552b of title 5, United States Code (commonly known as the "Government in the Sunshine Act").

(g) RECORDS.—The Board shall be subject to section 552 of title 5, United States Code (commonly known as the "Freedom of Information Act").

(h) REVIEW BY GOVERNMENT ACCOUNTABILITY OFFICE.—Not later than January 1, 2013, and annually thereafter, the Comptroller General of the United States shall conduct a review of the efficacy of the Board in fulfilling the purposes and duties of the Board under this subtitle.

SEC. 2603. DUTIES.

(a) INFORMATION GATHERING.—

(1) AUTHORITY.—The Board shall collect and analyze relevant market information to promote a full understanding of the dynamics of the emission allowance market established under this Act.

(2) INFORMATION.—The Board shall gather such information as the Board determines to be appropriate regarding the status of the market, including information relating to—

(A) emission allowance allocation and availability;

(B) the price of emission allowances;

(C) macro- and micro-economic effects of unexpected significant increases and decreases in emission allowance prices, or shifts in the emission allowance market, should those increases, decreases, or shifts occur;

(D) economic effect thresholds that could warrant implementation of cost relief measures described in section 2604(a) after the initial 2-year period described in subsection (d)(2);

(E) in the event any cost relief measures described in section 2604(a) are taken, the effects of those measures on the market;

(F) maximum levels of cost relief measures that are necessary to achieve avoidance of economic harm and preserve achievement of the purposes of this Act; and

(G) the success of the market in promoting achievement of the purposes of this Act.

(b) TREATMENT AS PRIMARY ACTIVITY.—

(1) IN GENERAL.—During the initial 2-year period of operation of the Board, information gathering under subsection (a) shall be the primary activity of the Board.

(2) SUBSEQUENT AUTHORITY.—After the 2-year period described in paragraph (1), the Board shall assume authority to implement the cost-relief measures described in section 2604(a).

(c) STUDY.—

(1) IN GENERAL.—During the 2-year period beginning on the date on which the emission allowance market established under this Act begins operation, the Board shall conduct a study of other markets for tradeable permits to emit covered greenhouse gases.

(2) REPORT.—Not later than 180 days after the beginning of the period described in paragraph (1), the Board shall submit to Congress, and publish on the Internet, a report describing the status of the mar-

ket, specifically with respect to volatility within the market and the average price of emission allowances during that 180-day period.

(d) EMPLOYMENT OF COST RELIEF MEASURES.—

(1) IN GENERAL.—If the Board determines that the emission allowance market established under this Act poses a significant harm to the economy of the United States, the Board shall carry out such cost relief measures relating to that market as the Board determines to be appropriate under section 2604(a).

(2) INITIAL PERIOD.—During the 2-year period beginning on the date on which the emission allowance market established under this Act begins operation, if the Board determines that the average daily closing price of emission allowances during a 180-day period exceeds the upper range of the estimate provided under section 2605, the Board shall—

(A) increase the quantity of emission allowances that covered facilities may borrow from the prescribed allocations of the covered facilities for future years; and

(B) take subsequent action as described in section 2604(a)(2).

(3) REQUIREMENTS.—Any action carried out pursuant to this subsection shall be subject to the requirements of section 2604(a)(3)(B).

(e) REPORTS.—The Board shall submit to the President and Congress quarterly reports—

(1) describing the status of the emission allowance market established under this Act, the economic effects of the market, regional, industrial, and consumer responses to the market, energy investment responses to the market, the effects on the market of any fraud on, or manipulation of, the market that the Board has identified, any corrective measures that should be carried out to relieve excessive costs of the market, and plans to compensate for those measures; and

(2) that are prepared independently by the Board, and not in partnership with Federal agencies.

SEC. 2604. POWERS.

(a) COST RELIEF MEASURES.—

(1) IN GENERAL.—Beginning on the day after the date of expiration of the 2-year period described in section 2603(b), the Board may carry out 1 or more of the following cost relief measures to ensure functioning, stable, and efficient markets for emission allowances:

(A) Increase the quantity of emission allowances that covered facilities may borrow from the prescribed allocations of the covered facilities for future years.

(B) Expand the period during which a covered facility may repay the Administrator for an emission allowance as described in subparagraph (A).

(C) Lower the interest rate at which an emission allowance may be borrowed as described in subparagraph (A).

(D) Increase the quantity of emission allowances obtained on a foreign greenhouse gas emissions trading market that the owner or operator of any covered facility may use to satisfy the allowance submission requirement of the covered facility under section 1202(a), on the condition that the Administrator has certified the market in accordance with the regulations promulgated pursuant to section 2502(a).

(E) Increase the quantity of offset allowances generated in accordance with subtitle D that the owner or operator of any covered facility may use to satisfy the total allowance submission

requirement of the covered facility under section 1202(a).

(F) Expand the total quantity of emission allowances made available to all covered facilities at any given time by borrowing against the total allowable quantity of emission allowances to be provided for future years.

(2) SUBSEQUENT ACTIONS.—On determination by the Board to carry out a cost relief measure pursuant to paragraph (1), the Board shall—

(A) allow the cost relief measure to be used only during the applicable allocation year;

(B) exercise the cost relief measure incrementally, and only as needed to avoid significant economic harm during the applicable allocation year;

(C) specify the terms of the relief to be achieved using the cost relief measure, including requirements for entity-level or national market-level compensation to be achieved by a specific date or within a specific time period;

(D) in accordance with section 2603(e), submit to the President and Congress a report describing the actions carried out by the Board and recommendations for the terms under which

the cost relief measure should be authorized by Congress and carried out by Federal entities; and

(E) evaluate, at the end of the applicable allocation year, actions that need to be carried out during subsequent years to compensate for any cost relief measure carried out during the applicable allocation year.

(3) ACTION ON EXPANSION OF BORROWING.—

(A) IN GENERAL.—If the Board carries out a cost relief measure pursuant to paragraph (1) that results in the expansion of borrowing of emission allowances under this Act, and if the average daily closing price of emission allowances for the 180-day period beginning on the date on which borrowing is so expanded exceeds the upper range of the estimate provided under section 2605, the Board shall increase the quantity of emission allowances available for the applicable allocation year in accordance with this paragraph.

(B) REQUIREMENTS.—An increase in the quantity of emission allowances under subparagraph (A) shall—

(i) apply to all covered facilities;

(ii) be allocated in accordance with the applicable formulas and procedures established under this Act;

(iii) be equal to not more than 5 percent of the total quantity of emission allowances otherwise available for the applicable allocation year under this Act;

(iv) remain in effect only for the applicable allocation year;

(v) specify the date by which the increase shall be repaid by covered facilities through a proportionate reduction of emission allowances available for subsequent allocation years; and

(vi) require the repayment under clause (v) to be made by not later than the date that is 15 years after the date on which the increase is provided.

(b) ASSESSMENTS.—Not more frequently than semi-annually, the Board may levy on owners and operators of covered facilities an assessment sufficient to pay the estimated expenses of the Board and the salaries of members of and employees of the Board during the 180-day period beginning on the date on which the assessment is levied,

taking into account any deficit carried forward from the preceding 180-day period.

(c) LIMITATIONS.—Nothing in this section gives the Board the authority—

(1) to consider or prescribe entity-level petitions for relief from the costs of an emission allowance allocation or trading program established under Federal law;

(2) to carry out any investigative or punitive process under the jurisdiction of any Federal or State court;

(3) to interfere with, modify, or adjust any emission allowance allocation scheme established under Federal law; or

(4) to modify the total quantity of emission allowances issued under this Act for the period of calendar years 2012 through 2050.

SEC. 2605. ESTIMATE OF COSTS TO ECONOMY OF LIMITING GREENHOUSE GAS EMISSIONS.

Not later than July 1, 2014, the Director of the Congressional Budget Office, using economic and scientific analyses, shall submit to Congress a report that describes—

(1) the projected price range at which emission allowances are expected to trade during the 2-year pe-

riod of the initial greenhouse gas emission market established under Federal law; and

(2) the projected impact of that market on the economy of the United States.

TITLE III—ALLOCATING AND DISTRIBUTING ALLOWANCES

Subtitle A—Auctions

SEC. 3101. ALLOCATION FOR EARLY AUCTIONS.

Not later than 180 days after the date of enactment of this Act, the Administrator shall allocate 5 percent of the emission allowances established for calendar year 2012, 3 percent of the emission allowances established for calendar year 2013, and 1 percent of the emissions established for calendar 2014, to the Corporation for early auctioning in accordance with section 4301.

SEC. 3102. ALLOCATION FOR ANNUAL AUCTIONS.

Not later than April 1, 2011, and annually thereafter through calendar year 2049, the Administrator shall allocate to the Corporation for annual auctioning a percentage of emission allowances for the following calendar year, as follows:

Calendar Year	*Percentage of Emission Allowance Account Allocated to the Corporation*
2012	*21.5*
2013	*24.5*

Calendar Year	*Percentage of Emission Allowance Account Allocated to the Corporation*
2014	*27.5*
2015	*29.5*
2016	*30.5*
2017	*31.5*
2018	*33.5*
2019	*34.5*
2020	*36.5*
2021	*39.75*
2022	*41*
2023	*43.25*
2024	*45.75*
2025	*48.5*
2026	*51.5*
2027	*55.5*
2028	*58.5*
2029	*61.5*
2030	*62.75*
2031	*69.5*
2032	*69.5*
2033	*69.5*
2034	*69.5*
2035	*69.5*
2036	*69.5*
2037	*69.5*
2038	*69.5*
2039	*69.5*

Calendar Year	*Percentage of Emission Allowance Account Allocated to the Corporation*
2040	*69.5*
2041	*69.5*
2042	*69.5*
2043	*69.5*
2044	*69.5*
2045	*69.5*
2046	*69.5*
2047	*69.5*
2048	*69.5*
2049	*69.5*
2050	*69.5*

Subtitle B—Early Action

SEC. 3201. ALLOCATION.

Not later than 2 years after the date of enactment of this Act, the Administrator shall allocate to owners or operators of covered facilities and other facilities that emit greenhouse gas, in recognition of actions of the owners and operators taken since January 1, 1994, that resulted in verified and credible reductions of greenhouse gas emissions—

(1) 5 percent of the emission allowances established for calendar year 2012;

(2) 4 percent of the emission allowances established for calendar year 2013;

(3) 3 percent of the emission allowances established for calendar year 2014;

(4) 2 percent of the emission allowances established for calendar year 2015; and

(5) 1 percent of the emission allowances established for calendar year 2016.

SEC. 3202. DISTRIBUTION.

(a) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Administrator shall establish, by regulation, procedures and standards for use in distributing, to owners and operators of covered facilities and other facilities that emit greenhouse gas, emission allowances allocated under section 3201.

(b) CONSIDERATION.—The procedures and standards established under subsection (a) shall provide for consideration of verified and credible emission reductions registered before the date of enactment of this Act under—

(1) the Climate Leaders Program, or any other voluntary greenhouse gas reduction program of the United States Environmental Protection Agency and United States Department of Energy;

(2) the Voluntary Reporting of Greenhouse Gases Program of the Energy Information Administration;

(3) State or regional greenhouse gas emission reduction programs that include systems for tracking

and verifying the greenhouse gas emission reductions; and

(4) voluntary entity programs that resulted in entity-wide reductions in greenhouse gas emissions.

(c) DISTRIBUTION.—Not later than 4 years after the date of enactment of this Act, the Administrator shall distribute all emission allowances allocated under section 3201.

Subtitle C—States

SEC. 3301. ALLOCATION FOR ENERGY SAVINGS.

(a) ALLOCATION.—Not later than April 1, 2011, and annually thereafter through calendar year 2049, the Administrator shall allocate 2 percent of the Emission Allowance Account for the following calendar year among States that have adopted regulations by not later than the date on which the allowance allocations are made, that subject regulated natural gas and electric utilities that deliver gas or electricity in those States to regulations that—

(1) automatically adjust the rates charged by natural gas and electric utilities to fully recover fixed costs of service without regard to whether their actual sales are higher or lower than the forecast of sales on which the tariffed rates were based; and

(2) make cost-effective energy-efficiency expenditures by investor-owned natural gas or electric utili-

ties at least as rewarding to their shareholders as power or energy purchases, or expenditures on new energy supplies or infrastructure.

(b) ALLOCATION FOR BUILDING EFFICIENCY.—Not later than January 1, 2012, and annually thereafter through January 1, 2050, the Administrator shall allocate 1 percent of the Emission Allowance Account among States that are in compliance with section 304(c) of the Energy Conservation and Production Act (as amended by section 5201).

(c) DISTRIBUTION.—Not later than 2 years after the date of enactment of this Act, the Administrator shall establish procedures and standards for the distribution of emission allowances to States in accordance with subsections (a) and (b).

(d) USE.—Any State receiving emission allowances under this section for a calendar year shall retire or use, in 1 or more of the ways described in section 3303(c)(1), not less than 90 percent of the emission allowances allocated to the State (or proceeds of the sale of those allowances) under this section for the calendar year.

SEC. 3302. ALLOCATION FOR STATES WITH PROGRAMS THAT EXCEED FEDERAL EMISSION REDUCTION TARGETS.

(a) ALLOCATION.—Not later than April 1, 2011, and annually thereafter through calendar year 2049, the Administrator shall allocate 2 percent of the Emission Allowance Account for the following calendar year among States that have—

(1) before the date of enactment of this Act, enacted statewide greenhouse gas emission reduction targets that are more stringent than the nationwide targets established under subtitle B of title I; and

(2) by the time of an allocation under this subsection, imposed on covered facilities within the States aggregate greenhouse gas emission limitations more stringent than those imposed on covered facilities under subtitle B of title I.

(b) DISTRIBUTION.—Not later than 2 years after the date of enactment of this Act, the Administrator shall establish procedures and standards for use in distributing emission allowances among States in accordance with subsection (a).

(c) USE.—Any State receiving emission allowances under this section for a calendar year shall retire or use, in 1 or more of the ways described in section 3303(c)(1), not less than 90 percent of the emission allowances allocated

to the State (or proceeds of the sale of those allowances) under this section for the calendar year.

SEC. 3303. GENERAL ALLOCATION.

(a) ALLOCATION.—Subject to subsection (d)(3), not later than April 1, 2011, and annually thereafter through calendar year 2049, the Administrator shall allocate 5 percent of the Emission Allowance Account for the following calendar year among States.

(b) DISTRIBUTION.—The allowances available for allocation to States under subsection (a) for a calendar year shall be distributed as follows:

(1) For each calendar year, ⅓ of the quantity of allowances available for allocation to States under subsection (a) shall be distributed among individual States based on the proportion that—

(A) the expenditures of a State for the low-income home energy assistance program established under the Low-Income Home Energy Assistance Act of 1981 (42 U.S.C. 8621 et seq.) for the preceding calendar year; bears to

(B) the expenditures of all States for that program for the preceding calendar year.

(2) For each calendar year, ⅓ of the quantity of allowances available for allocation to States under

subsection (a) shall be distributed among the States based on the proportion that—

(A) the population of a State, as determined by the most recent decennial census preceding the calendar year for which the allocation regulations are for the allocation year; bears to

(B) the population of all States, as determined by that census.

(3) For each calendar year, ⅓ of the quantity of allowances available for allocation to States under subsection (a) shall be distributed among the States based on the proportion that—

(A) the quantity of carbon dioxide that would be emitted assuming that all of the coal that is mined, natural gas that is processed, and petroleum that is refined within the boundaries of a State during the preceding year is completely combusted and that none of the carbon dioxide emissions are captured, as determined by the Secretary of Energy; bears to

(B) the aggregate quantity of carbon dioxide that would be emitted assuming that all of the coal that is mined, natural gas that is processed, and petroleum that is refined in all States for the preceding year is completely combusted and

that none of the carbon dioxide emissions are captured, as determined by the Secretary of Energy.

(c) USE.—

(1) IN GENERAL.—During any calendar year, a State shall retire or use in 1 or more of the following ways not less than 90 percent of the allowances allocated to the State (or proceeds of sale of those emission allowances) under this section for that calendar year:

(A) To mitigate impacts on low-income energy consumers.

(B) To promote energy efficiency (including support of electricity and natural gas demand reduction, waste minimization, and recycling programs).

(C) To promote investment in nonemitting electricity generation technology, including planning for the siting of facilities employing that technology in States (including territorial waters of States).

(D) To improve public transportation and passenger rail service and otherwise promote reductions in vehicle miles traveled.

(E) To encourage advances in energy technology that reduce or sequester greenhouse gas emissions.

(F) To address local or regional impacts of climate change, including by accommodating, protecting, or relocating affected communities and public infrastructure.

(G) To collect, evaluate, disseminate, and use information necessary for affected coastal communities to adapt to climate change (such as information derived from inundation prediction systems).

(H) To mitigate obstacles to investment by new entrants in electricity generation markets and energy-intensive manufacturing sectors.

(I) To address local or regional impacts of climate change policy, including providing assistance to displaced workers.

(J) To mitigate impacts on energy-intensive industries in internationally competitive markets.

(K) To reduce hazardous fuels, and to prevent and suppress wildland fire.

(L) To fund rural, municipal, and agricultural water projects that are consistent with the sustainable use of water resources.

(M) To fund any other purpose the States determine to be necessary to mitigate any negative economic impacts as a result of—

(i) global warming; or

(ii) new regulatory requirements as a result of this Act.

(2) DEADLINE.—A State shall distribute or sell allowances for use in accordance with paragraph (1) by not later than the beginning of each allowance allocation year.

(3) RETURN OF ALLOWANCES.—Not later than 330 days before the end of each allowance allocation year, a State shall return to the Administrator any allowances not distributed by the deadline under paragraph (2).

(4) USE FOR RECYCLING.—During any calendar year, a State shall retire or use not less than 5 percent of the emission allowances allocated to the State (or proceeds of sale of those emission allowances) under this section for increasing recycling rates through activities such as—

(A) improving recycling infrastructure;

(B) increasing public education on the benefits of recycling, particularly with respect to greenhouse gases;

(C) improving residential, commercial, and industrial collection of recyclables;

(D) improving recycling system efficiency;

(E) increasing recycling yields; and

(F) improving the quality and usefulness of recycled materials.

(d) PROGRAM FOR TRIBAL COMMUNITIES.—

(1) ESTABLISHMENT.—Not later than 3 years after the date of enactment of this Act, the Administrator, in consultation with the Secretary of the Interior, shall by regulation establish a program for tribal communities—

(A) that is designed to deliver assistance to tribal communities within the United States that face disruption or dislocation as a result of global climate change; and

(B) under which the Administrator shall distribute 0.5 percent of the Emission Allowance Account for each calendar among tribal governments of the tribal communities described in subparagraph (A).

(2) ALLOCATION.—Beginning in the first calendar year that begins after promulgation of the regulations referred to in paragraph (1), and annually thereafter until calendar year 2050, the Administrator shall allocate 0.5 percent of the Emission Allowance Account for each calendar year to the program established under paragraph (1).

SEC. 3304. ALLOCATION FOR MASS TRANSIT.

(a) ALLOCATION.—Not later than April 1, 2011, and annually thereafter through calendar year 2049, the Administrator shall allocate 1 percent of the Emission Allowance Account for the following calendar year among States.

(b) DISTRIBUTION.—The emission allowances available for allocation to States under subsection (a) for a calendar year shall be distributed among the States based on the formula established in section 104(b)(1)(A) of title 23, United States Code.

(c) USE.—During any calendar year, a State receiving emission allowances under this section shall—

(1) use the emission allowances (or proceeds of sale of those emission allowances) only for—

(A) the operating costs of State and municipal mass transit systems;

(B) efforts to increase mass transit service and ridership in the State, including by adding new mass transit systems; and

(C) efforts to increase the efficiency of mass transit systems through the development, purchase, or deployment of innovative technologies that reduce emissions of greenhouse gases; and

(2) shall ensure that use of the emission allowances (or proceeds of sale of those emission allowances) by the State for the purposes described in paragraph (1) is geographically distributed as follows:

(A) At least 60 percent in urban areas.

(B) At least 20 percent in areas that are not urban areas.

(C) 20 percent as the State determines to be appropriate.

(d) RETURN OF UNUSED EMISSION ALLOWANCES.—Any State receiving emission allowances under this section shall return to the Administrator any such emission allowance that the State has failed to use in accordance with subsection (c) by not later than 5 years after the date of receipt of the emission allowance from the Administrator.

(e) USE OF RETURNED EMISSION ALLOWANCES.—The Administrator shall immediately transfer to the Corpora-

tion for auctioning under section 4302 any emission allowances returned to the Administrator under subsection (d).

Subtitle D—Electricity Consumers

SEC. 3401. ALLOCATION.

Not later than April 1, 2011, and annually thereafter through calendar year 2049, the Administrator shall allocate among load-serving entities 9 percent of the Emission Allowance Account for the following calendar year.

SEC. 3402. DISTRIBUTION.

(a) IN GENERAL.—For each calendar year, the emission allowances allocated under section 3401 shall be distributed by the Administrator to each load-serving entity, including each rural electric cooperative that serves as a load-serving entity in a State that is not a participant in the pilot program established under section 3903(a), based on the proportion that—

(1) the quantity of electricity delivered by the load-serving entity during the 3 calendar years preceding the calendar year for which the emission allowances are distributed, adjusted upward for electricity not delivered as a result of consumer energy-efficiency programs implemented by the load-serving entity and verified by the regulatory agency of the load-serving entity; bears to

(2) the total quantity of electricity delivered by all load-serving entities during those 3 calendar years.

(b) BASIS.—The Administrator shall base the determination of the quantity of electricity delivered by a load-serving entity for the purpose of subsection (a) on the most recent data available in annual reports filed with the Energy Information Administration of the Department of Energy.

SEC. 3403. USE.

(a) IN GENERAL.—Any load-serving entity that accepts emission allowances distributed under section 3402 shall—

(1) sell each emission allowance distributed to the load-serving entity by not later than 1 year after receiving the emission allowance; and

(2) pursue fair market value for each emission allowance sold in accordance with paragraph (1).

(b) PROCEEDS.—All proceeds from the sale of emission allowances under subsection (a) shall be used solely—

(1) to mitigate economic impacts on low- and middle-income energy consumers, including by reducing transmission charges or issuing rebates; and

(2) to promote energy efficiency on the part of energy consumers.

(c) PROHIBITION ON REBATES.—No load-serving entity may use any proceeds from the sale of emission allowances under subsection (a) to provide to any consumer a rebate that is based on the quantity of electricity used by the consumer.

SEC. 3404. REPORTING.

(a) IN GENERAL.—Each load-serving entity that accepts emission allowances distributed under section 3402 shall, for each calendar year for which the load-serving entity accepts emission allowances, submit to the Administrator a report describing—

(1) the date of each sale of each emission allowance during the preceding year;

(2) the amount of revenue generated from the sale of emission allowances during the preceding year; and

(3) how, and to what extent, the load-serving entity used the proceeds of the sale of the emission allowances during the preceding year.

(b) AVAILABILITY OF REPORTS.—The Administrator shall make available to the public all reports submitted by any load-serving entity under subsection (b), including by publishing those reports on the Internet.

Subtitle E—Natural Gas Consumers

SEC. 3501. ALLOCATION.

Not later than April 1, 2011, and annually thereafter through calendar year 2049, the Administrator shall allocate among natural gas local distribution companies 2 percent of the Emission Allowance Account for the following calendar year.

SEC. 3502. DISTRIBUTION.

For each calendar year, the emission allowances allocated under section 3501 shall be distributed by the Administrator to each natural gas local distribution company based on the proportion that—

(1) the quantity of natural gas delivered by the natural gas local distribution company during the 3 calendar years preceding the calendar year for which the emission allowances are distributed, adjusted upward for natural gas not delivered as a result of consumer energy-efficiency programs implemented by the natural gas local distribution company and verified by the regulatory agency of the natural gas local distribution company; bears to

(2) the total quantity of natural gas delivered by all natural gas local distribution companies during those 3 calendar years.

SEC. 3503. USE.

(a) IN GENERAL.—Any natural gas local distribution company that accepts emission allowances distributed under section 3502 shall—

(1) sell each emission allowance distributed to the natural gas local distribution company by not later than 1 year after receiving the emission allowance; and

(2) pursue fair market value for each emission allowance sold in accordance with paragraph (1).

(b) PROCEEDS.—All proceeds from the sale of emission allowances under subsection (a) shall be used solely—

(1) to mitigate economic impacts on low- and middle-income energy consumers; and

(2) to promote energy efficiency on the part of energy consumers.

(c) PROHIBITION ON REBATES.—No natural gas local distribution company may use any proceeds from the sale of emission allowances under subsection (a) to provide to any consumer a rebate that is based on the quantity of natural gas used by the consumer.

SEC. 3504. REPORTING.

(a) IN GENERAL.—Each natural gas local distribution company that accepts emission allowances distributed under section 3502 shall, for each calendar year for which the natural gas local distribution company accepts emission

allowances, submit to the Administrator a report describing—

(1) the date of each sale of each emission allowance during the preceding year;

(2) the amount of revenue generated from the sale of emission allowances during the preceding year; and

(3) how, and to what extent, the natural gas local distribution company used the proceeds of the sale of the emission allowances during the preceding year.

(b) AVAILABILITY OF REPORTS.—The Administrator shall make available to the public all reports submitted by any natural gas local distribution company under subsection (a), including by publishing those reports on the Internet.

Subtitle F—Bonus Allowances for Carbon Capture and Geological Sequestration

SEC. 3601. ALLOCATION.

Not later than 3 years after the date of enactment of this Act, the Administrator shall—

(1) establish a Bonus Allowance Account; and

(2) allocate 4 percent of the emission allowances established for calendar years 2012 through 2030 to the Bonus Allowance Account.

SEC. 3602. QUALIFYING PROJECTS.

(a) DEFINITIONS.—In this section:

(1) COMMENCED.—The term "commenced", with respect to construction, means that an owner or operator has obtained the necessary permits to undertake a continuous program of construction and has entered into a binding contractual obligation, with substantial financial penalties for cancellation, to undertake such a program.

(2) CONSTRUCTION.—The term "construction" means the fabrication, erection, or installation of the technology for the carbon capture and sequestration project.

(b) ELIGIBILITY.—To be eligible to receive emission allowances under this subtitle, a carbon capture and sequestration project shall—

(1) comply with such criteria and procedures as the Administrator may establish, including a requirement, as prescribed in subsection (c), for an annual emissions performance standard for carbon dioxide emissions from any unit for which allowances are allocated;

(2) sequester, in a geological formation permitted by the Administrator for that purpose in accordance with regulations promulgated under part C of the Safe Drinking Water Act (42 U.S.C. 300h et seq.), carbon dioxide captured from any unit for which allowances are allocated; and

(3) have begun operation during the period beginning on January 1, 2008, and ending on December 31, 2035.

(c) EMISSION PERFORMANCE STANDARDS.—Subject to subsection (d), a carbon capture and sequestration project shall be eligible to receive emission allowances under this subtitle only if the project achieves 1 of the following emissions performance standards for limiting carbon dioxide emissions from the unit on an annual average basis:

(1) For an electric generation unit that is not a new entrant, an annual emissions rate of not more than 1,200 pounds of carbon dioxide per megawatt-hour of net electricity generation, after subtracting the carbon dioxide that is captured and sequestered.

(2) For a new entrant electric generation unit for which construction of the unit commenced prior to July 1, 2018, an annual emissions rate of not more than 800 pounds of carbon dioxide per megawatt-hour

of net electricity generation, after subtracting the carbon dioxide that is captured and sequestered.

(3) For a new entrant electric generation unit for which construction of the unit commenced on or after July 1, 2018, an annual emissions rate of not more than 350 pounds of carbon dioxide per megawatt-hour of net electricity generation, after subtracting the carbon dioxide that is captured and sequestered.

(4) For any unit at a covered facility that is not an electric generation unit, an annual emissions rate that is achieved by the capture and sequestration of a minimum of 85 percent of the total carbon dioxide emissions produced by the unit.

(d) ADJUSTMENT OF PERFORMANCE STANDARDS.—

(1) IN GENERAL.—The Corporation may adjust the emissions performance standard for a carbon capture and sequestration project under subsection (c) for an electric generation unit that uses subbituminous coal, lignite, or petroleum coke in significant amounts.

(2) REQUIREMENT.—In any case described in paragraph (1), the performance standard for the project shall prescribe an annual emissions rate that requires the project to achieve an equivalent reduction

from uncontrolled carbon dioxide emissions levels from the use of subbituminous coal, lignite, or petroleum coke, as compared to the emissions that the project would have achieved if that unit had combusted only bituminous coal during the particular year.

SEC. 3603. DISTRIBUTION.

(a) IN GENERAL.—Subject to section 3604, for each of calendar years 2012 through 2039, the Administrator shall distribute emission allowances from the Bonus Allowance Account to each qualifying project under this subtitle in a quantity equal to the product obtained by multiplying—

(1) the bonus allowance adjustment factor, as determined under subsection (b);

(2) the number of metric tons of carbon dioxide emissions avoided through capture and geologic sequestration of emissions by the project; and

(3) the bonus allowance rate for that calendar year, as provided in the following table:

Year	***Bonus Allowance Rate***
2012	*4.5*
2013	*4.5*
2014	*4.5*
2015	*4.5*
2016	*4.5*
2017	*4.5*
2018	*4.2*
2019	*3.9*
2020	*3.6*
2021	*3.3*
2022	*3.0*

Year	*Bonus Allowance Rate*
2023	*2.7*
2024	*2.4*
2025	*2.1*
2026	*1.8*
2027	*1.5*
2028	*1.3*
2029	*1.1*
2030	*0.9*
2031	*0.7*
2032	*0.5*
2033	*0.5*
2034	*0.5*
2035	*0.5*
2036	*0.5*
2037	*0.5*
2038	*0.5*
2039	*0.5*

(b) BONUS ALLOWANCE ADJUSTMENT RATIO.—The Administrator shall determine the bonus allowance adjustment factor by dividing a carbon dioxide emissions rate of 350 pounds per megawatt-hour by the annual carbon dioxide emissions rate, on a pounds per megawatt-hour basis, that a qualifying project at the electric generation unit achieved during a particular year, except that—

(1) the factor shall be equal to 1 in the case of a project that qualifies under section 3602(c)(1) during the first 4 years that emissions allowances are distributed to the project; and

(2) the factor shall not exceed 1 for any qualifying project.

SEC. 3604. 10-YEAR LIMIT.

A qualifying project may receive annual emission allowances under this subsection only for—

(1) the first 10 years of operation; or

(2) if the unit covered by the qualifying project began operating before January 1, 2012, the period of calendar years 2012 through 2021.

SEC. 3605. EXHAUSTION OF BONUS ALLOWANCE ACCOUNT.

If, at the beginning of a calendar year, the Administrator determines that the number of emission allowances remaining in the Bonus Allowance Account will be insufficient to allow the distribution, in that calendar year, of the number of allowances that otherwise would be distributed under section 3603 for the calendar year, the Administrator shall, for the calendar year—

(1) distribute the remaining bonus allowances only to qualifying projects that were already qualifying projects during the preceding calendar year;

(2) distribute the remaining bonus allowances to those qualifying projects on a pro rata basis; and

(3) discontinue the program established under this subtitle as of the date on which the Bonus Allowance Account is projected to be fully used based on projects already in operation.

Subtitle G—Domestic Agriculture and Forestry

SEC. 3701. ALLOCATION.

Not later than April 1, 2011, and annually thereafter through calendar year 2049, the Administrator shall allocate to the Secretary of Agriculture 5 percent of the Emission Allowance Account for the following calendar year for use in—

(1) achieving real, verifiable, additional, permanent, and enforceable reductions in greenhouse gas emissions from the agriculture and forestry sectors of the United States economy; and

(2) achieving real, verifiable, additional, permanent, and enforceable increases in greenhouse gas sequestration from those sectors.

SEC. 3702. AGRICULTURAL AND FORESTRY GREENHOUSE GAS MANAGEMENT RESEARCH.

(a) REPORT.—Not later than 1 year after the date of enactment of this Act, the Secretary of Agriculture, in consultation with scientific and agricultural and forestry experts, shall prepare and submit to Congress a report that describes the status of research on agricultural and forestry greenhouse gas management, including a description of—

(1) research on soil carbon sequestration and other agricultural and forestry greenhouse gas management that has been carried out;

(2) any additional research that is necessary;

(3) the proposed priority for additional research;

(4) the most appropriate approaches for conducting the additional research; and

(5) the extent to which and the manner in which carbon credits that are specific to agricultural and forestry operations, including harvested wood products and the reduction of hazardous fuels to reduce the risk of uncharacteristically severe wildfires, should be valued and allotted.

(b) STANDARDIZED SYSTEM OF SOIL CARBON MEASUREMENT AND CERTIFICATION FOR THE AGRICULTURAL AND FORESTRY SECTORS.—

(1) IN GENERAL.—As soon as practicable after the date of enactment of this Act, the Secretary of Agriculture shall establish a standardized system of carbon measurement and certification for the agricultural and forestry sectors.

(2) ADMINISTRATION.—In establishing the system, the Secretary of Agriculture shall—

(A) create a standardized system of measurements for agricultural and forestry greenhouse gases; and

(B) delineate the most appropriate system of certification of credit by public or private entities.

(c) RESEARCH.—After the date of submission of the report described in paragraph (1), the President and the Secretary of Agriculture (in collaboration with the member institutions of higher education of the Consortium for Agricultural Soil Mitigation of Greenhouse Gases, institutions of higher education, and research entities) shall initiate a program to conduct any additional research that is necessary.

SEC. 3703. DISTRIBUTION.

(a) IN GENERAL.—Taking into account the report prepared under section 3702(a), the Secretary of Agriculture shall establish, by regulation, a program under which agricultural and forestry allowances may be distributed to entities that carry out projects on agricultural and forest land that achieve real, verifiable, additional, permanent, and enforceable greenhouse gas emission mitigation benefits.

(b) NITROUS OXIDE AND METHANE.—The Secretary of Agriculture shall ensure that, during any 5-year period, the average annual percentage of the Emission Allowance Account that is distributed to entities under the program

established under subsection (a) specifically for achieving real, verifiable, additional, permanent, and enforceable reductions in nitrous oxide emissions through soil management or achieving real, verifiable, additional, permanent, and enforceable reductions in methane emissions through enteric fermentation and manure management shall be 0.5 percent.

(c) REQUIREMENT.—The Secretary of Agriculture shall distribute emission allowances under this section in a manner that maximizes the avoidance or reduction of greenhouse gas emissions.

Subtitle H—International Forest Protection

SEC. 3801. FINDINGS.

Congress finds that—

(1) land-use change and forest sector emissions account for approximately 20 percent of global greenhouse gas emissions;

(2) land conversion and deforestation are 2 of the largest sources of greenhouse gas emissions in the developing world, amounting to roughly 40 percent of the total greenhouse gas emissions of the developing world;

(3) with sufficient data, deforestation rates and forest carbon stocks can be measured with an acceptable level of uncertainty; and

(4) encouraging reduced deforestation and other forest carbon activities in other countries can—

(A) provide critical leverage to encourage voluntary developing country participation in emission limitation regimes;

(B) facilitate greater overall reductions in greenhouse gas emissions than would otherwise be practicable; and

(C) substantially benefit biodiversity, conservation, and indigenous and other forest-dependent people in developing countries.

SEC. 3802. DEFINITION OF FOREST CARBON ACTIVITIES.

In this subtitle, the term "forest carbon activities" means—

(1) activities directed at reducing greenhouse gas emissions from deforestation and forest degradation in countries other than the United States; and

(2) activities directed at increasing sequestration of carbon through restoration of forests, and degraded land in countries other than the United States that has not been forested prior to restoration, afforestation, and improved forest management, that

meet the eligibility requirements promulgated under section 3804(a).

SEC. 3803. ALLOCATION.

Not later than April 1, 2011, and annually thereafter through calendar year 2049, the Administrator shall allocate and distribute 2.5 percent of the Emission Allowance Account for the following calendar year for use in carrying out forest carbon activities in countries other than the United States.

SEC. 3804. DEFINITION AND ELIGIBILITY REQUIREMENTS.

(a) ELIGIBILITY REQUIREMENTS FOR FOREST CARBON ACTIVITIES.—Not later than 2 years after the date of enactment of this Act, the Administrator, in consultation with the Secretary of the Interior, the Secretary of State, and the Secretary of Agriculture, shall promulgate eligibility requirements for forest carbon activities directed at reducing emissions from deforestation and forest degradation, and at sequestration of carbon through restoration of forests and degraded land, afforestation, and improved forest management in countries other than the United States, including requirements that those activities be—

(1) carried out and managed in accordance with widely-accepted environmentally sustainable forestry practices; and

(2) designed—

(A) to promote native species and restoration of native forests, where practicable; and

(B) to avoid the introduction of invasive nonnative species.

(b) QUALITY CRITERIA FOR FOREST CARBON ALLOCATIONS.—Not later than 2 years after the date of enactment of this Act, the Administrator, in consultation with the Secretary of the Interior, the Secretary of State, and the Secretary of Agriculture, shall promulgate regulations establishing the requirements for eligibility to receive allowances under this section, including requirements that ensure that the emission reductions or sequestrations are real, permanent, additional, verifiable and enforceable, with reliable measuring and monitoring and appropriate accounting for leakage.

SEC. 3805. INTERNATIONAL FOREST CARBON ACTIVITIES.

(a) IN GENERAL.—The Administrator, in consultation with the Secretary of State, shall identify and periodically update a list of countries that have—

(1) demonstrated capacity to participate in international forest carbon activities, including—

(A) sufficient historical data on changes in national forest carbon stocks;

(B) technical capacity to monitor and measure forest carbon fluxes with an acceptable level of uncertainty; and

(C) institutional capacity to reduce emissions from deforestation and degradation;

(2) capped greenhouse gas emissions or otherwise established a national emission reference scenario based on historical data; and

(3) commenced an emission reduction program for the forest sector.

(b) ADDITIONALITY.—

(1) REDUCTION IN DEFORESTATION AND FOREST DEGRADATION.—A verified reduction in greenhouse gas emissions from deforestation and forest degradation under a cap or from a nationwide emissions reference scenario described in subsection (a) shall be—

(A) eligible for distribution of emission allowances under this section; and

(B) considered to satisfy the additionality criterion.

(2) PERIODIC REVIEW OF NATIONAL LEVEL REDUCTIONS IN DEFORESTATION AND DEGRADATION.—The Administrator, in consultation with the Secretary of State, shall identify and periodically update

a list of countries described in subsection (a) that have—

(A) achieved national-level reductions of deforestation and degradation below a historical reference scenario, taking into consideration the average annual deforestation and degradation rates of the country and of all countries during a period of at least 5 years; and

(B) demonstrated those reductions using remote sensing technology that meets international standards.

(3) OTHER FOREST CARBON ACTIVITIES.—A forest carbon activity, other than a reduction in deforestation or forest degradation, shall be eligible for distribution of emission allowances under this section, subject to the quality criteria for forest carbon activities identified in this Act or in regulations promulgated under this Act.

(c) RECOGNITION OF FOREST CARBON ACTIVITIES.—With respect to countries other than countries described in subsection (a), the Administrator—

(1) shall recognize forest carbon activities, subject to the quality criteria for forest carbon activities identified in this Act and regulations promulgated under this Act; and

(2) is encouraged to identify other incentives, including economic and market-based incentives, to encourage developing countries with largely-intact native forests to protect those forests.

SEC. 3806. REVIEWS AND DISCOUNT.

(a) REVIEWS.—Not later than 3 years after the date of enactment of this Act, and 5 years thereafter, the Administrator shall conduct a review of the program under this subtitle.

(b) DISCOUNT.—If, after the date that is 10 years after the date of enactment of this Act, the Administrator determines that foreign countries that, in the aggregate, generate greenhouse gas emissions accounting for more than 0.5 percent of global greenhouse gas emissions have not capped those emissions, established emissions reference scenarios based on historical data, or otherwise reduced total forest emissions, the Administrator may apply a discount to distributions of emission allowances to those countries under this section.

Subtitle I—Transition Assistance

SEC. 3901. GENERAL ALLOCATION AND DISTRIBUTION.

(a) GENERAL ALLOCATION.—Not later than April 1, 2011, and annually thereafter through January 1, 2029, the Administrator shall allocate percentages of the Emission Allowance Account for the following calendar year as follows:

Calendar Year	*Fossil fuel-fired electric power generating facilities*	*Rural electric cooperatives*	*Owners and operators of energy intensive manufacturing facilities*	*Facilities that produce or import petroleum-based fuel*	*HFC producers and importers*
2012	*19*	*1*	*10*	*2*	*2*
2013	*19*	*1*	*10*	*2*	*2*
2014	*19*	*1*	*10*	*2*	*2*
2015	*19*	*1*	*10*	*2*	*2*
2016	*19*	*1*	*10*	*2*	*2*
2017	*19*	*1*	*10*	*2*	*2*
2018	*18*	*1*	*9*	*2*	*2*
2019	*17*	*1*	*9*	*2*	*2*
2020	*16*	*1*	*8*	*2*	*2*
2021	*14*	*1*	*7*	*2*	*2*
2022	*13*	*1*	*7*	*1.75*	*1.75*
2023	*12*	*1*	*6*	*1.75*	*1.75*
2024	*11*	*1*	*5*	*1.5*	*1.25*
2025	*10*	*1*	*4*	*1*	*1*
2026	*8*	*1*	*3*	*1*	*1*
2027	*6*	*1*	*2*	*0.5*	*0.5*
2028	*4*	*1*	*1*	*0.5*	*0.5*
2029	*2*	*1*	*0.5*	*0.25*	*0.25*
2030	*1*	*1*	*0.25*	*0.25*	*0.25*

(b) GENERAL DISTRIBUTION.—Not later than 1 year after the date of enactment of this Act, the Administrator shall establish a system for distributing to entities identified under subsection (a) the emission allowances allocated under that subsection.

(c) FACILITIES THAT SHUT DOWN.—The system established pursuant to subsection (b) shall ensure, notwithstanding any other provision of this subtitle, that—

(1) emission allowances are not distributed to an owner or operator for any facility that has been permanently shut down at the time of the distribution;

(2) the owner or operator of any facility that permanently shuts down in a calendar year shall promptly return to the Administrator any emission allowances that the Administrator has distributed for that facility for any subsequent calendar years; and

(3) that, if a facility receives a distribution of emission allowances under this subtitle for a calendar year and subsequently permanently shuts down during that calendar year, the owner or operator of the facility shall promptly return to the Administrator a number of emission allowances equal to the number that the Administrator determines is the portion that the owner or operator will no longer need to submit for that facility under section 1202(a).

SEC. 3902. DISTRIBUTING EMISSION ALLOWANCES TO OWNERS AND OPERATORS OF FOSSIL FUEL-FIRED ELECTRIC POWER GENERATING FACILITIES.

(a) NEW ENTRANTS.—

(1) IN GENERAL.—As part of the system established under section 3901(b), the Administrator shall, for each calendar year, set aside, from the quantity of emission allowances represented by the percentages described in the table contained in section 3901(a) for owners and operators of fossil fuel-fired electric power generating facilities, a quantity of emission allowances for distribution to owners and operators of new entrant fossil fuel-fired electric power generating facilities (including such new entrant facilities owned or operated by rural electric cooperatives in any State that is not a participant in the pilot program established under section 3903(a)).

(2) CALCULATION OF ALLOWANCES.—The quantity of emission allowances distributed by the Administrator for a calendar year to a new entrant fossil fuel-fired electric power generating facility under paragraph (1) shall be equal to the product obtained by multiplying—

(A) the average greenhouse gas emission rate of all fossil fuel-fired electric power generating facilities that commenced operations during the 5 years preceding the date of enactment of this Act; and

(B) the electricity generated by the facility during the calendar year, adjusted downward on a pro rata basis for each new facility in the event that insufficient allowances are available under section 3901(a) for a calendar year.

(b) INCUMBENTS.—

(1) IN GENERAL.—As part of the system established under section 3901(b), the Administrator shall, for each calendar year, distribute to fossil fuel-fired electric power generating facilities (including such facilities owned or operated by rural electric cooperatives in any State that is not a participant in the pilot program established under section 3903(a)) that were operating during the calendar year preceding the year in which this Act was enacted the emission allowances represented by the percentages described in the table contained in section 3901(a) for owners and operators of fossil fuel-fired electric power generating facilities that remain after the distribution of emission allowances under subsection (a).

(2) CALCULATION OF ALLOWANCES.—The quantity of emission allowances distributed to a fossil fuel-fired electric power generating facility under paragraph (1) shall be equal to the product obtained by multiplying—

(A) the quantity of emission allowances available for distribution under paragraph (1); and

(B) the quotient obtained by dividing—

(i) the annual average quantity of carbon dioxide equivalents emitted by the facility during the 3 calendar years preceding the date of enactment of this Act; by

(ii) the annual average of the aggregate quantity of carbon dioxide equivalents emitted by all fossil fuel-fired electric power generating facilities during those 3 calendar years.

SEC. 3903. DISTRIBUTING ADDITIONAL EMISSION ALLOWANCES TO RURAL ELECTRIC COOPERATIVES.

(a) ESTABLISHMENT OF PILOT PROGRAM.—

(1) IN GENERAL.—As part of the system established under section 3901(b), the Administrator shall establish a pilot program for distributing to rural electric cooperatives in the States described in paragraph (2), for each of calendar years 2012 through 2029, 15 percent of the total number of emission allowances allocated for the calendar year to rural electric cooperatives under section 3901(a).

(2) DESCRIPTION OF STATES.—The States referred to in subsection (a) are—

(A) 1 State east of the Mississippi River in which 13 rural electric cooperatives sold to consumers in that State electricity in a quantity of 9,000,000 to 10,000,000 MWh, according to Energy Information Administration data for calendar year 2005; and

(B) 1 State west of the Mississippi River in which 30 rural electric cooperatives sold to consumers in that State electricity in a quantity of 3,000,000 to 4,000,000 MWh, according to Energy Information Administration data for calendar year 2005.

(b) DISTRIBUTION TO OTHER STATES.—As part of the system established under section 3901(b), the Administrator shall establish a system for distributing to rural electric cooperatives in all States other than the 2 States described in subsection (a)(2), for each of calendar years 2012 through 2029, 85 percent of the total number of emission allowances allocated for the calendar year to rural electric cooperatives under section 3901(a), in proportion to the sales of each rural electric cooperative, as reported by the Energy Information Administration.

(c) LIMITATION.—No rural electric cooperative that receives emission allowances under subsection (a) shall receive any emission allowance under subsection (b), section 3902, or section 3402.

(d) REPORT.—Not later than January 1, 2015, and every 3 years thereafter, the Administrator shall submit to Congress a report describing the success of the pilot program established under subsection (a), including a description of—

(1) the benefits realized by ratepayers of the rural electric cooperatives that receive allowances under the pilot program; and

(2) the use by those rural electric cooperatives of advanced, low greenhouse gas-emitting electric generation technologies, if any.

SEC. 3904. DISTRIBUTING EMISSION ALLOWANCES TO OWNERS AND OPERATORS OF ENERGY INTENSIVE MANUFACTURING FACILITIES.

(a) DEFINITIONS.—In this section:

(1) CURRENTLY OPERATING FACILITY.—The term "currently operating facility" means an eligible manufacturing facility that had significant operations during the calendar year preceding the calendar year for which emission allowances are being distributed under this section.

(2) ELIGIBLE MANUFACTURING FACILITY.—

(A) IN GENERAL.—The term "eligible manufacturing facility" means a manufacturing facility located in the United States that principally manufactures iron, steel, aluminum, pulp, paper, cement, chemicals, or such other products as the Administrator may determine, by rule, are likely to be significantly disadvantaged in competitive international markets as a result of indirect costs of the program established under this Act.

(B) EXCLUSION.—The term "eligible manufacturing facility" does not include a facility eligible to receive emission allowances under section 3902, 3903, or 3905.

(3) INDIRECT CARBON DIOXIDE EMISSIONS.—The term "indirect carbon dioxide emissions" means the product obtained by multiplying (as determined by the Administrator)—

(A) the quantity of electricity consumption at an eligible manufacturing facility; and

(B) the rate of carbon dioxide emission per kilowatt-hour output for the region in which the manufacturer is located.

(4) NEW ENTRANT MANUFACTURING FACILITY.—The term "new entrant manufacturing facility", with respect to a calendar year, means an eligible manufacturing facility that began operation during or after the calendar year for which emission allowances are being distributed under this section.

(b) TOTAL ALLOCATION FOR CURRENTLY OPERATING FACILITIES.—As part of the system established under section 3901(b), the Administrator shall, for each calendar year, distribute 96 percent of the total quantity of emission allowances available for allocation to carbon-intensive manufacturing under section 3901(a) to currently operating facilities.

(c) TOTAL ALLOCATION FOR CURRENTLY OPERATING FACILITIES IN EACH CATEGORY OF MANUFACTURING FACILITIES.—The quantity of emission allowances distributed by the Administrator for a calendar year to facilities in each category of currently operating facilities shall be equal to the product obtained by multiplying—

(1) the total quantity of emission allowances available for allocation under subsection (b); and

(2) the ratio that (during the calendar year preceding the calendar year for which emission allowances are being distributed under this section)—

(A) the sum of the direct and indirect carbon dioxide emissions by currently operating facilities in the category; bears to

(B) the sum of the direct and indirect carbon dioxide emissions by all currently operating facilities.

(d) INDIVIDUAL ALLOCATIONS TO CURRENTLY OPERATING FACILITIES.—The quantity of emission allowances distributed by the Administrator for a calendar year to a currently operating facility shall be a quantity equal to the product obtained by multiplying—

(1) the total quantity of emission allowances available for allocation to currently-operating facilities in the appropriate category, as determined under subsection (c); and

(2) the ratio that (during the 3 calendar years preceding the year for which the allocation rule is promulgated for the allocation period)—

(A) the average number of production employees employed at the facility; bears to

(B) the average number of production employees employed at all existing eligible manufacturing facilities in the appropriate category.

(e) NEW ENTRANT MANUFACTURING FACILITIES.—

(1) IN GENERAL.—As part of the system established under section 3901(b), the Administrator shall, for each calendar year, distribute 4 percent of the total quantity of emission allowances available for allocation to carbon intensive manufacturing under section 3901(a) to new entrant manufacturing facilities.

(2) INDIVIDUAL ALLOCATIONS.—The quantity of emission allowances distributed by the Administrator for a calendar year to a new entrant manufacturing facility shall be proportional to the product obtained by multiplying—

(A) the average number of production employees employed at the new entrant manufacturing facility during the prior calendar year; and

(B) the rate (in emission allowances per production employee) at which emission allowances were allocated to currently operating facilities in the appropriate category for the calendar year, as determined under subsection (d).

SEC. 3905. DISTRIBUTING EMISSION ALLOWANCES TO OWNERS AND OPERATORS OF FACILITIES AND OTHER ENTITIES THAT PRODUCE OR IMPORT PETROLEUM-BASED FUEL.

(a) IN GENERAL.—As part of the system established under section 3901(b), the Administrator shall, for each calendar year, distribute to facilities or entities that produce or import petroleum-based fuel the emission allowances represented by the percentages described in the table contained in section 3901(a) for owners and operators of facilities or entities that produce or import petroleum-based fuel.

(b) CALCULATION OF ALLOWANCES.—The quantity of emission allowances distributed to a facility or entity under subsection (a) shall be equal to the product obtained by multiplying—

(1) the quantity of emission allowances available for distribution under subsection (a); and

(2) the quotient obtained by dividing—

(A) the annual average of the aggregate quantity of the petroleum-based products produced or imported by that facility or entity during the 3 calendar years preceding the distribution of allowances; by

(B) the annual average of the aggregate quantity of petroleum-based products produced or imported by covered facilities and entities

that produced or imported petroleum-based fuel during those preceding 3 calendar years.

SEC. 3906. DISTRIBUTING EMISSION ALLOWANCES TO HYDROFLUOROCARBON PRODUCERS AND IMPORTERS.

(a) IN GENERAL.—The emission allowances allocated to hydrofluorocarbon producers and hydrofluorocarbon importers under section 3901(a) shall be distributed to the individual hydrofluorocarbon producers and hydrofluorocarbon importers in accordance with section 10005.

(b) EFFECT.—The distributions under subsection (a) shall not, in any way, limit or otherwise alter the prohibitions set forth in subsection 10007(b).

Subtitle J—Reducing Methane Emissions From Landfills and Coal Mines

SEC. 3907. ALLOCATION.

Not later than April 1, 2011, and annually thereafter through 2049, the Administrator shall allocate 1 percent of the Emission Allowance Account for the following calendar year to a program for achieving real, verifiable, additional, permanent, and enforceable reductions in emissions of methane from landfills and coal mines.

SEC. 3908. DISTRIBUTION.

(a) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Administrator shall establish a program that includes a system for distributing to individual entities the emission allowances allocated under section 3907.

(b) REQUIREMENT.—The Administrator shall distribute emission allowances under subsection (a) in a manner that maximizes the avoidance or reduction of greenhouse gas emissions.

TITLE IV—AUCTIONS AND USES OF AUCTION PROCEEDS

Subtitle A—Funds

SEC. 4101. ESTABLISHMENT.

There are established in the Treasury of the United States the following funds:

(1) The Energy Assistance Fund.

(2) The Climate Change Worker Training Fund.

(3) The Adaptation Fund.

(4) The Climate Change and National Security Fund.

(5) The Bureau of Land Management Emergency Firefighting Fund.

(6) The Forest Service Emergency Firefighting Fund.

(7) The Climate Security Act Management Fund.

SEC. 4102. AMOUNTS IN FUNDS.

Each Fund established by section 4101 shall consist of such amounts as are deposited into the respective Fund under subtitle C.

Subtitle B—Climate Change Credit Corporation

SEC. 4201. ESTABLISHMENT.

(a) IN GENERAL.—There is established, as a nonprofit corporation without stock, a corporation to be known as the "Climate Change Credit Corporation".

(b) TREATMENT.—The Corporation shall not be considered to be an agency or establishment of the Federal Government.

SEC. 4202. APPLICABLE LAWS.

The Corporation shall be subject to this title and, to the extent consistent with this title, the District of Columbia Business Corporation Act (D.C. Code section 29–301 et seq.).

SEC. 4203. BOARD OF DIRECTORS.

(a) IN GENERAL.—The Corporation shall have a board of directors composed of 5 individuals who are citizens of the United States, of whom 1 shall be elected annually by the board to serve as Chairperson.

(b) POLITICAL AFFILIATION.—Not more than 3 members of the board serving at any time may be affiliated with the same political party.

(c) APPOINTMENT AND TERM.—A member of the board shall be appointed by the President, by and with the advice and consent of the Senate, for a term of 5 years.

(d) QUORUM.—Three members of the board shall constitute a quorum for a meeting of the board of directors.

(e) PROHIBITIONS.—

(1) CONFLICTS OF INTEREST.—An individual employed by, or holding any official relationship (including any shareholder) with, any entity engaged in the generation, transmission, distribution, or sale of energy, an individual who has any pecuniary interest in the generation, transmission, distribution, or sale of energy, or an individual who has a pecuniary interest in the implementation of this Act, shall not be appointed to the Corporation under this subtitle.

(2) NO OTHER EMPLOYMENT.—A member of the Corporation shall not hold any other employment during the term of service of the member.

(f) VACANCIES.—

(1) IN GENERAL.—A vacancy on the Corporation—

(A) shall not affect the powers of the Corporation; and

(B) shall be filled in the same manner as the original appointment was made.

(2) SERVICE UNTIL NEW APPOINTMENT.—A member of the Corporation the term of whom has expired or otherwise been terminated shall continue to serve until the date on which a replacement is appointed if the President determines that service to be appropriate.

(g) REMOVAL.—

(1) IN GENERAL.—A member may be removed from the Corporation on determination of the President for cause.

(2) NOTIFICATION.—Not later than 30 days before removing a member from the Corporation for cause under paragraph (1), the President shall provide to Congress an advance notification of the determination by the President to remove the member.

SEC. 4204. REVIEW AND AUDIT BY COMPTROLLER GENERAL.

Not later than January 1, 2013, and annually thereafter, the Comptroller General of the United States shall conduct a review and audit of each expenditure made pursuant to this title to determine the efficacy of the programs, expenditures, and projects funded under this title.

Subtitle C—Auctions

SEC. 4301. EARLY AUCTIONS.

(a) INITIATION OF AUCTIONING.—Not later than 1 year after the date of enactment of this Act, the Corporation shall begin auctioning the emission allowances allocated to the Corporation under section 3101.

(b) COMPLETION OF AUCTIONING.—Not later than December 31, 2010, the Corporation shall complete auctioning of all allowances allocated to the Corporation under section 3101.

(c) PROCEEDS FROM EARLY AUCTIONING.—The Corporation shall use to carry out programs established under subtitle D all proceeds of early auctioning conducted by the Corporation under this section.

SEC. 4302. ANNUAL AUCTIONS.

(a) IN GENERAL.—Not later than 330 days before the beginning of a calendar year identified in the table contained in section 3102, the Corporation shall auction all of the allowances allocated to the Corporation for that year by the Administrator under section 3102.

(b) PROCEEDS FROM ANNUAL AUCTIONING.—

(1) BUREAU OF LAND MANAGEMENT EMERGENCY FIREFIGHTING FUND.—For each of calendar years 2012 through 2050, the Corporation shall deposit into the Bureau of Land Management Emergency Fire-

fighting Fund established by section 4101(5) proceeds, from annual auctions that the Corporation conducts for the calendar year under this section, that are sufficient to ensure that the amount in the Fund equals $300,000,000.

(2) FOREST SERVICE EMERGENCY FIREFIGHTING FUND.—For each of calendar years 2012 through 2050, the Corporation shall deposit into the Forest Service Emergency Firefighting Fund established by section 4101(6) proceeds, from annual auctions that the Corporation conducts for the calendar year under this section, that are sufficient to ensure that the amount in the Fund equals $800,000,000.

(3) CLIMATE SECURITY ACT MANAGEMENT FUND.—

(A) IN GENERAL.—For each of calendar years 2012 through 2050, the Corporation shall deposit into the Climate Security Act Management Fund established by section 4101(7) such percentage of the proceeds of the annual auctions conducted by the Corporation for the calendar year under this section as the Administrator determines to be sufficient to efficiently and effectively administer this Act.

(B) DISTRIBUTION.—The Administrator may distribute funds from the Climate Security Act Management Fund to the Secretary of Agriculture, the Secretary of Labor, and the Carbon Market Efficiency Board, as the Administrator determines to be necessary to assist in carrying out this Act.

(C) USE OF FUNDS.—The head of a Federal agency or department may use funds from the Climate Security Act Management Fund for the costs to the agency or department of carrying out this Act, including the costs of—

(i) promulgation of regulations;

(ii) development of policy guidance;

(iii) development and operation of information systems;

(iv) certification of monitoring equipment;

(v) conducting facilities audits and inspections;

(vi) monitoring and modeling;

(vii) quality assurance and verification functions;

(viii) enforcement;

(ix) administration;

(x) outreach;

(xi) training;

(xii) field audits; and

(xiii) financial management.

(D) TREATMENT.—Amounts in the Climate Security Act Management Fund—

(i) shall be used only to advance the purposes described in section 3;

(ii) are subject to the availability of appropriations; and

(iii) shall remain available until expended.

(4) USE OF REMAINING PROCEEDS.—

(A) IN GENERAL.—For each of calendar years 2012 through 2050, the Corporation shall use the proceeds of the annual auctions conducted by the Corporation for the calendar year under this section in accordance with this paragraph.

(B) ENERGY TECHNOLOGY DEPLOYMENT.—For each of calendar years 2012 through 2050, the Corporation shall use to carry out the programs established under subtitle D 52 percent of the proceeds of the annual auctions conducted by

the Corporation for the calendar year under this section.

(C) ENERGY INDEPENDENCE ACCELERATION FUND.—In any of calendar years 2012 through 2050 during which there exists in the Treasury of the United States an energy transformation acceleration fund administered by the Director of the Advanced Research Projects Agency within the Department of Energy, of the proceeds of the annual auctions conducted by the Corporation for the calendar year under this section, the Corporation shall deposit 2 percent of the proceeds into that fund.

(D) ENERGY CONSUMERS.—For each of calendar years 2012 through 2050, the Corporation shall deposit into the Energy Assistance Fund established by section 4101(1) 18 percent of the proceeds of the annual auctions conducted by the Corporation for the calendar year under this section.

(E) CLIMATE CHANGE WORKER TRAINING PROGRAM.—For each of calendar years 2012 through 2050, the Corporation shall deposit into the Climate Change Worker Training Fund established by section 4101(2) 5 percent of the pro-

ceeds of the annual auctions conducted by the Corporation for the calendar year under this section.

(F) ADAPTATION PROGRAM FOR NATURAL RESOURCES IN UNITED STATES AND TERRITORIES.—For each of calendar years 2012 through 2050, the Corporation shall deposit into the Adaptation Fund established by section 4101(3) 18 percent of the proceeds of the annual auctions conducted by the Corporation for the calendar year under this section.

(G) CLIMATE CHANGE AND NATIONAL SECURITY PROGRAM.—For each of calendar years 2012 through 2050, the Corporation shall deposit into the Climate Change and National Security Fund established by section 4101(4) 5 percent of the proceeds of the annual auctions conducted by the Corporation for the calendar year under this section.

Subtitle D—Energy Technology Deployment

SEC. 4401. GENERAL ALLOCATIONS.

For each calendar year, the Corporation shall use the amounts described in sections 4301(c) and 4302(b)(4)(B)

to carry out the programs established under this subtitle, as follows:

(1) 32 percent of the funds shall be used to carry out the zero- or low-carbon energy technologies program under section 4402.

(2) 25 percent shall be used to carry out the advanced coal and sequestration technologies program under section 4403.

(3) 6 percent shall be used to carry out the fuel from cellulosic biomass program under section 4404.

(4) 12 percent shall be used to carry out the advanced technology vehicles manufacturing incentive program under section 4405.

(5) 25 percent shall be used to carry out the sustainable energy program under section 4406.

SEC. 4402. ZERO- OR LOW-CARBON ENERGY TECHNOLOGIES DEPLOYMENT.

(a) DEFINITIONS.—In this section:

(1) ENERGY SAVINGS.—The term "energy savings" means megawatt-hours of electricity or million British thermal units of natural gas saved by a product, in comparison to projected energy consumption under an energy-efficiency standard applicable to the product.

(2) ENGINEERING INTEGRATION COSTS.—The term "engineering integration costs" includes the costs of engineering tasks relating to—

(A) redesigning manufacturing processes to begin producing qualifying components and zero- or low-carbon generation technologies;

(B) designing new tooling and equipment for production facilities that produce qualifying components and zero- or low-carbon generation technologies; and

(C) establishing or expanding manufacturing operations for qualifying components and zero- or low-carbon generation technologies.

(3) HIGH-EFFICIENCY CONSUMER PRODUCT.—The term "high-efficiency consumer product" means a covered product to which an energy conservation standard applies under section 325 of the Energy Policy and Conservation Act (42 U.S.C. 6295), if the energy efficiency of the product exceeds the energy efficiency required under the standard.

(4) QUALIFYING COMPONENT.—The term "qualifying component" means a component that the Secretary of Energy determines to be specially designed for zero- or low-carbon generation technology.

(5) ZERO- OR LOW-CARBON GENERATION.—The term "zero- or low-carbon generation" means generation of electricity by an electric generation unit that—

(A) emits no carbon dioxide into the atmosphere, or is fossil-fuel fired and emits into the atmosphere not more than 250 pounds of carbon dioxide per megawatt-hour (after adjustment for any carbon dioxide from the unit that is geologically sequestered); and

(B) was placed into commercial service after the date of enactment of this Act.

(6) ZERO- OR LOW-CARBON GENERATION TECHNOLOGY.—The term "zero- or low-carbon generation technology" means a technology used to create zero- or low-carbon generation.

(b) FINANCIAL INCENTIVES PROGRAM.—During each fiscal year beginning on or after October 1, 2008, the Corporation shall competitively award financial incentives under this subsection in the technology categories of—

(1) the production of electricity from new zero- or low-carbon generation;

(2) the manufacture of high-efficiency consumer products; and

(3) facility establishment or conversion by manufacturers and component suppliers of zero- or low-carbon technology.

(c) REQUIREMENTS.—

(1) IN GENERAL.—The Corporation shall make awards under this section to domestic producers of new zero- or low-carbon generation, domestic manufacturers of high-efficiency consumer products, and domestic facilities and operations of manufacturers and component suppliers of zero- or low-carbon generation technology—

(A) in the case of producers of new zero- or low-carbon generation, based on the bid of each producer in terms of dollars per megawatt-hour of electricity generated;

(B) in the case of manufacturers of qualifying high-efficiency consumer products, based on the bid of each manufacturer in terms of dollars per megawatt-hour or million British thermal units saved; and

(C) in the case of qualifying manufacturers of zero- or low-carbon generation technology, based on the criteria noted in subsection (e).

(2) ACCEPTANCE OF BIDS.—

(A) IN GENERAL.—In making awards under subparagraphs (A) and (B) of paragraph (1), the Corporation shall—

(i) solicit bids for reverse auction from appropriate producers and manufacturers, as determined by the Corporation; and

(ii) award financial incentives to the producers and manufacturers that submit the lowest bids that meet the requirements established by the Corporation.

(B) FACTORS FOR CONVERSION.—

(i) IN GENERAL.—For the purpose of assessing bids under subparagraph (A), the Corporation shall specify a factor for converting megawatt-hours of electricity and million British thermal units of natural gas to common units.

(ii) REQUIREMENT.—The conversion factor shall be based on the relative greenhouse gas emission benefits of electricity and natural gas conservation.

(d) FORMS OF AWARDS.—

(1) ZERO- AND LOW-CARBON GENERATORS.—An award for zero- or low-carbon generation under this subsection shall be in the form of a contract to pro-

vide a production payment for each year during the first 10 years of commercial service of the generation unit in an amount equal to the product obtained by multiplying—

(A) the amount bid by the producer of the zero- or low-carbon generation; and

(B) the megawatt-hours estimated to be generated by the zero- or low-carbon generation unit each year.

(2) HIGH-EFFICIENCY CONSUMER PRODUCTS.—An award for a high-efficiency consumer product under this subsection shall be in the form of a lump sum payment in an amount equal to the product obtained by multiplying—

(A) the amount bid by the manufacturer of the high-efficiency consumer product; and

(B) the energy savings during the projected useful life of the high-efficiency consumer product, not to exceed 10 years, as determined by the Corporation.

(3) MANUFACTURING OF ZERO- OR LOW-CARBON GENERATION TECHNOLOGY.—

(A) IN GENERAL.—An award for facility establishment or conversion costs for zero- or low-carbon generation technology shall be in an

amount equal to not more than 30 percent of the cost of—

(i) establishing, reequipping, or expanding a manufacturing facility to produce—

(I) qualifying zero- or low-carbon generation technology; or

(II) qualifying components;

(ii) engineering integration costs of zero- or low-carbon generation technology and qualifying components; and

(iii) property, machine tools, and other equipment acquired or constructed primarily to enable the recipient to test equipment necessary for the construction or operation of a zero- or low-carbon generation facility.

(B) MINIMUM AMOUNT.—The Corporation shall use not less than ¼ of the amounts made available to carry out this section to make awards to entities for the manufacturing of zero- or low-carbon generation technology.

(e) SELECTION CRITERIA.—In making awards under this section to qualifying manufacturers of zero- or low-car-

bon generation technology and qualifying components, the Corporation shall select manufacturers that—

(1) document the greatest use of domestically sourced parts and components;

(2) return to productive service existing idle manufacturing capacity;

(3) are located in States with the greatest availability of unemployed manufacturing workers;

(4) compensate workers at a minimum amount equal to at least 100 percent of the State average manufacturing wage, plus health insurance benefits;

(5) demonstrate a high probability of commercial success; and

(6) achieve other criteria, as the Corporation determines to be appropriate.

SEC. 4403. ADVANCED COAL AND SEQUESTRATION TECHNOLOGIES PROGRAM.

(a) ADVANCED COAL TECHNOLOGIES.—

(1) DEFINITIONS.—In this section:

(A) ADVANCED COAL GENERATION TECHNOLOGY.—Except as provided in paragraph (2), the term "advanced coal generation technology" means an advanced coal-fueled power plant technology that meets 1 of the following performance standards for limiting carbon dioxide emissions

from an electric generation unit on an annual average basis, as determined by the Corporation:

(i) For an electric generation unit that is not a new entrant, an annual emissions rate of not more than 1,200 pounds of carbon dioxide per megawatt-hour of net electricity generation, after subtracting the carbon dioxide that is captured and sequestered.

(ii) For any project for which construction of the unit commenced before July 1, 2018, an annual emissions rate of not more than 800 pounds of carbon dioxide per megawatt-hour of net electricity generation, after subtracting the carbon dioxide that is captured and sequestered.

(iii) For any project for which construction of the unit commenced on or after July 1, 2018, an annual emissions rate of not more than 350 pounds of carbon dioxide per megawatt-hour of net electricity generation, after subtracting the carbon dioxide that is captured and sequestered.

(B) COMMENCED.—The term "commenced", with respect to construction, means that an owner or operator has—

(i) obtained the necessary permits to carry out a continuous program of construction; and

(ii) entered into a binding contractual obligation, with substantial financial penalties for cancellation, to undertake such a program.

(C) CONSTRUCTION.—The term "construction", with respect to a carbon capture and sequestration project, means the fabrication, erection, or installation of technology for the project.

(2) ADJUSTMENT OF PERFORMANCE STANDARDS.—

(A) IN GENERAL.—The Corporation may adjust the emissions performance standards for a carbon capture and sequestration project under paragraph (1)(A) for an electric generation unit that uses subbituminous coal, lignite, or petroleum coke in significant amounts.

(B) REQUIREMENT.—If the Corporation adjusts a standard under subparagraph (A), the adjusted performance standard for the applicable

project shall prescribe an annual emissions rate that requires the project to achieve an equivalent reduction from uncontrolled carbon dioxide emissions levels from the use of subbituminous coal, lignite, or petroleum coke, as compared to the emissions the project would have achieved if that unit had combusted only bituminous coal during the particular calendar year.

(3) DEMONSTRATION PROJECTS.—

(A) IN GENERAL.—The Corporation shall use not less than ¼ of the amounts made available to carry out this section for each fiscal year to support demonstration projects using advanced coal generation technology, including retrofit technology that could be deployed on existing coal generation facilities.

(B) CERTAIN PROJECTS.—Of the amounts described in subparagraph (A), the Corporation shall make available up to 25 percent for projects that meet the carbon dioxide emissions performance standard under clause (i) of paragraph (1)(A).

(4) DEPLOYMENT INCENTIVES.—

(A) IN GENERAL.—The Corporation shall use not less than ¼ of the amounts made avail-

able to carry out this section for each fiscal year to provide financial incentives to facilitate the deployment of not more than 20 gigawatts of advanced coal generation technologies.

(B) ADMINISTRATION.—In providing incentives under this paragraph, the Corporation shall—

(i) provide appropriate incentives for regulated investor-owned utilities, municipal utilities, electric cooperatives, and independent power producers, as determined by the Secretary of Energy; and

(ii) ensure that a range of the domestic coal types is employed in the facilities that receive incentives under this paragraph.

(C) FUNDING REQUIREMENTS.—

(i) SEQUESTRATION ACTIVITIES.—The Corporation shall provide incentives only to projects that meet 1 of the emission performance standards for limiting carbon dioxide under clause (ii) or (iii) of paragraph (1)(A).

(ii) PROJECTS USING CERTAIN COALS.—In providing incentives under this paragraph, the Corporation shall set aside

not less than 25 percent of any amounts made available to carry out this subsection for projects using coal with an energy content of not more than 10,000 British thermal units per pound.

(5) STORAGE AGREEMENT REQUIRED.—The Corporation shall require a binding storage agreement for the carbon dioxide captured in a project under this subsection in a geological storage project permitted by the Administrator under regulations promulgated pursuant to section 1421(d) of the Safe Drinking Water Act (42 U.S.C. 300h(d)).

(6) DISTRIBUTION OF FUNDS.—

(A) REQUIREMENT.—The Corporation shall make awards under this section in a manner that maximizes the avoidance or reduction of greenhouse gas emissions.

(B) INCENTIVES.—A project that receives an award under this subsection may elect 1 of the following financial incentives:

(i) A loan guarantee.

(ii) A cost-sharing grant to cover the incremental cost of installing and operating carbon capture and storage equipment (for

which utilization costs may be covered for the first 10 years of operation).

(iii) Production payments of not more than 1.5 cents per kilowatt-hour of electric output during the first 10 years of commercial service of the project.

(7) LIMITATION.—A project may not receive an award under this subsection if the project receives an award under section 4402.

(b) SEQUESTRATION.—

(1) IN GENERAL.—The Corporation shall use not less than ½ of the amounts made available to carry out this section for each fiscal year for large-scale geological carbon storage demonstration projects that store carbon dioxide captured from electric generation units using coal gasification or other advanced coal combustion processes, including units that receive assistance under subsection (a).

(2) PROJECT CAPITAL AND OPERATING COSTS.—

(A) IN GENERAL.—The Corporation shall provide assistance under this subsection to reimburse the project owner for a percentage of the incremental project capital and operating costs of the project that are attributable to carbon cap-

ture and sequestration, as the Secretary determines to be appropriate.

(B) CERTAIN PROJECTS.—Of the assistance provided under subparagraph (A), the Corporation shall make available up to 25 percent for projects that meet the carbon dioxide emissions performance standard under subsection (a)(1)(A)(i).

SEC. 4404. FUEL FROM CELLULOSIC BIOMASS.

(a) IN GENERAL.—The Corporation shall provide deployment incentives under this section to encourage a variety of projects to domestically produce transportation fuels from cellulosic biomass, relying on different feedstocks in different regions of the United States.

(b) PROJECT ELIGIBILITY.—Incentives under this section shall be provided on a competitive basis to projects that domestically produce fuels that—

(1) meet United States fuel and emission specifications;

(2) help diversify domestic transportation energy supplies; and

(3) improve or maintain air, water, soil, and habitat quality, and protect scarce water supplies.

(c) INCENTIVES.—Incentives under this section may consist of—

(1) loan guarantees for the construction of production facilities and supporting infrastructure; or

(2) production payments through a reverse auction in accordance with subsection (d).

(d) REVERSE AUCTION.—

(1) IN GENERAL.—In providing incentives under this section, the Corporation shall—

(A) prescribe rules under which producers of fuel from cellulosic biomass may bid for production payments under subsection (c)(2); and

(B) solicit bids from producers of different classes of transportation fuel, as the Corporation determines to be appropriate.

(2) REQUIREMENT.—The rules under section 4402 shall require that incentives shall be provided to the producers that submit the lowest bid (in terms of cents per gallon gasoline equivalent) for each class of transportation fuel from which the Corporation solicits a bid.

SEC. 4405. ADVANCED TECHNOLOGY VEHICLES MANUFACTURING INCENTIVE PROGRAM.

(a) DEFINITIONS.—In this section:

(1) ADVANCED TECHNOLOGY VEHICLE.—The term "advanced technology vehicle" means an electric vehicle, a fuel cell-powered vehicle, a hybrid or plug-

in hybrid electric vehicle, or an advanced diesel light duty motor vehicle, that meets—

(A) the Tier II Bin 5 emission standard established in rules prescribed by the Administrator under section 202(i) of the Clean Air Act (42 U.S.C. 7521(i)), or a lower-numbered Bin emission standard;

(B) any new emission standard for fine particulate matter prescribed by the Administrator under that Act; and

(C) standard of at least 125 percent of the average base year combined fuel economy, calculated on an energy-equivalent basis for vehicles other than advanced diesel light-duty motor vehicles, for vehicles of a substantially similar nature and footprint.

(2) COMBINED FUEL ECONOMY.—The term "combined fuel economy" means—

(A) the combined city-highway miles per gallon values, as reported in accordance with section 32908 of title 49, United States Code; and

(B) in the case of an electric drive vehicle with the ability to recharge from an off-board source, the reported mileage, as determined in a manner consistent with the Society of Auto-

motive Engineers recommended practice for that configuration, or a similar practice recommended by the Secretary of Energy, using a petroleum equivalence factor for the off-board electricity (as defined by the Secretary of Energy).

(3) ENGINEERING INTEGRATION COSTS.—The term "engineering integration costs" includes the cost of engineering tasks performed in the United States relating to—

(A) incorporating qualifying components into the design of advanced technology vehicles; and

(B) designing new tooling and equipment for production facilities that produce in the United States qualifying components or advanced technology vehicles.

(4) QUALIFYING COMPONENT.—The term "qualifying component" means a component that the Secretary of Energy determines to be—

(A) specially designed for advanced technology vehicles;

(B) installed for the purpose of meeting the performance requirements of advanced technology

vehicles as specified in subparagraphs (A), (B), and (C) of paragraph (1); and

(C) manufactured in the United States.

(b) MANUFACTURER FACILITY CONVERSION AWARDS.—The Corporation shall provide facility conversion funding awards under this subsection to automobile manufacturers and component suppliers to pay up to 30 percent of the cost of—

(1) reequipping or expanding an existing manufacturing facility to produce—

(A) qualifying advanced technology vehicles; or

(B) qualifying components; and

(2) engineering integration of qualifying vehicles and qualifying components.

(c) PERIOD OF AVAILABILITY.—An award under subsection (b) shall apply to—

(1) facilities and equipment placed in service after the date of enactment of this Act and before January 1, 2030; and

(2) engineering integration costs incurred after the date of enactment of this Act.

(d) ADDITIONAL LIMITATIONS.—

(1) MAXIMUM AMOUNT.—The maximum amount of all awards under this section shall not exceed $40,000,000,000.

(2) CAFE REQUIREMENTS.—The Corporation shall not make an award under this section to an automobile manufacturer or component supplier that, directly or through a parent, subsidiary, or affiliated entity, is not in compliance with each corporate average fuel economy standard under section 32902 of title 49, United States Code, in effect on the date of the award.

(e) ADDITIONAL REQUIREMENTS.—

(1) DEFINITION OF RECIPIENT.—In this subsection, the term "recipient" means the automobile manufacturer or component supplier (including any parent, subsidiary, and affiliated entities) that receives an award under this section.

(2) CERTIFICATION.—To be eligible for an award under this section, an automobile manufacturer or component supplier (including any parent, subsidiary, and affiliated entities) shall certify to the Corporation that, for each of the 7 calendar years following the receipt of the award, the manufacturer or supplier will maintain in the United States a number of full-time or full-time-equivalent employees—

(A) equal to 90 percent of the monthly average number of full-time or full-time-equivalent employees maintained by the manufacturer or supplier for the 12-month period ending on the date of receipt of the award;

(B) sufficient to ensure that the proportion that the workforce of the manufacturer or supplier in the United States bears to the global workforce of the manufacturer or supplier is equal to or greater than the average monthly proportion that the workforce of the manufacturer or supplier in the United States bears to the global workforce of the manufacturer or supplier for the 12-month period ending on the date of receipt of the award; or

(C) sufficient to ensure that any percentage decrease in the hourly workforce of the manufacturer or supplier in the United States is not greater than the aggregate of the percentage decrease in the market share of the manufacturer or supplier in the United States and the increase in the productivity of the manufacturer or supplier, calculated during the period beginning on the date of receipt of the award and ending on the date of certification under this subparagraph.

(3) RECERTIFICATION.—Not later than 1 year after the date of receipt of an award under this section, and annually thereafter, a manufacturer or supplier shall—

(A) recertify to the Corporation that, during the preceding calendar year, the manufacturer or supplier has achieved compliance with the requirement described in paragraph (2); and

(B) provide to the Corporation sufficient data for verification of the recertification.

(4) REPAYMENT.—A manufacturer or supplier that fails to make the recertification required by paragraph (3) shall pay to the Corporation an amount equal to the difference between—

(A) the amount of the original award to the manufacturer or supplier; and

(B) the product obtained by multiplying—

(i) an amount equal to 1/7 of that original amount; and

(ii) the number of years during which the manufacturer or supplier—

(I) received an award under this section; and

(II) made the certification required by paragraph (3).

SEC. 4406. SUSTAINABLE ENERGY PROGRAM.

(a) DEFINITION OF SUSTAINABLE ENERGY TECHNOLOGY.—In this section, the term "sustainable energy technology" means a technology to harness a renewable energy source (as defined in section 609(a) of the Public Utility Regulatory Policies Act of 1978 (7 U.S.C. 918c(a)), including in distributed energy systems.

(b) DEMONSTRATION PROJECTS.—The Corporation shall use not less than 25 percent of the amounts made available to carry out this section for each fiscal year to support demonstration projects in the United States using sustainable energy technology, including in distributed energy systems.

(c) DEPLOYMENT INCENTIVES.—

(1) IN GENERAL.—The Corporation shall use not less than 25 percent of the amounts made available to carry out this section for each fiscal year to provide Federal financial incentives to facilitate the deployment in the United States of sustainable energy technology, including in distributed energy systems.

(2) ADMINISTRATION.—In providing incentives under this subsection, the Corporation shall provide appropriate incentives for regulated investor-owned utilities, municipal utilities, electric cooperatives, independent power producers, and consumers, as determined by the Secretary of Energy.

(d) DISTRIBUTION OF FUNDS.—A project that receives an award under this subsection may elect 1 of the following Federal financial incentives:

(1) A loan guarantee.

(2) A cost-sharing grant to cover the incremental cost of installing and operating equipment (for which utilization costs may be covered for the first 10 years of operation).

(3) Production payments of not more than 1.5 cents per kilowatt-hour of electric output during the first 10 years of commercial service of the project.

(e) LIMITATION.—A project may not receive an award under this subsection if the project receives an award under section 4402.

Subtitle E—Energy Consumers

SEC. 4501. PROPORTIONS OF FUNDING AVAILABILITY.

All funds deposited into the Energy Assistance Fund established by section 4101(1) shall be made available, without further appropriation or fiscal year limitation, to the following programs in the following proportions:

(1) 50 percent of the funds to the low-income home energy assistance program established under the Low Income Home Energy Assistance Act of 1981 (42 U.S.C. 8621 et seq.).

(2) 25 percent of the funds to the Weatherization Assistance Program for Low-Income Persons established under part A of title IV of the Energy Conservation and Production Act (42 U.S.C. 6861 et seq.).

(3) 25 percent of the funds to the rural energy assistance program described in section 4502.

SEC. 4502. RURAL ENERGY ASSISTANCE PROGRAM.

The Secretary of Energy shall carry out a program to use the funds made available under section 4501(3) to provide financial assistance to promote the availability of reasonably-priced distributed electricity in off-grid rural regions in which electricity prices exceed 150 percent of the national average, as determined by the Secretary of Energy.

Subtitle F—Climate Change Worker Training Program

SEC. 4601. FUNDING.

All funds deposited into the Climate Change Worker Training Fund established by section 4101(2) shall be made available, without further appropriation or fiscal year limitation, to carry out the programs established under this subtitle.

SEC. 4602. PURPOSES.

The purposes of this subtitle are—

(1) to create a sustainable, comprehensive public program that provides quality training that is linked to jobs that are created through low-carbon energy, sustainable energy, and energy efficiency initiatives;

(2) to satisfy industry demand for a skilled workforce, support economic growth, boost the global competitiveness of the United States in expanding low-carbon energy, sustainable energy, and energy efficiency industries, and provide economic self-sufficiency and family-sustaining jobs for United States workers, including low-wage workers, through quality training and placement in job opportunities in those industries; and

(3) to provide funds for Federal and State industry-wide research, labor market information and labor exchange programs, and the development of Federal- and State-administered training programs.

SEC. 4603. ESTABLISHMENT.

Not later than 180 days after the date of enactment of this Act, the Secretary of Labor (referred to in this subtitle as the ''Secretary''), in consultation with the Administrator and the Secretary of Energy, shall establish a climate change worker training program that achieves the purposes of this subtitle.

SEC. 4604. ACTIVITIES.

(a) NATIONAL RESEARCH PROGRAM.—Under the program established under section 4603, the Secretary, acting through the Bureau of Labor Statistics, shall provide assistance to support national research to develop labor market data and to track future workforce trends resulting from energy-related initiatives carried out under this section, including—

(1) linking research and development in low-carbon energy, sustainable energy, and energy efficiency technology with the development of standards and curricula for current and future jobs;

(2) the tracking and documentation of academic and occupational competencies and future skill needs with respect to low-carbon energy, sustainable energy, and energy efficiency technology;

(3) tracking and documentation of occupational information and workforce training data with respect to low-carbon energy, sustainable energy, and energy efficiency technology;

(4) assessing new employment and work practices, including career ladder and upgrade training and high-performance work systems; and

(5) collaborating with State agencies, industry, organized labor, and community and nonprofit organizations to disseminate successful innovations for

labor market services and worker training with respect to low-carbon energy, sustainable energy, and energy efficiency technology.

(b) NATIONAL ENERGY TRAINING PARTNERSHIP GRANTS.—

(1) GRANTS.—

(A) IN GENERAL.—Under the program established under section 4603, the Secretary shall award national energy training partnerships grants on a competitive basis to eligible entities to enable the entities—

(i) to carry out national training that leads to economic self-sufficiency; and

(ii) to develop a low-carbon energy, sustainable energy, and energy efficiency industries workforce.

(B) DIVERSITY.—Grants shall be awarded under this paragraph so as to ensure geographic diversity, with—

(i) at least 2 grants awarded to entities located in each of the 4 Petroleum Administration for Defense Districts with no subdistricts; and

(ii) at least 1 grant awarded to an entity located in each of the subdistricts of the

Petroleum Administration for Defense District with subdistricts.

(2) ELIGIBILITY.—To be eligible to receive a grant under paragraph (1), an entity shall be a nonprofit partnership that—

(A) includes the equal participation of industry, including public or private employers, and labor organizations, including joint labor-management training programs, and may include community-based organizations, educational institutions, small businesses, cooperatives, State and local veterans agencies, and veterans service organizations; and

(B) demonstrates—

(i) experience in implementing and operating worker skills training and education programs;

(ii) the ability to identify and involve in training programs carried out using the grant, target populations of workers that are or will be engaged in activities relating to low-carbon energy, sustainable energy, and energy efficiency industries; and

(iii) the ability to help workers achieve economic self-sufficiency.

(3) ACTIVITIES.—Activities to be carried out using a grant provided under this subsection may include—

(A) the provision of occupational skills training, including curriculum development, on-the-job training, and classroom training;

(B) the provision of safety and health training;

(C) the provision of basic skills, literacy, general equivalency degree, English as a second language, and job readiness training;

(D) individual referral and tuition assistance for a community college training program;

(E) the provision of customized training in conjunction with an existing registered apprenticeship program or labor-management partnership;

(F) the provision of career ladder and upgrade training; and

(G) the implementation of transitional jobs strategies.

(c) STATE LABOR MARKET RESEARCH, INFORMATION, AND LABOR EXCHANGE RESEARCH PROGRAM.—

(1) IN GENERAL.—Under the program established under section 4603, the Secretary shall award

competitive grants to States to enable the States to administer labor market and labor exchange informational programs that include the implementation of the activities described in paragraph (2).

(2) ACTIVITIES.—A State shall use amounts awarded under this subsection to provide funding to the State agency that administers the Wagner-Peyser Act (29 U.S.C. 49 et seq.) and State unemployment compensation programs to carry out the following activities using State agency merit staff:

(A) The identification of job openings in the low-carbon energy, sustainable energy, and energy efficiency sector.

(B) The administration of skill and aptitude testing and assessment for workers.

(C) The counseling, case management, and referral of qualified job seekers to openings and training programs, including low-carbon energy, sustainable energy, and energy efficiency training programs.

(d) STATE ENERGY TRAINING PARTNERSHIP PROGRAM.—

(1) IN GENERAL.—Under the program established under section 4603, the Secretary shall award competitive grants to States to enable the States to

administer low-carbon energy, sustainable energy, and energy efficiency workforce development programs that include the implementation of the activities described in paragraph (2).

(2) ACTIVITIES.—

(A) IN GENERAL.—A State shall use amounts awarded under the subsection to award competitive grants to eligible State energy sector partnerships to enable the partnerships to coordinate with existing apprenticeship and labor management training programs and implement training programs that lead to the economic self-sufficiency of trainees.

(B) ELIGIBILITY.—To be eligible to receive a grant under this subsection, a State energy sector partnership shall—

(i) consist of nonprofit organizations that include equal participation from industry, including public or private nonprofit employers, and labor organizations, including joint labor-management training programs, and may include representatives from local governments, worker investment agency one-stop career centers, community based organizations, community colleges,

other post-secondary institutions, small businesses, cooperatives, State and local veterans agencies, and veterans service organizations;

(ii) demonstrate experience in implementing and operating worker skills training and education programs; and

(iii) demonstrate the ability to identify and involve in training programs, target populations of workers that are or will be engaged in activities relating to low-carbon energy, sustainable energy, and energy efficiency industries.

(C) PRIORITY.—In awarding grants under this subsection, the Secretary shall give priority to States that demonstrate linkages of activities under the grant with—

(i) meeting national energy policies associated with low-carbon energy, sustainable energy, and energy efficiency; and

(ii) meeting State energy policies associated with low-carbon energy, sustainable energy, and energy efficiency.

(D) COORDINATION.—An entity that receives a grant under this subsection shall—

(i) coordinate activities carried out under the grant with existing apprenticeship and labor management training programs; and

(ii) implement training programs that lead to the economic self-sufficiency of trainees, including providing—

(I) outreach and recruitment services, in coordination with the appropriate State agency;

(II) occupational skills training, including curriculum development, on-the-job training, and classroom training;

(III) safety and health training;

(IV) basic skills, literacy, general equivalency degree, English as a second language, and job readiness training;

(V) individual referral and tuition assistance for a community college training program;

(VI) customized training in conjunction with an existing registered apprenticeship program or labor-management partnership;

(VII) career ladder and upgrade training; and

(VIII) services under transitional jobs strategies.

SEC. 4605. WORKER PROTECTIONS AND NONDISCRIMINATION REQUIREMENTS.

(a) APPLICABILITY OF WIA.—Sections 181 and 188 of the Workforce Investment Act of 1998 (29 U.S.C. 2931, 2938) shall apply to all programs carried out using assistance under this subtitle.

(b) CONSULTATION WITH LABOR ORGANIZATIONS.—If a labor organization represents a substantial number of workers that are engaged in similar work or training in an area that is the same as the area that is proposed to be funded under this subtitle, the labor organization shall be provided an opportunity to be consulted and to submit comments in regard to such a proposal.

SEC. 4606. WORKFORCE TRAINING AND SAFETY.

(a) UNIVERSITY PROGRAMS.—In order to enhance the educational opportunities and safety of a future generation of scientists, engineers, health physicists, and energy workforce employees, 25 percent of the funds deposited into the Climate Change Worker Training Fund shall be used for the University Programs within the Department of Energy, to help United States university and colleges stay at the

forefront of science education and research and assist universities in the operation of advanced energy research facilities and in the performance of other educational activities.

(b) EMPLOYEE ORGANIZATIONS.—The Secretary shall provide technical assistance and funds for training directly to nonprofit employee organizations, voluntary emergency response organizations, and joint labor-management organizations that demonstrate experience in implementing and operating worker health and safety training and education programs.

(c) WORKFORCE TRAINING.—

(1) IN GENERAL.—The Secretary of Labor, in cooperation with the Secretary of Energy, shall promulgate regulations—

(A) to implement a program to provide workforce training to meet the high demand for workers skilled in zero- and low-emitting carbon energy technologies and provide for related safety issues;

(B) to implement a fully validated electrical craft certification program, career and technology awareness at the primary and secondary education level, preapprenticeship career technical education for all zero- and low-emitting carbon energy technologies related industrial

skilled crafts, community college and skill center training for zero- and low-emitting carbon energy technology technicians, development of construction management personnel for zero- and low-emitting carbon energy technology construction projects and regional grants for integrated zero- and low-emitting carbon energy technology workforce development programs; and

(C) to ensure the safety of workers in such careers.

(2) CONSULTATION.—In carrying out this subsection, the Secretary of Labor shall consult with relevant Federal agencies, representatives of the zero- and low-emitting carbon energy technologies industries, and organized labor, concerning skills and such safety measures that are needed in those industries.

(d) QUANTIFICATION.—For purposes of dispersing funds under this section, qualifying zero- and low-emitting carbon energy means any technology that has a rated capacity of at least 750 megawatts of power.

Subtitle G—Adaptation Program for Natural Resources in United States and Territories

SEC. 4701. DEFINITIONS.

In this subtitle:

(1) ECOLOGICAL PROCESS.—

(A) IN GENERAL.—The term "ecological process" means a biological, chemical, or physical interaction between the biotic and abiotic components of an ecosystem.

(B) INCLUSIONS.—The term "ecological process" includes—

(i) nutrient cycling;

(ii) pollination;

(iii) predator-prey relationships;

(iv) soil formation;

(v) gene flow;

(vi) larval dispersal and settlement;

(vii) hydrological cycling;

(viii) decomposition; and

(ix) disturbance regimes, such as fire and flooding.

(2) FISH AND WILDLIFE.—The term "fish and wildlife" means—

(A) any species of wild fauna, including fish and other aquatic species; and

(B) any fauna in a captive breeding program the object of which is to reintroduce individuals of a depleted indigenous species into previously occupied range.

(3) HABITAT.—The term "habitat" means the physical, chemical, and biological properties that are used by wildlife (including aquatic and terrestrial plant communities) for growth, reproduction, and survival, food, water, cover, and space, on a tract of land, in a body of water, or in an area or region.

(4) INDIAN TRIBE.—The term "Indian tribe" has the meaning given the term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b).

(5) PLANT.—The term "plant" means any species of wild flora.

(6) SECRETARY.—The term "Secretary" means the Secretary of the Interior.

(7) STATE.—The term "State" means—

(A) a State;

(B) the District of Columbia;

(C) the Commonwealth of Puerto Rico; and

(D) any other territory or possession of the United States.

SEC. 4702. ADAPTATION FUND.

(a) AVAILABILITY OF AMOUNTS.—All amounts deposited in the Adaptation Fund established by section 4101(3) shall be made available, without further appropriation or fiscal year limitation, to carry out activities (including re-

search and education activities) that assist fish and wildlife, fish and wildlife habitat, plants, and associated ecological processes in becoming more resilient, adapting to, and surviving the impacts of climate change and ocean acidification (referred to in this section as "adaptation activities") pursuant to this section.

(b) DEPARTMENT OF THE INTERIOR.—Of the amounts made available annually to carry out this subsection—

(1) 35 percent shall be allocated to the Secretary, and subsequently made available to States through the Wildlife Conservation and Restoration Account established under section 3(a)(2) of the Pittman-Robertson Wildlife Restoration Act (16 U.S.C. 669b(a)(2)), to carry out adaptation activities in accordance with comprehensive State adaptation strategies, as described in subsection (j);

(2) 19 percent shall be allocated to the Secretary for use in funding adaptation activities carried out—

(A) under endangered species, migratory bird, and other fish and wildlife programs administered by the United States Fish and Wildlife Service;

(B) on wildlife refuges and other public land under the jurisdiction of the United States

Fish and Wildlife Service, the Bureau of Land Management, or the National Park Service; or

(C) within Federal water managed by the Bureau of Reclamation;

(3) 5 percent shall be allocated to the Secretary for adaptation activities carried out under cooperative grant programs, including—

(A) the cooperative endangered species conservation fund authorized under section 6(i) of the Endangered Species Act of 1973 (16 U.S.C. 1535(i));

(B) programs under the North American Wetlands Conservation Act (16 U.S.C. 4401 et seq.);

(C) the multinational species conservation fund established under the heading "MULTINATIONAL SPECIES CONSERVATION FUND" of title I of the Department of the Interior and Related Agencies Appropriations Act, 1999 (16 U.S.C. 4246);

(D) the Neotropical Migratory Bird Conservation Fund established by section 9(a) of the Neotropical Migratory Bird Conservation Act (16 U.S.C. 6108(a));

(E) the Coastal Program of the United States Fish and Wildlife Service;

(F) the National Fish Habitat Action Plan;

(G) the Partners for Fish and Wildlife Program;

(H) the Landowner Incentive Program;

(I) the Wildlife Without Borders Program of the United States Fish and Wildlife Service; and

(J) the Park Flight Migratory Bird Program of the National Park Service; and

(4) 1 percent shall be allocated to the Secretary and subsequently made available to Indian tribes to carry out adaptation activities through the tribal wildlife grants program of the United States Fish and Wildlife Service.

(c) LAND AND WATER CONSERVATION FUND.—

(1) DEPOSITS.—

(A) IN GENERAL.—Except as provided in paragraph (2), of the amounts made available for each fiscal year to carry out this subsection, 10 percent shall be deposited into the Land and Water Conservation Fund established under section 2 of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l–5).

(B) Deposits to the Land and Water Conservation Fund under this subsection shall—

(i) be supplemental to authorizations provided under section 3 of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l–6); and

(ii) remain available for non-adaptation needs.

(2) EXCEPTION.—For any fiscal year in which a deposit into the Land and Water Conservation Fund under paragraph (1) would result in an amount greater than $900,000,000—

(A) $900,000,000 shall be deposited into the Land and Water Conservation Fund; and

(B) the remaining funds shall be distributed on a pro rata basis as otherwise provided in this section.

(3) ALLOCATIONS.—Of the amounts deposited under this subsection into the Land and Water Conservation Fund—

(A) 1/6 shall be allocated to the Secretary and made available to carry out section 6 of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l–8) to States, on a competitive basis—

(i) in accordance with comprehensive wildlife conservation strategies and Indian tribes, to carry out adaptation activities through the acquisition of land and interests in land;

(ii) notwithstanding section 5 of that Act (16 U.S.C. 460l–7); and

(iii) in addition to grants provided pursuant to—

(I) annual appropriations Acts;

(II) the Energy Policy Act of 2005 (42 U.S.C. 15801 et seq.); or

(III) any other authorization for nonadaptation needs;

(B) ⅓ shall be allocated to the Secretary to carry out adaptation activities through the acquisition of lands and interests in land under section 7 of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l–9);

(C) ⅙ shall be allocated to the Secretary of Agriculture and made available to the States to carry out adaptation activities through the acquisition of land and interests in land under section 7 of the Forest Legacy Program under the

Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2103c); and

(D) ⅓ shall be allocated to the Secretary of Agriculture to carry out adaptation activities through the acquisition of land and interests in land under section 7 of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l–9).

(4) EXPENDITURE OF FUNDS.—In allocating funds under subsection (c), the Secretary and the Secretary of Agriculture shall take into consideration factors including—

(A) the availability of non-Federal contributions from State, local, or private sources;

(B) opportunities to protect wildlife corridors or otherwise to link or consolidate fragmented habitats;

(C) opportunities to reduce the risk of catastrophic wildfires, extreme flooding, or other climate-related events that are harmful to fish and wildlife and people;

(D) the potential for conservation of species or habitat types at serious risk due to climate change, ocean acidification, and other stressors; and

(E) the potential to provide enhanced access to land and water for fishing, hunting, and other public recreational uses.

(d) FOREST SERVICE.—Of the amounts made available annually to carry out this section, 5 percent shall be allocated to the Secretary of Agriculture for use in funding adaptation activities carried out on national forests and national grasslands under the jurisdiction of the Forest Service, or pursuant to the cooperative Wings Across the Americas Program.

(e) ENVIRONMENTAL PROTECTION AGENCY.—Of the amounts made available annually to carry out this section, 5 percent shall be allocated to the Administrator for use in adaptation activities restoring and protecting—

(1) large-scale freshwater aquatic ecosystems, such as the Everglades, the Great Lakes, Flathead Lake, the Missouri River, the Mississippi River, the Colorado River, the Sacramento-San Joaquin Rivers, the Ohio River, the Columbia-Snake River System, the Apalachicola, Chattahoochee and Flint River System, the Connecticut River, and the Yellowstone River;

(2) large-scale estuarine ecosystems, such as Chesapeake Bay, Long Island Sound, Puget Sound, the Mississippi River Delta , San Francisco Bay

Delta, Narragansett Bay, and Albemarle-Pamlico Sound; and

(3) freshwater and estuarine ecosystems, watersheds, and basins identified as priorities by the Administrator, working in cooperation with other Federal agencies, States, local governments, scientists, and other conservation partners.

(f) CORPS OF ENGINEERS.—Of the amounts made available annually to carry out this section, 10 percent shall be allocated to the Secretary of the Army for use by the Corps of Engineers to carry out adaptation activities restoring—

(1) large-scale freshwater aquatic ecosystems, such as the ecosystems described in subsection (e)(1);

(2) large-scale estuarine ecosystems, such as the ecosystems described in subsection (e)(2);

(3) freshwater and estuarine ecosystems, watersheds, and basins identified as priorities by the Corps of Engineers, working in cooperation with other Federal agencies, States, local governments, scientists, and other conservation partners; and

(4) habitats or ecosystems under programs such as the Estuary Restoration Act of 2000 (33 U.S.C. 2901 et seq.), project modifications for improvement of the environment, and aquatic restoration under

section 206 of the Water Resources Development Act of 1996 (33 U.S.C. 2330).

(g) DEPARTMENT OF COMMERCE.—Of the amounts made available annually to carry out this section, 10 percent shall be allocated to the Secretary of Commerce for use in funding adaptation activities to protect, maintain, and restore coastal, estuarine, and marine resources, habitats, and ecosystems, including such activities carried out under—

(1) the coastal and estuarine land conservation program;

(2) the community-based restoration program;

(3) the Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.), subject to the condition that State coastal agencies shall incorporate, and the Secretary of Commerce shall approve, coastal zone management plan elements that are—

(A) consistent with the national adaptation strategy under subsection (i), as part of a coastal zone management program established under this Act; and

(B) specifically designed to strengthen the ability of coastal, estuarine, and marine resources, habitats, and ecosystems to adapt to and withstand the impacts of—

(i) global warming; and

(ii) where practicable, ocean acidification;

(4) the Open Rivers Initiative;

(5) the Magnuson Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.);

(6) the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.);

(7) the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.);

(8) the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1401 et seq.); and

(9) the Coral Reef Conservation Act of 2000 (16 U.S.C. 6401 et seq.).

(h) COST SHARING.—Notwithstanding any other provision of law, a State or Indian tribe that receives a grant under paragraph (1) or (4) of subsection (b) shall provide 10 percent of the costs of each activity carried out using amounts under the grant.

(i) NATIONAL ADAPTATION STRATEGY.—

(1) IN GENERAL.—Effective beginning on the date on which the President establishes the national strategy under paragraph (3), funds made available under paragraphs (2), (3), and (4) of subsection (b) and subsections (c) through (g) shall be used only for

adaptation activities that are consistent with the national strategy.

(2) INITIAL PERIOD.—Until the date on which the President establishes the national strategy under paragraph (3), funds made available under paragraphs (2), (3), and (4) of subsection (b) and subsections (c) through (g) shall be used only for adaptation activities that are consistent with a workplan established by the President.

(3) NATIONAL STRATEGY.—

(A) IN GENERAL.—Not later than 3 years after the date of enactment of this Act, the President shall develop and implement a national strategy for assisting fish and wildlife, fish and wildlife habitat, plants, and associated ecological processes in becoming more resilient and adapting to the impacts of climate change and ocean acidification.

(B) ADMINISTRATION.—In establishing and revising the national strategy, the President shall—

(i) base the national strategy on the best available science, as identified by the Science Advisory Board established under subparagraph (D);

(ii) develop the national strategy in cooperation with State fish and wildlife agencies, State coastal agencies, United States territories, and Indian tribes;

(iii) coordinate with the Secretary of the Interior, the Secretary of Commerce, the Secretary of Agriculture, the Secretary of Defense, the Administrator of the Environmental Protection Agency, and other agencies as appropriate;

(iv) consult with local governments, conservation organizations, scientists, and other interested stakeholders; and

(v) provide public notice and opportunity for comment.

(C) CONTENTS.—The President shall include in the national strategy, at a minimum, prioritized goals and measures and a schedule for implementation—

(i) to identify and monitor fish and wildlife, fish and wildlife habitat, plants, and associated ecological processes that are particularly likely to be adversely affected by climate change and ocean acidification and have the greatest need for conservation;

(ii) to identify and monitor coastal, estuarine, marine, terrestrial, and freshwater habitats that are at the greatest risk of being damaged by climate change and ocean acidification;

(iii) to assist species in adapting to the impacts of climate change and ocean acidification;

(iv) to protect, acquire, maintain, and restore fish and wildlife habitat to build resilience to climate change and ocean acidification;

(v) to provide habitat linkages and corridors to facilitate fish, wildlife, and plant movement in response to climate change and ocean acidification;

(vi) to restore and protect ecological processes that sustain fish, wildlife, and plant populations that are vulnerable to climate change and ocean acidification;

(vii) to protect, maintain, and restore coastal, marine, and aquatic ecosystems so that the ecosystems are more resilient and better able to withstand the additional stresses associated with climate change, in-

cluding relative sea level rise and ocean acidification;

(viii) to protect ocean and coastal species from the impact of climate change and ocean acidification;

(ix) to incorporate adaptation strategies and activities to address relative sea level rise in coastal zone planning;

(x) to protect, maintain, and restore ocean and coastal habitats to build healthy and resilient ecosystems, including the purchase of coastal and island land; and

(xi) to incorporate consideration of climate change and ocean acidification, and to integrate adaptation strategies and activities for fish and wildlife, fish and wildlife habitat, plants, and associated ecological processes, in the planning and management of Federal land and water administered by the Federal agencies that receive funding under this section.

(D) SCIENCE ADVISORY BOARD.—

(i) ESTABLISHMENT.—Not later than 180 days after the date of enactment of this Act, the Secretary shall establish and ap-

point the members of a science advisory board, to be comprised of not fewer than 10 and not more than 20 members, who shall—

(I) be recommended by the President of the National Academy of Sciences;

(II) have expertise in fish, wildlife, plant, aquatic, and coastal and marine biology, ecology, climate change, ocean acidification, and other relevant scientific disciplines; and

(III) represent a balanced membership between Federal, State, and local representatives, universities, and conservation organizations.

(ii) DUTIES.—The science advisory board shall—

(I) advise the President and relevant Federal agencies and departments on—

(aa) the best available science regarding the impacts of climate change and ocean acidification on fish and wildlife, habitat, plants,

and associated ecological processes; and

(bb) scientific strategies and mechanisms for adaptation; and

(II) identify and recommend priorities for ongoing research needs on those issues.

(iii) COLLABORATION.—The science advisory board shall collaborate with other climate change and ecosystem research entities in other Federal agencies and departments.

(iv) AVAILABILITY TO PUBLIC.—The advice and recommendations of the science advisory board shall be made available to the public.

(v) NONAPPLICABILITY OF FACA.—The Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to the science advisory board.

(E) COORDINATION WITH OTHER PLANS.—In developing the national strategy, the President shall, to the maximum extent practicable—

(i) take into consideration research and information contained in—

(I) State comprehensive wildlife conservation plans;

(II) the North American waterfowl management plan;

(III) the national fish habitat action plan;

(IV) coastal zone management plans;

(V) the reports of the Pew Oceans Commission and the United States Commission on Ocean Policy; and

(VI) other relevant plans; and

(ii) coordinate and integrate the goals and measures identified in the national strategy with the goals and measures identified in those plans.

(F) REVISIONS.—Not later than 5 years after the date on which the strategy is developed, and not less frequently than every 5 years thereafter, the President shall review and update the national strategy using the procedures described in this paragraph.

(j) STATE COMPREHENSIVE ADAPTATION STRATEGIES.—

(1) IN GENERAL.—Except as provided in paragraph (2), funds made available to States under this subtitle shall be used only for activities that are consistent with a State strategy that has been approved by, as appropriate—

(A) the Secretary of the Interior; or

(B) for any State with a coastal zone (within the meaning of the Coastal Zone Management Act (16 U.S.C. 1451 et seq.)), by the Secretary of Commerce, subject to the condition that approval by the Secretary of Commerce shall be required only for those portions of the strategy relating to activities affecting the coastal zone.

(2) INITIAL PERIOD.—

(A) IN GENERAL.—Until the earlier of the date that is 3 years after the date of enactment of this Act or the date on which a State receives approval for the State strategy, a State shall be eligible to receive funding under subsection (b)(1) for adaptation activities that are—

(i) consistent with the comprehensive wildlife strategy of the State and, where appropriate, other fish, wildlife and conservation strategies; and

(ii) in accordance with a workplan developed in coordination with, as appropriate—

(I) the Secretary of the Interior; or

(II) for any State with a coastal zone (within the meaning of the Coastal Zone Management Act (16 U.S.C. 1451 et seq.)), by the Secretary of Commerce, subject to the condition that approval by the Secretary of Commerce shall be required only for those portions of the strategy relating to activities affecting the coastal zone.

(B) PENDING APPROVAL.—During the period for which approval by the applicable Secretary of a State strategy described in paragraph (3) is pending, the State may continue receiving funds under subsection (b)(1) pursuant to the workplan described subparagraph (A)(ii).

(3) REQUIREMENTS.—A State strategy shall—

(A) describe the impacts of climate change and ocean acidification on the diversity and health of the fish, wildlife and plant populations, habitats, and associated ecological processes;

(B) describe and prioritize proposed conservation actions to assist fish, wildlife, and plant populations in adapting to those impacts;

(C) establish programs for monitoring the impacts of climate change on fish, wildlife, and plant populations, habitats, and associated ecological processes;

(D) include strategies, specific conservation actions, and a timeframe for implementing conservation actions for fish, wildlife, and plant populations, habitats, and associated ecological processes;

(E) establish methods for assessing the effectiveness of conservation actions taken to assist fish, wildlife, and plant populations, habitats, and associated ecological processes in adapting to those impacts and for updating those actions to respond appropriately to new information or changing conditions;

(F) be developed—

(i) with the participation of the State fish and wildlife agency, the State agency responsible for administration of Land and Water Conservation Fund grants, the State

Forest Legacy program coordinator, and the State coastal agency; and

(ii) in coordination with the Secretary of the Interior and, where applicable, the Secretary of Commerce;

(G) provide for solicitation and consideration of public and independent scientific input;

(H) take into consideration research and information contained in, and coordinate with and integrate the goals and measures identified in, as appropriate, other fish, wildlife, and habitat conservation strategies, including—

(i) the national fish habitat action plan;

(ii) plans under the North American Wetlands Conservation Act (16 U.S.C. 4401 et seq.);

(iii) the Federal, State, and local partnership known as "Partners in Flight";

(iv) federally approved coastal zone management plans under the Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.);

(v) federally approved regional fishery management plans and habitat conservation

activities under the Magnuson Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.);

(vi) the national coral reef action plan;

(vii) recovery plans for threatened species and endangered species under section 4(f) of the Endangered Species Act of 1973 (16 U.S.C. 1533(f));

(viii) habitat conservation plans under section 10 of that Act (16 U.S.C. 1539);

(ix) other Federal and State plans for imperiled species;

(x) the United States shorebird conservation plan;

(xi) the North American waterbird conservation plan; and

(xii) other State-based strategies that comprehensively implement adaptation activities to remediate the effects of climate change and ocean acidification on fish, wildlife, and habitats; and

(I) be incorporated into a revision of the comprehensive wildlife conservation strategy of a State—

(i) that has been submitted to the United States Fish and Wildlife Service; and

(ii)(I) that has been approved by the Service; or

(II) on which a decision on approval is pending.

(4) UPDATING.—Each State strategy described in paragraph (3) shall be updated at least every 5 years.

Subtitle H—International Climate Change Adaptation and National Security Program

SEC. 4801. FINDINGS.

Congress finds that—

(1) global climate change represents a potentially significant threat multiplier for instability around the world as changing precipitation patterns may exacerbate competition and conflict over agricultural, vegetative, and water resources and displace people, thus increasing hunger and poverty and causing increased pressure on least developed countries;

(2) the strategic, social, political, and economic consequences of global climate change could have disproportionate impacts on least developed countries,

which have fewer resources and thus, often fewer emissions;

(3) the strategic, social, political, and economic consequences of global climate change are likely to have a greater adverse effect on less developed countries;

(4) the consequences of global climate change could pose a danger to the security interest and economic interest of the United States; and

(5) it is in the national security interest of the United States to recognize, plan for, and mitigate the international strategic, social, political, and economic effects of a changing climate.

SEC. 4802. PURPOSES.

The purposes of this subtitle are—

(1) to protect the national security of the United States where such interest can be advanced by minimizing, averting, or increasing resilience to potentially destabilizing climate change impacts;

(2) to support the development of national and regional climate change adaptation plans in least developed countries;

(3) to support the deployment of technologies that would help least developed countries reduce their

greenhouse gas emissions and respond to destabilizing impacts of climate change;

(4) to provide assistance to least-developed countries and small island developing states with national or regional climate change adaptation plans in the planning, financing, and execution of adaptation projects;

(5) to support investments and capital to reduce vulnerability related to climate change and its impacts, including but not limited to drought, famine, floods, sea level rise, shifts in agricultural zones or seasons, shifts in range that affect economic livelihoods, and refugees and internally displaced persons;

(6) to support climate change adaptation research in or for least developed countries; and

(7) to encourage the identification and adoption of appropriate low-carbon and efficient energy technologies in least-developed countries.

SEC. 4803. ESTABLISHMENT.

(a) ESTABLISHMENT OF PROGRAM.—The Secretary of State, working with the Administrator of the U.S. Agency for International Development (referred to in this subtitle as the "Agency") and the Administrator, shall establish an International Climate Change Adaptation and National Security Program within the Agency.

(b) RESPONSIBILITIES OF PROGRAM.—The Program shall—

(1) submit annual reports to the President, the Committees on Environment and Public Works and Foreign Relations of the Senate, and the Committees on Energy and Commerce and Foreign Relations of the House of Representatives, and any other relevant committees on national security, the economy and foreign policy, that describe—

(A) the extent to which other countries are committing to reducing greenhouse gas emissions through mandatory programs;

(B) the extent to which global climate change, through its potential negative impacts on sensitive populations and natural resources in least developed countries, may threaten, cause, or exacerbate political instability or international conflict in those regions; and

(C) the ramifications of any potentially destabilizing impacts climate change may have on the economic and national security of the United States, including—

(i) the creation of refugees; and

(ii) international or internal armed conflicts over water, food, land, or other resources;

(2) include in each annual report submitted under paragraph (1) a description of how funds made available under section 4804 were spent to enhance the national security of the United States and assist in avoiding the politically destabilizing impacts of climate change in volatile regions of the world, particularly least developed countries; and

(3) identify and recommend the countries in which assistance can have the greatest and most sustainable benefit to reducing vulnerability to climate change, primarily in the form of deploying adaptation and greenhouse gas reduction technologies.

SEC. 4804. FUNDING.

(a) CARRYING OUT RECOMMENDATIONS.—All funds deposited into the Climate Change and National Security Fund established by section 4101(4) shall be made available, without further appropriation or fiscal year limitation, to carry out the program established under this subtitle.

(b) DISTRIBUTION OF FUNDS.—The Administrator of the Agency shall distribute to the International Climate

Change Adaptation and National Security Program the funds for the purposes described in section 4802.

(c) OVERSIGHT.—The Administrator of the Agency shall oversee the expenditures by the Program.

(d) LIMITATIONS.—Not more than 10 percent of amounts made available to carry out this subtitle shall be spent in any single country in any year.

Subtitle I—Emergency Firefighting Programs

SEC. 4901. FINDINGS.

Congress finds that—

(1) since 1980, wildfires in the United States have burned almost twice as many acres per year on average than the average burned acreage during the period beginning on January 1, 1920, and ending on December 31, 1979;

(2) the wildfire season in the western United States has increased by an average of 78 days during the 30-year period preceding the date of enactment of this Act;

(3) researchers predict that the area subject to wildfire damage will increase during the 21st century by up to 118 percent as a result of climate change;

(4) of the annual budget of the Forest Service, the Forest Service used for wildfire suppression activities—

(A) 13 percent in 1991; and

(B) 45 percent in 2007; and

(5) 1 percent of the largest escaped fires—

(A) burn 95 percent of all burned acres; and

(B) consume 85 percent of all wildfire fighting costs.

SEC. 4902. BUREAU OF LAND MANAGEMENT EMERGENCY FIREFIGHTING PROGRAM.

(a) USE OF FUNDS.—The amounts deposited into the Bureau of Land Management Emergency Firefighting Fund established by section 4101(5) shall be made available, without further appropriation or fiscal year limitation, to pay for wildland fire suppression activities the costs of which are in excess of amounts annually appropriated to the Secretary of the Interior for normal, nonemergency wildland fire suppression activities.

(b) ACCOUNTING AND REPORTING.—

(1) IN GENERAL.—Not later than 3 years after the date of enactment of this Act, the Secretary of the Interior shall establish an accounting and reporting system, in accordance and compatible with National

Fire Plan reporting procedures, for the activities carried out under this section.

(2) REQUIREMENT.—The system established under paragraph (1) shall require that the Secretary of the Interior shall submit to the Committee on Natural Resources of the House of Representatives and the Committee on Energy and Natural Resources of the Senate—

(A) a monthly report describing each expenditure made from the Bureau of Land Management Emergency Firefighting Fund during the preceding month; and

(B) a report at the end of each fiscal year describing the expenditures made from the Bureau of Land Management Emergency Firefighting Fund during the preceding fiscal year.

SEC. 4903. FOREST SERVICE EMERGENCY FIREFIGHTING PROGRAM.

(a) USE OF FUNDS.—The amounts deposited into the Forest Service Emergency Firefighting Fund established by section 4101(6) shall be made available, without further appropriation or fiscal year limitation, to pay for wildland fire suppression activities the costs of which are in excess of amounts annually appropriated to the Secretary of Agri-

culture for normal, nonemergency wildland fire suppression activities.

(b) ACCOUNTING AND REPORTING.—

(1) IN GENERAL.—Not later than 3 years after the date of enactment of this Act, the Secretary of Agriculture shall establish an accounting and reporting system, in accordance and compatible with National Fire Plan reporting procedures, for the activities carried out under this section.

(2) REQUIREMENT.—The system established under paragraph (1) shall require that the Secretary of Agriculture shall submit to the Committee on Natural Resources of the House of Representatives and the Committee on Energy and Natural Resources of the Senate—

(A) a monthly report describing each expenditure made from the Forest Service Emergency Firefighting Fund during the preceding month; and

(B) a report at the end of each fiscal year describing the expenditures made from the Forest Service Emergency Firefighting Fund during the preceding fiscal year.

TITLE V—ENERGY EFFICIENCY

Subtitle A—Appliance Efficiency

SEC. 5101. RESIDENTIAL BOILERS.

Section 325(f) of the Energy Policy and Conservation Act (42 U.S.C. 6925(f)) is amended—

(1) in the subsection heading, by inserting "AND BOILERS" after "FURNACES";

(2) in paragraph (1), by striking "except that" and all that follows through subparagraph (A) and inserting "except that";

(3) in subparagraph (B)—

(A) by striking "(B) the Secretary" and inserting "the Secretary"; and

(B) by redesignating clauses (i) through (iii) as subparagraphs (A) through (C), respectively, and indenting appropriately;

(4) by redesignating paragraph (3) as paragraph (4); and

(5) by inserting after paragraph (2) the following:

"(3) BOILERS.—

"(A) IN GENERAL.—Subject to subparagraphs (B) and (C), boilers manufactured on or after September 1, 2012, shall meet the following requirements:

Boiler Type Requirements	*Minimum Annual Fuel Utilization Efficiency*	*Design*
Gas hot water	*82 percent*	*No constant burning pilot, automatic means for adjusting water temperature*
Gas steam	*80 percent*	*No constant burning pilot*
Oil hot water	*84 percent*	*Automatic means for adjusting temperature*
Oil steam	*82 percent*	*None*
Electric hot water	*None*	*Automatic means for adjusting temperature*
Electric steam	*None*	*None*

"(B) AUTOMATIC MEANS FOR ADJUSTING WATER TEMPERATURE.—

"(i) IN GENERAL.—The manufacturer shall equip each gas, oil, and electric hot water boiler (other than a boiler equipped with tankless domestic water heating coils) with an automatic means for adjusting the temperature of the water supplied by the boiler to ensure that an incremental change in inferred heat load produces a corresponding incremental change in the temperature of water supplied.

"(ii) CERTAIN BOILERS.—For a boiler that fires at 1 input rate, the requirements of this subparagraph may be satisfied by providing an automatic means that allows the burner or heating element to fire only when the means has determined that the in-

ferred heat load cannot be met by the residual heat of the water in the system.

"(iii) NO INFERRED HEAT LOAD.—When there is no inferred heat load with respect to a hot water boiler, the automatic means described in clauses (i) and (ii) shall limit the temperature of the water in the boiler to not more than 140 degrees Fahrenheit.

"(iv) OPERATION.—A boiler described in clause (i) or (ii) shall be operable only when the automatic means described in clauses (i), (ii), and (iii) is installed.

"(C) EXCEPTION.—A boiler that is manufactured to operate without any need for electricity, any electric connection, any electric gauges, electric pumps, electric wires, or electric devices of any sort, shall not be required to meet the requirements of this subsection.".

SEC. 5102. REGIONAL VARIATIONS IN HEATING OR COOLING STANDARDS.

(a) IN GENERAL.—Section 327 of the Energy Policy and Conservation Act (42 U.S.C. 6297) is amended—

(1) by redesignating subsections (e), (f), and (g) as subsections (f), (g), and (h), respectively; and

(2) by inserting after subsection (d) the following:

"(e) REGIONAL STANDARDS FOR SPACE HEATING AND AIR CONDITIONING PRODUCTS.—

"(1) STANDARDS.—

"(A) IN GENERAL.—The Secretary may establish regional standards for space heating and air conditioning products, other than window-unit air-conditioners and portable space heaters.

"(B) NATIONAL MINIMUM AND REGIONAL STANDARDS.—For each space heating and air conditioning product, the Secretary may establish—

"(i) a national minimum standard; and

"(ii) 2 more stringent regional standards for regions determined to have significantly differing climatic conditions.

"(C) MAXIMUM SAVINGS.—Any standards established for a region under subparagraph (B)(ii) shall achieve the maximum level of energy savings that are technically feasible and economically justified within that region.

"(D) ECONOMIC JUSTIFIABILITY STUDY.—

"(i) IN GENERAL.—As a preliminary step in determining the economic justifiability of establishing a regional standard under subparagraph (B)(ii), the Secretary shall conduct a study involving stakeholders, including—

"(I) a representative from the National Institute of Standards and Technology;

"(II) representatives of nongovernmental advocacy organizations;

"(III) representatives of product manufacturers, distributors, and installers;

"(IV) representatives of the gas and electric utility industries; and

"(V) such other individuals as the Secretary may designate.

"(ii) REQUIREMENTS.—The study under this subparagraph—

"(I) shall determine the potential benefits and consequences of prescribing regional standards for heating and cooling products; and

"(II) may, if favorable to the standards, constitute the evidence of economic justifiability required under this Act.

"(E) REGIONAL BOUNDARIES.—Regional boundaries used in establishing regional standards under subparagraph (B)(ii) shall—

"(i) conform to State borders; and

"(ii) include only contiguous States (other than Alaska and Hawaii), except that on the request of a State, the Secretary may divide the State to include a part of the State in each of 2 regions.

"(2) NONCOMPLYING PRODUCTS.—If the Secretary establishes standards for a region, it shall be unlawful under section 332 to offer for sale at retail, sell at retail, or install within the region products that do not comply with the applicable standards.

"(3) DISTRIBUTION IN COMMERCE.—

"(A) IN GENERAL.—Except as provided in subparagraph (B), no product manufactured in a manner that complies with a regional standard established under paragraph (1) shall be distributed in commerce without a prominent label affixed to the product that includes—

"(i) at the top of the label, in print of not less than 14-point type, the following statement: 'It is a violation of Federal law for this product to be installed in any State outside the region shaded on the map printed on this label.';

"(ii) below the notice described in clause (i), an image of a map of the United States with clearly defined State boundaries and names, and with all States in which the product meets or exceeds the standard established pursuant to paragraph (1) shaded in a color or a manner as to be easily visible without obscuring the State boundaries and names; and

"(iii) below the image of the map required under clause (ii), the following statement: 'It is a violation of Federal law for this label to be removed, except by the owner and legal resident of any single-family home in which this product is installed.'.

"(B) ENERGY-EFFICIENCY RATING.—A product manufactured that meets or exceeds all regional standards established under this paragraph shall bear a prominent label affixed to the

product that includes at the top of the label, in print of not less than 14-point type, the following statement: 'This product has achieved an energy-efficiency rating under Federal law allowing its installation in any State.'.

"(4) RECORDKEEPING.—A manufacturer of space heating or air conditioning equipment subject to regional standards established under this subsection shall—

"(A) obtain and retain records on the intended installation locations of the equipment sold; and

"(B) make such records available to the Secretary on request.".

(b) CONFORMING AMENDMENTS.—Section 327 of the Energy Policy and Conservation Act (42 U.S.C. 6297) is amended—

(1) in subsection (b)—

(A) in paragraph (2), by striking "subsection (e)" and inserting "subsection (f)"; and

(B) in paragraph (3)—

(i) by striking "subsection (f)(1)" and inserting "subsection (g)(1)"; and

(ii) by striking "subsection (f)(2)" and inserting "subsection (g)(2)"; and

(2) in subsection (c)(3), by striking "subsection (f)(3)" and inserting "subsection (g)(3)".

Subtitle B—Building Efficiency

SEC. 5201. UPDATING STATE BUILDING ENERGY EFFICIENCY CODES.

Section 304 of the Energy Conservation and Production Act (42 U.S.C. 6833) is amended to read as follows:

"SEC. 304. UPDATING STATE BUILDING ENERGY EFFICIENCY CODES.

"(a) UPDATES.—

"(1) IN GENERAL.—The Secretary shall support updating the national model building energy codes and standards not later than 3 years after the date of enactment of the Lieberman-Warner Climate Security Act of 2008, and not less frequently every 3 years thereafter, to achieve overall energy savings, as compared to the IECC (2006) for residential buildings and ASHRAE Standard 90.1 (2004) for commercial buildings, of at least—

"(A) 30 percent, with respect to each edition of a model code or standard published during the period beginning on January 1, 2010, and ending on December 31, 2019;

"(B) 50 percent, with respect to each edition of a model code or standard published on or after January 1, 2020; and

"(C) targets for intermediate and subsequent years, to be established by the Secretary not less than 3 years before the beginning on each target year, in coordination with IECC and ASHRAE Standard 90.1 cycles, at the maximum level of energy efficiency that is technologically feasible and lifecycle cost-effective.

"(2) REVISIONS TO IECC AND ASHRAE.—

"(A) IN GENERAL.—If the IECC or ASHRAE Standard 90.1 regarding building energy use is revised, not later than 1 year after the date of the revision, the Secretary shall determine whether the revision will—

"(i) improve energy efficiency in buildings; and

"(ii) meet the energy savings goals described in paragraph (1).

"(B) MODIFICATIONS.—

"(i) IN GENERAL.—If the Secretary makes a determination under subparagraph (A)(ii) that a code or standard does not meet the energy savings goals established

under paragraph (1) or if a national model code or standard is not updated for more than 3 years, not later than 1 year after the determination or the expiration of the 3-year period, the Secretary shall establish a modified code or standard that meets the energy savings goals.

"(ii) REQUIREMENTS.—

"(I) ENERGY SAVINGS.—A modification to a code or standard under clause (i) shall—

"(aa) achieve the maximum level of energy savings that is technically feasible and lifecycle cost-effective;

"(bb) be achieved through an amendment or supplement to the most recent revision of the IECC or ASHRAE Standard 90.1 and taking into consideration other appropriate model codes and standards; and

"(cc) incorporate available appliances, technologies, and construction practices.

"(II) TREATMENT AS BASELINE.—A modification to a code or standard under clause (i) shall serve as the baseline for the next applicable determination of the Secretary under subparagraph (A)(i).

"(C) PUBLIC PARTICIPATION.—The Secretary shall—

"(i) publish in the Federal Register a notice relating to each goal, determination, and modification under this paragraph; and

"(ii) provide an opportunity for public comment regarding the goals, determinations, and modifications.

"(b) STATE CERTIFICATION OF BUILDING ENERGY CODE UPDATES.—

"(1) GENERAL CERTIFICATION.—

"(A) IN GENERAL.—Not later than 2 years after the date of enactment of the Lieberman-Warner Climate Security Act of 2008, each State shall certify to the Secretary that the State has reviewed and updated the provisions of the residential and commercial building codes of the State regarding energy efficiency.

"(B) ENERGY SAVINGS.—A certification under subparagraph (A) shall include a demonstration that the applicable provisions of the State code meet or exceed, as applicable—

"(i)(I) the IECC (2006) for residential buildings; or

"(II) the ASHRAE Standard 90.1 (2004) for commercial buildings; or

"(ii) the quantity of energy savings represented by the provisions referred to in clause (i).

"(2) REVISION OF CODES AND STANDARDS.—

"(A) IN GENERAL.—If the Secretary makes an affirmative determination under subsection (a)(2)(A)(i) or establishes a modified code or standard under subsection (a)(2)(B), not later than 2 years after the determination or proposal, each State shall certify that the State has reviewed and updated the provisions of the residential and commercial building codes of the State regarding energy efficiency.

"(B) ENERGY SAVINGS.—A certification under subparagraph (A) shall include a demonstration that the applicable provisions of the State code meet or exceed—

"(i) the modified code or standard; or

"(ii) the quantity of energy savings represented by the modified code or standard.

"(C) FAILURE TO DETERMINE.—If the Secretary fails to make a determination under subsection (a)(2)(A)(i) by the date specified in subsection (a)(2), or if the Secretary makes a negative determination, not later than 2 years after the specified date or the date of the determination, each State shall certify that the State has—

"(i) reviewed the revised code or standard; and

"(ii) updated the provisions of the residential and commercial building codes of the State as necessary to meet or exceed, as applicable—

"(I) any provisions of a national code or standard determined to improve energy efficiency in buildings; or

"(II) energy savings achieved by those provisions through other means.

"(c) ACHIEVEMENT OF COMPLIANCE BY STATES.—

"(1) IN GENERAL.—Not later than 3 years after the date on which a State makes a certification under

subsection (b), the State shall certify to the Secretary that the State has achieved compliance with the building energy code that is the subject of the certification.

"(2) RATE OF COMPLIANCE.—The certification shall include documentation of the rate of compliance based on independent inspections of a random sample of the new and renovated buildings covered by the State code during the preceding calendar year.

"(3) COMPLIANCE.—A State shall be considered to achieve compliance for purposes of paragraph (1) if—

"(A) at least 90 percent of new and renovated buildings covered by the State code during the preceding calendar year substantially meet all the requirements of the code; or

"(B) the estimated excess energy use of new and renovated buildings that did not meet the requirements of the State code during the preceding calendar year, as compared to a baseline of comparable buildings that meet the requirements of the code, is not more than 10 percent of the estimated energy use of all new and renovated buildings covered by the State code during the preceding calendar year.

"(d) FAILURE TO CERTIFY.—

"(1) EXTENSION OF DEADLINES.—The Secretary shall extend a deadline for certification by a State under subsection (b) or (c) for not more than 1 additional year, if the State demonstrates to the satisfaction of the Secretary that the State has made—

"(A) a good faith effort to comply with the certification requirement; and

"(B) significant progress with respect to the compliance.

"(2) NONCOMPLIANCE BY STATE.—

"(A) IN GENERAL.—A State that fails to submit a certification required under subsection (b) or (c), and to which an extension is not provided under paragraph (1), shall be considered to be out of compliance with this section.

"(B) EFFECT ON LOCAL GOVERNMENTS.—A local government of a State that is out of compliance with this section may be considered to be in compliance with this section if the local government meets each applicable certification requirement of this section.

"(e) TECHNICAL ASSISTANCE.—

"(1) IN GENERAL.—The Secretary shall provide technical assistance (including building energy analysis and design tools, building demonstrations, and

design assistance and training) to ensure that national model building energy codes and standards meet the goals described in subsection (a)(1).

"(2) ASSISTANCE TO STATES.—The Secretary shall provide technical assistance to States—

"(A) to implement this section, including procedures for States to demonstrate that the codes of the States achieve equivalent or greater energy savings than the national model codes and standards;

"(B) to improve and implement State residential and commercial building energy efficiency codes; and

"(C) to otherwise promote the design and construction of energy-efficient buildings.

"(f) INCENTIVE FUNDING.—

"(1) IN GENERAL.—The Secretary shall provide incentive funding to States—

"(A) to implement this section; and

"(B) to improve and implement State residential and commercial building energy efficiency codes, including increasing and verifying compliance with the codes.

"(2) AMOUNT.—In determining whether, and in what amount, to provide incentive funding under this

subsection, the Secretary shall take into consideration actions proposed by the State—

"(A) to implement this section;

"(B) to implement and improve residential and commercial building energy efficiency codes; and

"(C) to promote building energy efficiency through use of the codes.

"(3) ADDITIONAL FUNDING.—The Secretary shall provide additional funding under this subsection for implementation of a plan to demonstrate a rate of compliance with applicable residential and commercial building energy efficiency codes at a rate of not less than 90 percent, based on energy performance—

"(A) to a State that has adopted and is implementing, on a statewide basis—

"(i) a residential building energy efficiency code that meets or exceeds the requirements of the IECC (2006) (or a successor code that is the subject of an affirmative determination by the Secretary under subsection (a)(2)(A)(i)); and

"(ii) a commercial building energy efficiency code that meets or exceeds the requirements of the ASHRAE Standard 90.1

(2004) (or a successor standard that is the subject of an affirmative determination by the Secretary under subsection (a)(2)(A)(i)); or

"(B) in the case of a State in which no statewide energy code exists for residential buildings or commercial buildings, or in which the State code fails to comply with subparagraph (A), to a local government that has adopted and is implementing residential and commercial building energy efficiency codes, as described in subparagraph (A).

"(4) TRAINING.—Of the amounts made available to carry out this subsection, the Secretary may use not more than $500,000 for each State to train State and local officials to implement State or local energy codes in accordance with a plan described in paragraph (3).".

SEC. 5202. CONFORMING AMENDMENT.

Section 303 of the Energy Conservation and Production Act (42 U.S.C. 6832) is amended by adding at the end the following new paragraph:

"(17) IECC.—The term 'IECC' means the International Energy Conservation Code.".

TITLE VI—GLOBAL EFFORT TO REDUCE GREENHOUSE GAS EMISSIONS

SEC. 6001. DEFINITIONS.

In this title:

(1) BASELINE EMISSION LEVEL.—The term "baseline emission level" means, as determined by the Administrator, the total average annual greenhouse gas emissions attributed to a category of covered goods of a foreign country during the period beginning on January 1, 2012, and ending on December 31, 2014, based on—

(A) relevant data available for that period; and

(B) to the extent necessary with respect to a specific category of covered goods, economic and engineering models and best available information on technology performance levels for the manufacture of that category of covered goods.

(2) COMPARABLE ACTION.—The term "comparable action" means any greenhouse gas regulatory programs, requirements, and other measures adopted by a foreign country that, in combination, are comparable in effect to actions carried out by the United States to limit greenhouse gas emissions pursuant to

this Act, as determined by the President, taking into consideration the level of economic development of the foreign country.

(3) COMPLIANCE YEAR.—The term "compliance year" means each calendar year for which the requirements of this title apply to a category of covered goods of a covered foreign country that is imported into the United States.

(4) COVERED FOREIGN COUNTRY.—The term "covered foreign country" means a foreign country that is included on the covered list prepared under section 6006(b)(3).

(5) COVERED GOOD.—The term "covered good" means a good that (as identified by the Administrator by rule)—

(A) is a primary product;

(B) generates, in the course of the manufacture of the good, a substantial quantity of direct greenhouse gas emissions and indirect greenhouse gas emissions; and

(C) is closely related to a good the cost of production of which in the United States is affected by a requirement of this Act.

(6) FOREIGN COUNTRY.—The term "foreign country" means a member of, or observer government

to, the World Trade Organization (WTO), other than the United States.

(7) INDIRECT GREENHOUSE GAS EMISSIONS.—The term "indirect greenhouse gas emissions" means any emissions of a greenhouse gas resulting from the generation of electricity that is consumed during the manufacture of a good.

(8) INTERNATIONAL AGREEMENT.—The term "international agreement" means any international agreement to which the United States is a party, including the Marrakesh agreement establishing the World Trade Organization, done at Marrakesh on April 15, 1994.

(9) INTERNATIONAL RESERVE ALLOWANCE.—The term "international reserve allowance" means an allowance (denominated in units of metric tons of carbon dioxide equivalent) that is—

(A) purchased from a special reserve of allowances pursuant to section 6006(a)(2); and

(B) used for purposes of meeting the requirements of section 6006.

(10) PRIMARY PRODUCT.—The term "primary product" means—

(A) iron, steel, aluminum, cement, bulk glass, or paper; or

(B) any other manufactured product that—

(i) is sold in bulk for purposes of further manufacture; and

(ii) generates, in the course of the manufacture of the product, direct greenhouse gas emissions and indirect greenhouse gas emissions that are comparable (on an emissions-per-dollar basis) to emissions generated in the manufacture of products by covered facilities in the industrial sector.

SEC. 6002. PURPOSES.

The purposes of this title are—

(1) to promote a strong global effort to significantly reduce greenhouse gas emissions;

(2) to ensure, to the maximum extent practicable, that greenhouse gas emissions occurring outside the United States do not undermine the objectives of the United States in addressing global climate change; and

(3) to encourage effective international action to achieve those objectives through—

(A) agreements negotiated between the United States and foreign countries; and

(B) measures carried out by the United States that comply with applicable international agreements.

SEC. 6003. INTERNATIONAL NEGOTIATIONS.

(a) FINDING.—Congress finds that the purposes described in section 6002 can be most effectively addressed and achieved through agreements negotiated between the United States and foreign countries.

(b) NEGOTIATING OBJECTIVE.—

(1) STATEMENT OF POLICY.—It is the policy of the United States to work proactively under the United Nations Framework Convention on Climate Change and, in other appropriate forums, to establish binding agreements committing all major greenhouse gas-emitting nations to contribute equitably to the reduction of global greenhouse gas emissions.

(2) INTENT OF CONGRESS REGARDING OBJECTIVE.—To the extent that the agreements described in subsection (a) involve measures that will affect international trade in any good or service, it is the intent of Congress that the negotiating objective of the United States shall be to focus multilateral and bilateral international agreements on the reduction of greenhouse gas emissions to advance achievement of the purposes described in section 6002.

SEC. 6004. INTERAGENCY REVIEW.

(a) INTERAGENCY GROUP.—

(1) ESTABLISHMENT.—The President shall establish an interagency group to carry out this section.

(2) CHAIRPERSON.—The chairperson of the interagency group established under paragraph (1) shall be the Secretary of State.

(3) REQUIREMENT.—The Administrator shall be a member of the interagency group.

(b) DETERMINATIONS.—

(1) IN GENERAL.—Subject to paragraph (2), the interagency group established under subsection (a)(1) shall determine whether, and the extent to which, each foreign country has taken comparable action to limit the greenhouse gas emissions of the foreign country.

(2) EXEMPTION.—The interagency group may exempt from a determination under paragraph (1) any foreign country on the excluded list under section 6006(b)(2).

(c) REPORT TO PRESIDENT.—Not later than January 1, 2018, and annually thereafter, the interagency group shall submit to the President a report describing the determinations of the interagency group under subsection (b).

SEC. 6005. PRESIDENTIAL DETERMINATIONS.

(a) IN GENERAL.—Not later than January 1, 2019, and annually thereafter, the President shall determine

whether each foreign country that is subject to interagency review under section 6004(b) has taken comparable action to limit the greenhouse gas emissions of the foreign country, taking into consideration—

(1) the baseline emission levels of the foreign country; and

(2) applicable reports submitted under section 6004(c).

(b) REPORTS.—The President shall—

(1) submit to Congress an annual report describing the determinations of the President under subsection (a) for the most recent calendar year; and

(2) publish the determinations in the Federal Register.

SEC. 6006. INTERNATIONAL RESERVE ALLOWANCE PROGRAM.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—The Administrator shall establish a program under which the Administrator, during the 1-year period beginning on January 1, 2019, and annually thereafter, shall offer for sale to United States importers international reserve allowances in accordance with this subsection.

(2) SOURCE.—International reserve allowances under paragraph (1) shall be issued from a special re-

serve of allowances that is separate from, and established in addition to, the quantity of allowances established under section 1201.

(3) PRICE.—

(A) IN GENERAL.—Subject to subparagraph (B), the Administrator shall establish, by rule, a methodology for determining the price of international reserve allowances for each compliance year at a level that does not exceed the market price of allowances established under section 1201 for the compliance year.

(B) MAXIMUM PRICE.—The price for an international reserve allowance under subparagraph (A) shall not exceed the clearing price for current compliance year allowances established at the most recent auction of allowances by the Corporation.

(4) SERIAL NUMBER.—The Administrator shall assign a unique serial number to each international reserve allowance issued under this subsection.

(5) TRADING SYSTEM.—The Administrator may establish, by rule, a system for the sale, exchange, purchase, transfer, and banking of international reserve allowances.

(6) REGULATED ENTITIES.—International reserve allowances may not be submitted by regulated entities to comply with the allowance submission requirements of section 1202.

(7) PROCEEDS.—All proceeds from the sale of international reserve allowances under this subsection shall be allocated to a program that the Administrator, in coordination with the Secretary of State, shall establish to mitigate the negative impacts of global climate change on disadvantaged communities in other countries.

(b) FOREIGN COUNTRY LISTS.—

(1) IN GENERAL.—Not later than January 1, 2020, and annually thereafter, the President shall develop and publish in the Federal Register 2 lists of foreign countries, in accordance with this subsection.

(2) EXCLUDED LIST.—

(A) IN GENERAL.—The President shall identify and publish in a list, to be known as the "excluded list"—

(i) each foreign country determined by the President under section 6005(a) to have taken action comparable to that taken by the United States to limit the greenhouse gas emissions of the foreign country; and

(ii) each foreign country the share of total global greenhouse gas emissions of which is below the de minimis percentage described in subparagraph (B).

(B) DE MINIMIS PERCENTAGE.—The de minimis percentage referred to in subparagraph (A) is a percentage of total global greenhouse gas emissions of not more than 0.5, as determined by the President, for the most recent calendar year for which emissions and other relevant data is available, taking into consideration, as necessary, the annual average deforestation rate during a representative period for a foreign country that is a developing country.

(3) COVERED LIST.—

(A) IN GENERAL.—The President shall identify and publish in a list, to be known as the "covered list", each foreign country the covered goods of which are subject to the requirements of this section.

(B) REQUIREMENT.—The covered list shall include each foreign country that is not included on the excluded list under paragraph (2).

(c) WRITTEN DECLARATIONS.—

(1) IN GENERAL.—Effective beginning January 1, 2020, a United States importer of any covered good shall, as a condition of importation or withdrawal for consumption from a warehouse of the covered good, submit to the Administrator and the appropriate office of the U.S. Customs and Border Protection a written declaration with respect to each such importation or withdrawal.

(2) CONTENTS.—A written declaration under paragraph (1) shall contain a statement that—

(A) the applicable covered good is accompanied by a sufficient number of international reserve allowances, as determined under subsection (d); or

(B) the covered good is from a foreign country on the excluded list under subsection (b)(2).

(3) INCLUSION.—A written declaration described in paragraph (2)(A) shall include the unique serial number of each emission allowance associated with the importation of the applicable covered good.

(4) FAILURE TO DECLARE.—

(A) IN GENERAL.—Except as provided in subparagraph (B), an imported covered good that is not accompanied by a written declaration

under this subsection shall not be permitted to enter the customs territory of the United States.

(B) EXCEPTION FOR CERTAIN IMPORTS.—Subparagraph (A) shall not apply to a covered good of a foreign country if the President determines that—

(i) the foreign country has taken comparable action to limit the greenhouse gas emissions of the foreign country, in accordance with section 6005;

(ii) the United Nations has identified the foreign country as among the least-developed of developing countries; or

(iii) the foreign country is on the excluded list under subsection (b)(2).

(5) CORRECTED DECLARATION.—

(A) IN GENERAL.—If, after making a declaration required under this subsection, an importer has reason to believe that the declaration contains information that is not correct, the importer shall provide a corrected declaration by not later than 30 days after the date of discovery of the error, in accordance with subparagraph (B).

(B) METHOD.—A corrected declaration under subparagraph (A) shall be in the form of a letter or other written statement to the Administrator and the office of the U.S. Customs and Border Protection to which the original declaration was submitted.

(d) QUANTITY OF ALLOWANCES REQUIRED.—

(1) METHODOLOGY.—

(A) IN GENERAL.—The Administrator shall establish, by rule, a method for calculating the required number of international reserve allowances that a United States importer must submit, together with a written declaration under subsection (c), for each category of covered goods of each covered foreign country.

(B) FORMULA.—The Administrator shall develop a general formula for calculating the international reserve allowance requirement that applies, on a per unit basis, to each covered good of a covered foreign country that is imported during each compliance year.

(2) INITIAL COMPLIANCE YEAR.—

(A) IN GENERAL.—Subject to subparagraph (B), the methodology under paragraph (1) shall establish an international reserve allowance re-

quirement (per unit imported into the United States) for the initial compliance year for each category of covered goods of each covered foreign country that is equal to the quotient obtained by dividing—

(i) the excess, if any, of the total emissions from the covered foreign country that are attributable to the category of covered goods produced during the most recent year for which data are available, over the baseline emission level of the covered foreign country for that category; and

(ii) the total quantity of the covered good produced in the covered foreign country during the most recent calendar year.

(B) ADJUSTMENTS.—The Administrator shall adjust the requirement under subparagraph (A)—

(i) in accordance with the ratio that—

(I) the quantity of allowances that were allocated at no cost to entities within the industry sector manufacturing the covered goods for the compliance year during which the covered

goods were imported into the United States; bears to

(II) the greenhouse gas emissions of that industry sector; and

(ii) to take into account the level of economic development of the covered foreign country in which the covered goods were produced.

(3) SUBSEQUENT COMPLIANCE YEARS.—For each subsequent compliance year, the Administrator shall revise, as appropriate, the international reserve allowance requirement applicable to each category of imported covered goods of each covered foreign country to reflect changes in the factors described in paragraph (2)(B).

(4) PUBLICATION.—Not later than 90 days before the beginning of each compliance year, the Administrator shall publish in the Federal Register a schedule describing the required number of international reserve allowances for each category of imported covered goods of each covered foreign country, as calculated under this subsection.

(e) FOREIGN ALLOWANCES AND CREDITS.—

(1) FOREIGN ALLOWANCES.—

(A) IN GENERAL.—A United States importer may submit, in lieu of an international reserve allowance issued under this section, a foreign allowance or similar compliance instrument distributed by a foreign country pursuant to a cap and trade program that represents a comparable action.

(B) COMMENSURATE CAP AND TRADE PROGRAM.—For purposes of subparagraph (A), a cap and trade program that represents a comparable action shall include any greenhouse gas regulatory program adopted by a covered foreign country to limit the greenhouse gas emissions of the covered foreign country, if the President certifies that the program—

(i)(I) places a quantitative limitation on the total quantity of greenhouse gas emissions of the covered foreign country (expressed in terms of tons emitted per calendar year); and

(II) achieves that limitation through an allowance trading system;

(ii) satisfies such criteria as the President may establish for requirements relating to the enforceability of the cap and trade

program, including requirements for monitoring, reporting, verification procedures, and allowance tracking; and

(iii) is a comparable action.

(2) FOREIGN CREDITS.—

(A) IN GENERAL.—A United States importer may submit, in lieu of an international reserve allowance issued under this section, a foreign credit or a credit for an international offset project that the Administrator has authorized for use under subtitle E of title II.

(B) APPLICATION.—The limitation on the use of international reserve allowances by regulated entities under subsection (a)(6) shall not apply to a United States importer for purposes of this paragraph.

(f) RETIREMENT OF ALLOWANCES.—The Administrator shall retire each international reserve allowance, foreign allowance, and foreign credit submitted to achieve compliance with this section.

(g) CONSISTENCY WITH INTERNATIONAL AGREEMENTS.—The Administrator, in consultation with the Secretary of State, shall adjust the international reserve allowance requirements established under this section (including the quantity of international reserve allowances required for

each category of covered goods of a covered foreign country) as the Administrator determines to be necessary to ensure that the United States complies with all applicable international agreements.

(h) TERMINATION.—The international reserve allowance requirements of this section shall not apply to a covered good of a covered foreign country in any case in which the President makes a determination described in subsection (b)(2) with respect to the covered goods of that covered foreign country.

(i) FINAL REGULATIONS.—Not later than January 1, 2019, the Administrator shall promulgate such regulations as the Administrator determines to be necessary to carry out this section.

SEC. 6007. ADJUSTMENT OF INTERNATIONAL RESERVE ALLOWANCE REQUIREMENTS.

(a) IN GENERAL.—Not later than January 1, 2023, and annually thereafter, the President shall prepare and submit to Congress a report that assesses the effectiveness of the applicable international reserve allowance requirements under section 6006 with respect to the covered goods of each covered foreign country.

(b) INADEQUATE REQUIREMENTS.—If the President determines that an applicable international reserve allowance requirement is not adequate to achieve the purposes

of this title, the President, simultaneously with the submission of the report under subsection (a), shall—

(1) adjust the requirement; or

(2) take such other action as the President determines to be necessary to improve the effectiveness of the requirement, in accordance with all applicable international agreements.

(c) EFFECTIVE DATE.—An adjustment under subsection (b)(1) shall take effect beginning on January 1 of the compliance year immediately following the date on which the adjustment is made.

TITLE VII—REVIEWS AND RECOMMENDATIONS

SEC. 7001. NATIONAL ACADEMY OF SCIENCES REVIEWS.

(a) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Administrator shall offer to enter into a contract with the National Academy of Sciences under which the Academy shall, not later than January 1, 2012, and every 3 years thereafter, submit to Congress and the Administrator a report that includes an analysis of—

(1) the latest scientific information and data relevant to global climate change;

(2) the performance of this Act and other policies in reducing greenhouse gas emissions and mitigating the adverse impacts of global climate change;

(3) the performance of this Act in ensuring that the Land and Water Conservation Fund established under section 2 of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l–5) receives funds that are sufficient to carry out the purposes of that Fund; and

(4) the performance of this Act in ensuring that the Bureau of Land Management and the Forest Service receive funds that are sufficient to enable those agencies to suppress wildland fire effectively and thereby minimize wildfire damage.

(b) LATEST SCIENTIFIC INFORMATION.—The analysis required under subsection (a)(1) shall—

(1) address existing reports, including the most recent assessment report of the Intergovernmental Panel on Climate Change; and

(2) include a description of—

(A) trends in and projections for total United States greenhouse gas emissions;

(B) trends in and projections for total worldwide greenhouse gas emissions;

(C) current and projected future atmospheric concentrations of greenhouse gases;

(D) current and projected future global average temperature, including an analysis of

whether an increase of global average temperature in excess of 3.6 degrees Fahrenheit (2 degrees Celsius) above the preindustrial average has occurred or is more likely than not to occur in the foreseeable future as a result of anthropogenic climate change;

(E) current and projected future adverse impacts of global climate change on human populations, wildlife, and natural resources; and

(F) trends in and projections for the health of the oceans and ocean ecosystems, including predicted changes in ocean acidity, temperatures, the extent of coral reefs, and other indicators of ocean ecosystem health, resulting from anthropogenic carbon dioxide and climate change.

(c) PERFORMANCE OF THIS ACT AND EXISTING TECHNOLOGIES.—The analysis required under subsection (a)(2) shall include a description of—

(1) the extent to which this Act, in concert with other policies, will prevent a dangerous increase in global average temperature;

(2) the extent to which this Act, in concert with other policies, will prevent dangerous atmospheric concentrations of greenhouse gases;

(3) the current and future projected deployment of technologies and practices that reduce or limit greenhouse gas emissions, including—

(A) technologies for capture and disposal of greenhouse gases;

(B) efficiency improvement technologies;

(C) zero-greenhouse gas emitting energy technologies, including solar, wind, geothermal, and nuclear technologies; and

(D) above- and below-ground biological sequestration technologies;

(4) the extent to which this Act and other policies are accelerating the development and commercial deployment of technologies and practices that reduce and limit greenhouse gas emissions;

(5) the extent to which the allocations and distributions of emission allowances and auction proceeds under this Act are advancing the purposes of this Act, and whether any of those allocations and distributions should be modified, including by increasing the percentage of annual Emission Allowance Account being auctioned, to better carry out the purposes of this Act;

(6) whether the motor vehicle fuel and motor vehicle and nonroad regulations within the scope of Ex-

ecutive Order 13432 (72 Fed. Reg. 27717; relating to cooperation among agencies in protecting the environment with respect to greenhouse gas emissions from motor vehicles, nonroad vehicles, and nonroad engines) have been finalized and implemented by Federal agencies and departments;

(7) whether any other transportation-related programs, including fuel economy standard reform, greenhouse gas vehicle emissions standards, renewable fuel volume mandates, low-carbon fuel standards, and activities to reduce vehicle miles traveled have been finalized and implemented by any Federal agencies or departments;

(8) whether any regulation or program described in paragraph (12) or (13) is expected to achieve, as compared to the baseline greenhouse gas emissions consistent with the reference case contained in the report of the Energy Information Administration entitled "Annual Energy Outlook 2006", at a minimum—

(A) at least a 6.2-percent reduction in cumulative greenhouse gas emissions from the light-duty motor vehicle sector, including light-duty vehicles and light-duty trucks, during the

period beginning on January 1, 2010, and ending on December 31, 2020; or

(B) a cumulative reduction of approximately 1,140,000 metric tons of carbon dioxide equivalent, measured on a full fuel cycle basis;

(9) whether additional measures, including an increase in the earned income tax credit, a reduction in payroll taxes, or the implementation of electronic benefit transfers by State health and human services agencies to reach low-income individuals who are not required to file Federal income tax returns, are needed to help low- and moderate-income individuals respond to changes in the cost of energy-related goods and services;

(10) the feasibility of expanding the definition of the term "covered facility" under this Act;

(11) the feasibility of expanding the scope of the compliance obligation established under section 1202(a);

(12) the feasibility of reducing the number of emission allowances comprising the Emission Allowance Account for 1 or more calendar years under this Act;

(13) the feasibility of establishing policies for reducing greenhouse gas emissions over and above those policies established by this Act;

(14) the feasibility of accelerating the commercial deployment of existing and emerging renewable energy technologies for electricity generation, from solar, wind, geothermal energy, ocean energy (including tidal, wave, current, and thermal) or biomass (as defined in section 203(b) of the Energy Policy Act of 2005 (42 U.S.C. 15852(b))), utilizing a bonus emission allowance program comparable to the program established under subtitle F of title III; and

(15) the results of a report on products manufactured with recycled materials that—

(A) describes the greenhouse gas emission reductions those products can achieve;

(B) summarizes and assesses the results of research on manufactured products and scrap recycling activities; and

(C) evaluates the lifecycle greenhouse gas emission reduction and other benefits and issues associated with—

(i) recycling scrap metal (including end-of-life vehicles), recovered fiber (or paper), scrap electronics, scrap glass, scrap

plastics, scrap rubber, scrap tires, and scrap textiles with respect to reduction or avoidance of greenhouse gas to the environment;

(ii) using recyclable materials in manufactured products;

(iii) designing and manufacturing products that increase recyclable output;

(iv) eliminating or reducing the use of substances and materials in products that decrease recyclable output; and

(v) establishing a standardized system for lifecycle greenhouse gas emission reduction measurement and certification for the manufactured products and scrap recycling sectors, including the potential options for the structure and operation of such a system.

SEC. 7002. ENVIRONMENTAL PROTECTION AGENCY REVIEW.

Not later than January 1, 2012, the Administrator shall submit to Congress a report indicating—

(1) the latest scientific information and data relevant to the health effects of mercury emissions from coal-fired electric power generating facilities;

(2) the state of the technology designed to reduce mercury emissions from coal combustion, including the efficacy of the technology with respect to each coal type; and

(3) the extent to which the implementation of this Act is assisting in bringing concentrations of particulate matter and ozone into line with National Ambient Air Quality Standards.

SEC. 7003. ENVIRONMENTAL PROTECTION AGENCY RECOMMENDATIONS.

(a) REVIEW.—Not later than January 1, 2013, and every 3 years thereafter, the Administrator shall submit to Congress recommendations for action in response to the most recent report submitted by the National Academy of Sciences under section 7001 and the report submitted by the Administrator under section 7002.

(b) CATEGORIES OF ACTION.—The categories of action eligible for inclusion in the recommendations submitted under subsection (a) include proposed legislation recommending—

(1) expansion of the definition of the term "covered facility" under this Act;

(2) expansion of the scope of the compliance obligation established under section 1202;

(3) adjustment of the number of emission allowances comprising the Emission Allowance Account for 1 or more calendar years under this Act;

(4) establishment of policies for reducing greenhouse gas emissions over and above those policies established under this Act;

(5) establishment of policies for reducing nationwide emissions into the atmosphere of sulfur dioxide, nitrogen oxides, and mercury in excess of the reductions resulting from the implementation of this Act; and

(6) establishment of a program, similar to the program established under subtitle F of title III, for distributing bonus emission allowances in order to accelerate the commercial deployment of existing and emerging renewable energy technologies for electricity generation.

(c) CONSISTENCY WITH REVIEWS.—The Administrator shall include with each submission of recommendations under subsection (a) an explanation of any inconsistencies between the recommendations and the reviews submitted by the National Academy of Sciences under section 7001 and the report submitted by the Administrator under section 7002.

(d) SAVINGS CLAUSE.—Nothing in this title limits, procedurally affects, or otherwise restricts the authority of the Administrator, a State, or any person to use authorities under this Act or any other law to adopt or enforce any rule.

SEC. 7004. PRESIDENTIAL RECOMMENDATIONS.

(a) ESTABLISHMENT OF THE INTERAGENCY CLIMATE CHANGE TASK FORCE.—Not later than January 1, 2019, the President shall establish an Interagency Climate Change Task Force.

(b) COMPOSITION.—The members of the Interagency Climate Change Task Force shall be—

(1) the Administrator;

(2) the Secretary of Energy;

(3) the Secretary of the Treasury;

(4) the Secretary of Commerce; and

(5) such other Cabinet Secretaries as the President may name to the membership of the Task Force.

(c) CHAIRMAN.—The Administrator shall act as Chairman of the Interagency Climate Change Task Force.

(d) REPORT TO PRESIDENT.—

(1) IN GENERAL.—Not later than April 1, 2019, the Task Force shall make public and submit to the President a consensus report making recommenda-

tions, including specific legislation for the President to recommend to Congress.

(2) BASIS.—The report shall be based on the third set of recommendations submitted by the Administrator to Congress under section 7003.

(3) INCLUSIONS.—The Task Force shall include with the consensus report an explanation of any inconsistencies between the consensus report and the third set of recommendations submitted by the Administrator to Congress under section 7003.

(e) PRESIDENTIAL RECOMMENDATION TO CONGRESS.—Not later than July 1, 2020, the President shall submit to Congress the text of a proposed Act based on the consensus report submitted to the President under subsection (d).

SEC. 7005. ADAPTATION ASSESSMENTS AND PLAN.

(a) REGIONAL ESTIMATES.—

(1) ESTIMATES.—

(A) IN GENERAL.—The Administrator, in consultation with the officials described in paragraph (2) and relevant State agencies, shall conduct 6 regional infrastructure cost assessments in various regions of the United States, and a national cost assessment, to provide estimates of the

range of costs that should be anticipated for adaptation to the impacts of climate change.

(B) VARIOUS PROBABILITIES.—The Administrator shall develop the estimates under subparagraph (A) for low, medium, and high probabilities of climate change and the potential impacts of climate change.

(2) DESCRIPTION OF OFFICIALS.—The officials referred to in paragraph (1) are—

(A) the Secretary of Agriculture;

(B) the Secretary of Commerce;

(C) the Secretary of Defense;

(D) the Secretary of Energy;

(E) the Secretary of Health and Human Services;

(F) the Secretary of Homeland Security;

(G) the Secretary of Housing and Urban Development;

(H) the Secretary of the Interior;

(I) the Secretary of Transportation;

(J) the Director of United States Geological Survey; and

(K) the heads of such other Federal agencies and departments as the Administrator determines to be necessary.

(3) SUBMISSION TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, the Administrator shall submit to Congress a report describing the results of the assessments conducted under this subsection.

(b) ADAPTATION PLAN.—

(1) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Administrator shall submit to Congress a climate change adaptation plan for the United States, based on—

(A) assessments performed by the United Nations Intergovernmental Panel on Climate Change in accordance with the Global Change Research Act of 1990 (15 U.S.C. 2921 et seq.); and

(B) any other assessment prepared by a Federal, regional, State, or local government entity that is—

(i) scientific;

(ii) peer-reviewed; or

(iii) subjected to public comment.

(2) INCLUSIONS.—The adaptation plan under paragraph (1) shall include—

(A) a prioritized list of vulnerable systems and regions in the United States;

(B) requirements for coordination between Federal, State, and local governments to ensure that key public infrastructure, safety, health, and land use planning and control issues are addressed;

(C) requirements for coordination among the Federal Government, industry, and communities;

(D) requirements for management of climate change, including the need for information derived from inundation prediction systems on the impacts to coastal communities;

(E) an assessment of climate change science research needs, including probabilistic assessments as an aid to planning;

(F) an assessment of climate change technology needs; and

(G) regional and national cost assessments for the range of costs that should be anticipated for adapting to the impacts of climate change.

(c) IMPACTS OF CLIMATE CHANGE ON LOW-INCOME POPULATIONS.—

(1) IN GENERAL.—The Administrator shall conduct research on the impact of climate change on low-income populations in all countries, including—

(A) an assessment of the adverse impact of climate change on—

(i) low-income populations in the United States; and

(ii) developing countries;

(B)(i) an identification of appropriate climate change adaptation measures and programs for developing countries and low-income populations;

(ii) an assessment of the impact of the measures and programs on low-income populations; and

(C) an estimate of the costs of developing and implementing those climate change adaptation and mitigation programs.

(2) REPORT.—Not later than 1 year after the date of enactment of this Act, the Administrator shall submit to Congress a report describing the results of the research conducted under paragraph (1).

SEC. 7006. STUDY BY ADMINISTRATOR OF AVIATION SECTOR GREENHOUSE GAS EMISSIONS.

(a) IN GENERAL.—The Administrator shall enter into an agreement with the National Academy of Sciences under which the Academy shall conduct a study on greenhouse gas

emissions associated with the aviation industry, including—

(1) a determination of appropriate data necessary to make determinations of emission inventories, considering fuel use, airport operations, ground equipment, and all other sources of emissions in the aviation industry;

(2) an estimate of projected industry emissions for the following 5-year, 20-year, and 50-year periods;

(3) based on existing literature, research and surveys to determine the existing best practices for emission reduction in the aviation sector;

(4) recommendations on areas of focus for additional research for technologies and operations with the highest potential to reduce emissions; and

(5) recommendations of actions that the Federal Government could take to encourage or require additional emissions reductions.

(b) CONSULTATION.—In developing the parameters of the study under this section, the Administrator shall conduct the study under this section in consultation with—

(1) the Secretary of Transportation, acting through the Administrator of the Federal Aviation Administration; and

(2) other appropriate Federal agencies and departments.

TITLE VIII—FRAMEWORK FOR GEOLOGICAL SEQUESTRATION OF CARBON DIOXIDE

SEC. 8001. NATIONAL DRINKING WATER REGULATIONS.

(a) IN GENERAL.—Section 1421 of the Safe Drinking Water Act (42 U.S.C. 300h) is amended—

(1) in subsection (b)(1), by striking "subsection (d)(2)" and inserting "subsection (e)(2)";

(2) by redesignating subsection (d) as subsection (e); and

(3) by inserting after subsection (c) the following:

"(d) CARBON DIOXIDE.—

"(1) REGULATIONS.—Not later than 1 year after the date of enactment of the Lieberman-Warner Climate Security Act of 2008, the Administrator shall promulgate regulations for permitting commercial-scale underground injection of carbon dioxide for purposes of geological sequestration to address climate change, including provisions—

"(A) for monitoring and controlling the long-term storage of carbon dioxide and avoiding, to the maximum extent practicable, any re-

lease of carbon dioxide into the atmosphere, and for ensuring protection of underground sources of drinking water, human health, and the environment; and

"(B) relating to long-term liability associated with commercial-scale geological sequestration.

"(2) SUBSEQUENT REPORTS.—Not later than 5 years after the date on which regulations are promulgated pursuant to paragraph (1), and not less frequently than once every 5 years thereafter, the Administrator shall submit to Congress a report that contains an evaluation of the effectiveness of the regulations, based on current knowledge and experience, with particular emphasis on any new information on potential impacts of commercial-scale geological sequestration on drinking water, human health, and the environment.

"(3) REVISION.—If the Administrator determines, based on a report under paragraph (2), that regulations promulgated pursuant to paragraph (1) require revision, the Administrator shall promulgate revised regulations not later than 1 year after the date on which the applicable report is submitted to Congress under paragraph (2).".

(b) CONFORMING AMENDMENT.—Section 1447(a)(4) of the Safe Drinking Water Act (42 U.S.C. 300j–6(a)(4)) is amended by striking "section 1421(d)(2)" and inserting "section 1421(e)(2)".

SEC. 8002. ASSESSMENT OF GEOLOGICAL STORAGE CAPACITY FOR CARBON DIOXIDE.

(a) DEFINITIONS.—In this section:

(1) ASSESSMENT.—The term "assessment" means the national assessment of capacity for carbon dioxide completed under subsection (f).

(2) CAPACITY.—The term "capacity" means the portion of a storage formation that can retain carbon dioxide in accordance with the requirements (including physical, geological, and economic requirements) established under the methodology developed under subsection (b).

(3) ENGINEERED HAZARD.—The term "engineered hazard" includes the location and completion history of any well that could affect a storage formation or capacity.

(4) RISK.—The term "risk" includes any risk posed by a geomechanical, geochemical, hydrogeological, structural, or engineered hazard.

(5) SECRETARY.—The term "Secretary" means the Secretary of the Interior, acting through the Director of the United States Geological Survey.

(6) STORAGE FORMATION.—The term "storage formation" means a deep saline formation, unmineable coal seam, oil or gas reservoir, or other geological formation that is capable of accommodating a volume of industrial carbon dioxide.

(b) METHODOLOGY.—Not later than 1 year after the date of enactment of this Act, the Secretary shall develop a methodology for conducting an assessment under subsection (f), taking into consideration—

(1) the geographical extent of all potential storage formations in all States;

(2) the capacity of the potential storage formations;

(3) the injectivity of the potential storage formations;

(4) an estimate of potential volumes of oil and gas recoverable by injection and storage of industrial carbon dioxide in potential storage formations;

(5) the risk associated with the potential storage formations; and

(6) the work performed to develop the Carbon Sequestration Atlas of the United States and Canada

completed by the Department of Energy in April 2006.

(c) COORDINATION.—

(1) FEDERAL COORDINATION.—

(A) CONSULTATION.—The Secretary shall consult with the Secretary of Energy and the Administrator regarding data sharing and the format, development of methodology, and content of the assessment to ensure the maximum usefulness and success of the assessment.

(B) COOPERATION.—The Secretary of Energy and the Administrator shall cooperate with the Secretary to ensure, to the maximum extent practicable, the usefulness and success of the assessment.

(2) STATE COORDINATION.—The Secretary shall consult with State geological surveys and other relevant entities to ensure, to the maximum extent practicable, the usefulness and success of the assessment.

(d) EXTERNAL REVIEW AND PUBLICATION.—On completion of the methodology under subsection (b), the Secretary shall—

(1) publish the methodology and solicit comments from the public and the heads of affected Federal and State agencies;

(2) establish a panel of individuals with expertise in the matters described in paragraphs (1) through (5) of subsection (b) composed, as appropriate, of representatives of Federal agencies, institutions of higher education, nongovernmental organizations, State organizations, industry, and international geosciences organizations to review the methodology and comments received under paragraph (1); and

(3) on completion of the review under paragraph (2), publish in the Federal Register the revised final methodology.

(e) PERIODIC UPDATES.—The methodology developed under this section shall be updated periodically (including not less frequently than once every 5 years) to incorporate new data as the data becomes available.

(f) NATIONAL ASSESSMENT.—

(1) IN GENERAL.—Not later than 2 years after the date of publication of the methodology under subsection (d)(3), the Secretary, in consultation with the Secretary of Energy and State geological surveys, shall complete a national assessment of the capacity for carbon dioxide storage in accordance with the methodology.

(2) GEOLOGICAL VERIFICATION.—As part of the assessment, the Secretary shall carry out a characterization program to supplement the geological data relevant to determining storage capacity in carbon dioxide in geological storage formations, including—

(A) well log data;

(B) core data; and

(C) fluid sample data.

(3) PARTNERSHIP WITH OTHER DRILLING PROGRAMS.—As part of the drilling characterization under paragraph (2), the Secretary shall enter into partnerships, as appropriate, with other entities to collect and integrate data from other drilling programs relevant to the storage of carbon dioxide in geologic formations.

(4) INCORPORATION INTO NATCARB.—

(A) IN GENERAL.—On completion of the assessment, the Secretary shall incorporate the results of the assessment using, to the maximum extent practicable—

(i) the NatCarb database; or

(ii) a new database developed by the Secretary, as the Secretary determines to be necessary.

(B) RANKING.—The database shall include the data necessary to rank potential storage sites—

(i) for capacity and risk;

(ii) across the United States;

(iii) within each State;

(iv) by formation; and

(v) within each basin.

(5) REPORT.—Not later than 180 days after the date on which the assessment is completed, the Secretary shall submit to the Committee on Energy and Natural Resources of the Senate and the Committee on Science and Technology of the House of Representatives a report describing the results of the assessment.

(6) PERIODIC UPDATES.—The assessment shall be updated periodically (including not less frequently than once every 5 years) as necessary to support public and private sector decisionmaking, as determined by the Secretary.

SEC. 8003. STUDY OF THE FEASIBILITY RELATING TO CONSTRUCTION OF PIPELINES AND GEOLOGICAL CARBON DIOXIDE SEQUESTRATION ACTIVITIES.

(a) IN GENERAL.—The Secretary of Energy, in coordination with the Administrator, the Federal Energy Regulatory Commission, the Secretary of Transportation, and the Secretary of the Interior, shall conduct a study to assess the feasibility of the construction of—

(1) pipelines to be used for the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery; and

(2) geological carbon dioxide sequestration facilities.

(b) SCOPE.—The study shall consider—

(1) any barrier or potential barrier in existence as of the date of enactment of this Act, including any technical, siting, financing, or regulatory barrier, relating to—

(A) the construction of pipelines to be used for the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery; or

(B) the geological sequestration of carbon dioxide;

(2) any market risk (including throughput risk) relating to—

(A) the construction of pipelines to be used for the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery; or

(B) the geological sequestration of carbon dioxide;

(3) any regulatory, financing, or siting option that, as determined by the Secretary of Energy, would—

(A) mitigate any market risk described in paragraph (2); or

(B) help ensure the construction of pipelines dedicated to the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery;

(4) the means by which to ensure the safe handling and transportation of carbon dioxide;

(5) any preventive measure to ensure the integration of pipelines to be used for the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery; and

(6) any other appropriate use, as determined by the Secretary of Energy, in coordination with the Ad-

ministrator, the Federal Energy Regulatory Commission, the Secretary of Transportation, and the Secretary of the Interior.

(c) REPORT.—Not later than 180 days after the date of enactment of this Act, the Secretary of Energy shall submit to the Congress a report describing the results of the study.

SEC. 8004. LIABILITIES FOR CLOSED GEOLOGICAL STORAGE SITES.

(a) ESTABLISHMENT OF TASK FORCE.—As soon as practicable after the date of enactment of this Act, the Administrator shall establish a task force, to be composed of an equal number of stakeholders, the public, subject matter experts, and members of the private sector, to conduct a study of the legal framework, environmental and safety considerations, and cost implications of potential Federal assumption of liability with respect to closed geological storage sites.

(b) REPORT.—Not later than 18 months after the date of enactment of this Act, the task force established under subsection (a) shall submit to Congress a report describing the results of the study conducted under subsection (a), including recommendations of the task force, if any, with respect to the framework described in that subsection.

TITLE IX—MISCELLANEOUS

SEC. 9001. PARAMOUNT INTEREST WAIVER.

(a) IN GENERAL.—If the President determines that a national security emergency exists and, in light of information that was not available as of the date of enactment of this Act, it is in the paramount interest of the United States to modify any requirement under this Act to minimize the effects of the emergency, the President may, after opportunity for public notice and comment, temporarily adjust, suspend, or waive any regulations promulgated pursuant to this Act to achieve that minimization.

(b) CONSULTATION.—In making an emergency determination under subsection (a), the President shall, to the maximum extent practicable, consult with and take into account any advice received from—

(1) the National Academy of Sciences;

(2) the Secretary of Energy; and

(3) the Administrator.

(c) JUDICIAL REVIEW.—An emergency determination under subsection (a) shall be subject to judicial review in accordance with section 307 of the Clean Air Act (42 U.S.C. 7607).

SEC. 9002. ADMINISTRATIVE PROCEDURE AND JUDICIAL REVIEW.

(a) RULEMAKING PROCEDURES.—Any rule, requirement, regulation, method, standard, program, determination, or final action made or promulgated pursuant to any title of this Act, with the exception of sections 3101, 3102, 3201, and 3901, shall be subject to the rulemaking procedures described in sections 551 through 557 of title 5, United States Code.

(b) ENFORCEMENT.—Each provision of this Act (including provisions relating to mandatory duties of the Administrator) shall be fully enforceable pursuant to sections 113, 303, and 304 of the Clean Air Act (42 U.S.C. 7413, 7603, 7604).

(c) RECORDKEEPING, INSPECTIONS, MONITORING, ENTRY, AND SUBPOENAS.—The Administrator shall have the same powers and authority provided under sections 114 and 307(a) of the Clean Air Act (42 U.S.C. 7414, 7607(a)) in carrying out, administering, and enforcing this Act.

(d) JUDICIAL REVIEW.—A petition for judicial review of any regulation promulgated, or final action carried out, by the Administrator pursuant to this Act may be filed only—

(1) in the United States Court of Appeals for the District of Columbia; and

(2) in accordance with section 307(b) of the Clean Air Act (42 U.S.C. 7607(b)).

SEC. 9003. RETENTION OF STATE AUTHORITY.

(a) IN GENERAL.—Except as provided in subsection (b), in accordance with section 116 of the Clean Air Act (42 U.S.C. 7416) and section 510 of the Federal Water Pollution Control Act (33 U.S.C. 1370), nothing in this Act precludes or abrogates the right of any State to adopt or enforce—

(1) any standard, cap, limitation, or prohibition relating to emissions of greenhouse gas; or

(2) any requirement relating to control, abatement, or avoidance of emissions of greenhouse gas.

(b) EXCEPTION.—Notwithstanding subsection (a), no State may adopt a standard, cap, limitation, prohibition, or requirement that is less stringent than the applicable standard, cap, limitation, prohibition, or requirement under this Act.

SEC. 9004. TRIBAL AUTHORITY.

For purposes of this Act, the Administrator may treat any federally recognized Indian tribe as a State, in accordance with section 301(d) of the Clean Air Act (42 U.S.C. 7601(d)).

SEC. 9005. ROCKY MOUNTAIN CENTERS FOR STUDY OF COAL UTILIZATION.

(a) DESIGNATION.—The University of Wyoming and Montana State University shall be known and designated as the "Rocky Mountain Centers for the Study of Coal Utilization".

(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as are necessary to carry out this section.

SEC. 9006. SUN GRANT CENTER RESEARCH ON COMPLIANCE WITH CLEAN AIR ACT.

(a) DESIGNATION.—Each sun grant center is designated as a research institution of the Environmental Protection Agency for the purpose of conducting studies regarding the effects of biofuels and biomass on national and regional compliance with the Clean Air Act (42 U.S.C. 7401 et seq.).

(b) FUNDING.—The Administrator shall provide to the sun grant centers such funds as the Administrator determines to be necessary to carry out studies described in subsection (a).

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

SEC. 9007. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated such sums as are necessary to carry out this Act.

TITLE X—CONTROL OF HYDROFLUOROCARBON CONSUMPTION

SEC. 10001. APPLICABILITY.

For purposes of this Act, it shall be unlawful for any person to produce or import for consumption in the United States any hydrofluorocarbon, or product or equipment containing a hydrofluorocarbon, except exclusively in accordance with this title and the regulations promulgated by the Administrator pursuant to this title.

SEC. 10002. DEFINITIONS.

In this title:

(1) BASELINE.—The term "baseline" means the global warming potential-weighted equivalent of 300,000,000 metric tons of carbon dioxide.

(2) ENTITY; PERSON.—The terms "entity" and "person" have the meaning given the term "person" in section 551 of title 5, United States Code.

(3) GLOBAL WARMING POTENTIAL.—

(A) IN GENERAL.—The term "global warming potential" means the potential contribution to global warming of a hydrofluorocarbon, as

compared to the potential contribution to global warming of an equal weight of carbon dioxide.

(B) CALCULATION.—For the purposes of calculating the global warming potential of a hydrofluorocarbon, the values for the 100-year time horizon in the fourth assessment report of the Intergovernmental Panel on Climate Change shall be used.

(4) GLOBAL WARMING POTENTIAL-WEIGHTED.—The term "global warming potential-weighted", with respect to a hydrofluorocarbon, means the value equal to the product obtained, for purposes of determining the quantity of carbon dioxide with an equivalent global warming potential, by multiplying—

(A) a certain quantity of the hydrofluorocarbon; and

(B) the global warming potential of the hydrofluorocarbon.

(5) HYDROCHLOROFLUOROCARBON.—The term "hydrochlorofluorocarbon" means any hydrochlorofluorocarbon identified in section 602(b) of the Clean Air Act (42 U.S.C. 7671a(b)).

(6) HYDROFLUOROCARBON.—The term "hydrofluorocarbon" means a hydrofluoroalkane.

(7) HYDROFLUOROCARBON CONSUMPTION.—

(A) IN GENERAL.—The term "hydrofluorocarbon consumption", with respect to a hydrofluorocarbon, means—

(i) in the case of a hydrofluorocarbon producer, a value equal to the difference between—

(I) a value equal to the sum of—

(aa) the quantity of the hydrofluorocarbon produced in the United States; and

(bb) the quantity of the hydrofluorocarbon imported from any source into the United States or acquired in the United States from another hydrofluorocarbon producer through sale or other transaction; and

(II) the quantity of the hydrofluorocarbon exported or transferred to another hydrofluorocarbon producer or importer in the United States through sale or other transaction; and

(ii) in the case of a hydrofluorocarbon importer, a value equal to the difference between—

(I) the quantity of the hydrofluorocarbon imported from any source into the United States; and

(II) the quantity of the hydrofluorocarbon exported.

(B) EXCLUSION.—The term "hydrofluorocarbon consumption" does not include a quantity of hydrofluorocarbon that is recycled.

(8) HYDROFLUOROCARBON CONSUMPTION ALLOWANCE.—The term "hydrofluorocarbon consumption allowance" means an authorization—

(A) to produce or import a global warming potential-weighted quantity of hydrofluorocarbon equivalent to 1 metric ton of carbon dioxide; or

(B) to import products or equipment containing a quantity of hydrofluorocarbon equivalent in global warming potential to 1 metric ton of carbon dioxide.

(9) HYDROFLUOROCARBON DESTRUCTION.—The term "hydrofluorocarbon destruction" means a process that results in the permanent transformation or

decomposition of all or a significant portion of a hydrofluorocarbon to another gas, liquid, or solid with a lower or zero global warming potential.

(10) HYDROFLUOROCARBON DESTRUCTION ALLOWANCE.—The term "hydrofluorocarbon destruction allowance" means an authorization to produce or import a global warming potential-weighted quantity of hydrofluorocarbon equal to the global warming potential-weighted quantity of hydrofluorocarbon destroyed pursuant to section 10010.

(11) HYDROFLUOROCARBON IMPORTER.—The term "hydrofluorocarbon importer" means an entity that imported hydrofluorocarbon or products or equipment containing hydrofluorocarbon into the United States during calendar year 2005.

(12) HYDROFLUOROCARBON PRODUCER.—The term "hydrofluorocarbon producer" means an entity that produced hydrofluorocarbon in the United States for sale in the United States during calendar year 2005.

(13) IMPORT.—The term "import" means the action of landing on or bringing or introducing a product into, or attempting to land on or bring or introduce a product into, any area subject to the jurisdiction of the United States, regardless of whether the ac-

tion constitutes an importation within the meaning of the customs laws of the United States.

(14) PRODUCE; PRODUCTION.—

(A) IN GENERAL.—The terms "produce" and "production" mean the manufacture of a hydrofluorocarbon from any raw material, feedstock, or chemical.

(B) EXCLUSIONS.—The terms "produce" and "production" do not include—

(i) the manufacture of a hydrofluorocarbon that is used and entirely consumed (except for trace quantities) in the manufacture of other chemicals or products; or

(ii) the reuse or recycling of a hydrofluorocarbon.

(15) RECYCLE; REUSE.—The terms "reuse" and "recycle" mean—

(A) the removal of a quantity of hydrofluorocarbon from a product or equipment;

(B) the reprocessing of the product or equipment to remove impurities; and

(C) the offering of the product or equipment for sale in the United States.

SEC. 10003. CAP ON HYDROFLUOROCARBON CONSUMPTION AND IMPORTATION INTO UNITED STATES.

(a) ESTABLISHMENT.—The Administrator shall establish a cap on hydrofluorocarbon consumption in the United States for each calendar year during the period of calendar years 2010 through 2050, as directed in section 10004 that shall not be exceeded except as provided in section 10009.

(b) PROHIBITION.—Consumption of a hydrofluorocarbon or products or equipment containing any hydrofluorocarbon, except as provided in this title, shall be illegal.

SEC. 10004. HYDROFLUOROCARBON CONSUMPTION ALLOWANCE ACCOUNT.

(a) ALLOWANCE ACCOUNT.—

(1) ESTABLISHMENT.—Not later than April 1, 2009, and annually thereafter through April 1, 2050, the Administrator shall establish and allocate a separate quantity of hydrofluorocarbon consumption allowances.

(2) DENOMINATION.—Hydrofluorocarbon consumption allowances shall be denominated in metric tons of carbon dioxide equivalent.

(b) IDENTIFICATION NUMBERS.—The Administrator shall assign to each hydrofluorocarbon consumption allowance established under subsection (a) a unique identifica-

tion number that includes the calendar year for which the hydrofluorocarbon consumption allowance was assigned.

(c) LEGAL STATUS OF HYDROFLUOROCARBON CONSUMPTION ALLOWANCES.—

(1) IN GENERAL.—A consumption allowance allocated under this title is a limited authorization to produce or import a hydrofluorocarbon and any product or equipment containing a hydrofluorocarbon, in accordance with this title.

(2) ALLOWANCE NOT PROPERTY RIGHT.—A hydrofluorocarbon consumption allowance does not constitute a property right.

(3) TERMINATION OR LIMITATION.—Nothing in this Act or any other provision of law limits the authority of the United States to terminate or limit hydrofluorocarbon consumption allowances.

(4) EFFECT OF ACT.—Nothing in this Act relating to hydrofluorocarbon consumption allowances shall affect the application of, or any requirement of compliance with, any other provision of law by any person.

(d) LIFETIME OF HYDROFLUOROCARBON CONSUMPTION ALLOWANCES.—Hydrofluorocarbon consumption allowances distributed by the Administrator and hydrofluorocarbon destruction allowances may be used for

compliance for a period of not more than 5 years after the calendar year for which the allowances are allocated.

(e) HYDROFLUOROCARBON CONSUMPTION ALLOWANCES FOR EACH CALENDAR YEAR.—The number of hydrofluorocarbon consumption allowances established and allocated by the Administrator for each of calendar years 2010 through 2050 shall be as follows:

Calendar year	***HFC consumption allowances (in million metric tons)***
2010	*300*
2011	*294*
2012	*289*
2013	*283*
2014	*278*
2015	*272*
2016	*267*
2017	*261*
2018	*256*
2019	*250*
2020	*245*
2021	*239*
2022	*234*
2023	*228*
2024	*222*
2025	*217*
2026	*206*
2027	*195*
2028	*184*
2029	*173*
2030	*162*
2031	*150*
2032	*139*
2033	*128*
2034	*117*
2035	*106*
2036	*95*
2037	*90*
2038	*90*
2039	*90*
2040	*90*
2041	*90*
2042	*90*
2043	*90*
2044	*90*

2045 ..... *90*
2046 ..... *90*
2047 ..... *90*
2048 ..... *90*
2049 ..... *90*
2050 ..... *90*

SEC. 10005. ALLOCATION OF HYDROFLUOROCARBON CONSUMPTION ALLOWANCES.

(a) IN GENERAL.—Not later than 90 days before the beginning of each applicable calendar year, the Administrator shall allocate the portion of the hydrofluorocarbon consumption allowances in the hydrofluorocarbon consumption allowance account that is available for allocation for that calendar year.

(b) ELIGIBLE ENTITIES.—

(1) IN GENERAL.—The Administrator shall allocate hydrofluorocarbon consumption allowances as described in paragraph (2) to entities that—

(A) were hydrofluorocarbon producers or hydrofluorocarbon importers during the period beginning on January 1, 2004, and ending on December 31, 2006; and

(B) are hydrofluorocarbon producers or hydrofluorocarbon importers on the date of enactment of this Act.

(2) DESCRIPTION OF ALLOCATION.—Hydrofluorocarbon consumption allowances shall be

allocated to entities described in paragraph (1) as follows:

(A) HYDROFLUOROCARBON PRODUCERS.—Each hydrofluorocarbon producer shall receive a quantity of hydrofluorocarbon allowances equal to the ratio that—

(i) a value equal to the difference between—

(I) the global warming potential-weighted average of 100 percent of the hydrofluorocarbon and 60 percent of the hydrochlorofluorocarbon produced in the United States, imported into the United States, or acquired in the United States by the hydrofluorocarbon producer during the period beginning on January 1, 2004, and ending on December 31, 2006; and

(II) the global warming potential-weighted average of 100 percent of the hydrofluorocarbon and 60 percent of the hydrochlorofluorocarbon that the producer exported or transferred to another producer of hydrofluorocarbons

in the United States during the period described in subclause (I); bears to

(ii) a value equal to the difference between—

(I) the total global warming potential-weighted average of 100 percent of the hydrofluorocarbon and 60 per cent of the hydrochlorofluorocarbon produced in or imported into the United States during the period described in clause (i)(I); and

(II) the global warming potential-weighted average of 100 percent of the hydrofluorocarbon and 60 per cent of the hydrochlorofluorocarbon exported from the United States during that period.

(B) HYDROFLUOROCARBON IMPORTERS.—Each hydrofluorocarbon importer shall receive a quantity of hydrofluorocarbon allowances equal to the ratio that—

(i) the global warming potential-weighted average of 100 percent of hydrofluorocarbon and 60 percent of hydrochlorofluorocarbon imported by the

hydrofluorocarbon importer as a product or contained in equipment during the period beginning on January 1, 2004, and ending on December 31, 2006; bears to

(ii) a value equal to the difference between—

(I) the total global warming potential-weighted average of 100 percent of the hydrofluorocarbon and 60 per cent of the hydrochlorofluorocarbon produced in and imported into the United States during the period described in clause (i); and

(II) the global warming potential-weighted average of 100 percent of the hydrofluorocarbon and 60 per cent of the hydrochlorofluorocarbon exported from the United States during that period.

(c) WITHHOLDING ALLOWANCES.—

(1) IN GENERAL.—For calendar year 2010 and each calendar year thereafter, the Administrator shall withhold a quantity of hydrofluorocarbon consumption allowances that would otherwise be allocated under subsection (b) for auction at least annually by

the Corporation to the entities identified in subsection (b)(1).

(2) AUCTIONS BY CORPORATION.—For each applicable calendar year, the Administrator shall withhold, and the Corporation shall auction to the entities identified in subsection (b)(1), the following quantities of the hydrofluorocarbon consumption allowances established under section 10004:

Calendar year	***Percent withheld for auction***
2010	*5*
2011	*10*
2012	*10*
2013	*10*
2014	*15*
2015	*20*
2016	*25*
2017	*30*
2018	*35*
2019	*40*
2020	*45*
2021	*50*
2022	*55*
2023	*60*
2024	*65*
2025	*70*
2026	*75*
2027	*80*
2028	*85*
2029	*90*
2030	*95*
2031	*100*
2032	*100*
2033	*100*
2034	*100*
2035	*100*
2036	*100*
2037	*100*
2038	*100*
2039	*100*
2040	*100*
2041	*100*
2042	*100*
2043	*100*
2044	*100*

2045 100
2046 100
2047 100
2048 100
2049 100
2050 100

(3) PROCEEDS.—The Corporation shall award the proceeds of the auction to support the following purposes:

(A) A program to recover and destroy the maximum economically recoverable chlorofluorocarbons, halons, and other substances listed under title VI of the Clean Air Act (42 U.S.C. 7671 et seq.) that have significant ozone depletion potential and global warming potential.

(B) A program of incentives for consumer purchases of refrigeration and cooling equipment that—

(i) contains refrigerants with no or low global warming potential; and

(ii) achieves energy efficiency that represents at least a 30 percent improvement, as compared to the more efficient of—

(I) the applicable Federal energy efficiency standard; and

(II) the applicable Energy Star rating.

(C) A program to support the development and deployment of—

(i) hydrofluorocarbons with low global warming potential; and

(ii) energy efficient technologies, equipment, and products containing or using hydrofluorocarbons.

(D) The programs receiving auction proceeds under title IV.

SEC. 10006. COMPLIANCE OBLIGATION.

(a) SUBMISSION OF ALLOWANCES.—

(1) IN GENERAL.—Not later than 90 days after the end of each applicable calendar year, a hydrofluorocarbon producer or hydrofluorocarbon importer shall submit to the Administrator a quantity of hydrofluorocarbon consumption allowances, or hydrofluorocarbon destruction allowances awarded pursuant to section 10010, equal to the total number of global warming potential-weighted tons of hydrofluorocarbon consumed in the United States during the preceding calendar year by the hydrofluorocarbon producer or hydrofluorocarbon importer, as determined in accordance with paragraphs (2) and (3).

(2) HYDROFLUOROCARBON PRODUCERS.—For hydrofluorocarbon producers, the quantity of hydrofluorocarbon consumed shall be a value equal to the difference between—

(A) the global warming potential-weighted tons of hydrofluorocarbon produced in the United States, imported as a product, or acquired in the United States from another hydrofluorocarbon producer through sale or other transaction; and

(B) the global warming potential-weighted tons of hydrofluorocarbon the producer exported or transferred to another hydrofluorocarbon producer in the United States through sale or other transaction.

(3) HYDROFLUOROCARBON IMPORTERS.—For hydrofluorocarbon importers, hydrofluorocarbon consumed shall be a value equal to the global warming potential-weighted tons of hydrofluorocarbon imported by the hydrofluorocarbon importer or acquired in the United States from a hydrofluorocarbon producer through sale or other transaction.

(b) RETIREMENT.—Immediately on receipt of a hydrofluorocarbon consumption allowance or a hydrofluorocarbon destruction allowance under subsection (a), the Administrator shall retire the allowance.

(c) DETERMINATION OF COMPLIANCE.—Not later than July 1 of each year, the Administrator shall—

(1) determine whether each hydrofluorocarbon producer and hydrofluorocarbon importer achieved compliance with subsection (a) for the preceding year; and

(2) so notify each hydrofluorocarbon producer and hydrofluorocarbon importer.

(d) PENALTIES.—A hydrofluorocarbon producer or hydrofluorocarbon importer that is not in compliance with subsection (a), as determined under subsection (c), shall be liable for the payment of an excess consumption penalty as provided in section 1203, except that the deadlines described in this title shall be substituted for the deadlines described in that section.

SEC. 10007. SALE, EXCHANGE, AND OTHER USES OF HYDROFLUOROCARBON CONSUMPTION ALLOWANCES.

(a) PERMISSIBLE USES.—

(1) IN GENERAL.—A hydrofluorocarbon producer or hydrofluorocarbon importer may purchase, hold, sell, exchange, transfer, submit for compliance in accordance with section 10006, or retire hydrofluorocarbon consumption allowances or hydrofluorocarbon destruction allowances.

(2) ACTION ON RETIREMENT.—If any hydrofluorocarbon producer or hydrofluorocarbon importer permanently retires a hydrofluorocarbon consumption allowance, the Administrator shall promptly redistribute the allowance to another hydrofluorocarbon producer or hydrofluorocarbon importer pursuant to section 10005(b).

(b) PROHIBITIONS.—

(1) IN GENERAL.—Hydrofluorocarbon consumption allowances or hydrofluorocarbon destruction allowances shall not be traded or exchanged with allowances associated with any other emission allowance allocation or trading program under this Act.

(2) CERTAIN USES.—Hydrofluorocarbon consumption allowances shall not be used to achieve compliance with any other obligation relating to emissions of greenhouse gases regulated under any other provision of this Act, and emission allowances established and allocated under any other provision of this Act shall not be used to achieve compliance with this title.

(c) LIMITATION.—The privilege of purchasing, holding, selling, exchanging, transferring, and submitting for compliance in accordance with section 10006, and retiring hydrofluorocarbon consumption allowances or

hydrofluorocarbon destruction allowances shall be restricted to entities described in section 10005(b)(1).

SEC. 10008. ALLOWANCE TRANSFER SYSTEM.

(a) REGULATIONS.—Not later than 18 months after the date of enactment of this Act, the Administrator shall promulgate regulations to carry out the provisions of this title relating to hydrofluorocarbon consumption allowances and hydrofluorocarbon destruction allowances, including regulations providing that the transfer of those allowances shall not be effective until the date on which a written certification of the transfer, signed by a responsible official of each party to the transfer, is received and recorded by the Administrator in accordance with those regulations.

(b) TRANSFERS.—

(1) IN GENERAL.—The regulations promulgated under subsection (a) shall permit the transfer of hydrofluorocarbon consumption allowances prior to the allocation of the allowances.

(2) DEDUCTION AND ADDITION OF TRANSFERS.—A recorded preallocation transfer of hydrofluorocarbon consumption allowances shall be—

(A) deducted by the Administrator from the number of hydrofluorocarbon consumption allowances that would otherwise be allocated to the transferor; and

(B) added to those hydrofluorocarbon consumption allowances allocated to the transferee.

(c) ISSUANCE, RECORDING, AND TRACKING SYSTEM.—The regulations promulgated under subsection (a) shall include a system for issuing, recording, and tracking hydrofluorocarbon consumption and hydrofluorocarbon destruction allowances that shall specify all necessary procedures and requirements for an orderly and competitive functioning of the hydrofluorocarbon consumption allowance system.

SEC. 10009. BANKING AND BORROWING.

(a) BANKING.—A hydrofluorocarbon producer or hydrofluorocarbon importer that submits hydrofluorocarbon consumption allowances or hydrofluorocarbon destruction allowances to the Administrator to achieve compliance with section 10006 shall indicate in the identification number of the hydrofluorocarbon consumption allowance or hydrofluorocarbon destruction allowance the calendar year for which the allowance is submitted.

(b) BORROWING OF HYDROFLUOROCARBON CONSUMPTION ALLOWANCES.—In accordance with the regulations promulgated under section 10008(a), and subject to subsection (d), a hydrofluorocarbon producer or hydrofluorocarbon importer may—

(1) borrow hydrofluorocarbon consumption allowances from the Administrator; and

(2) for a calendar year, submit borrowed hydrofluorocarbon consumption allowances to the Administrator to satisfy not more than 15 percent of the compliance obligation under section 10006.

(c) LIMITATION ON BORROWING.—A hydrofluorocarbon consumption allowance borrowed under subsection (b) shall be a hydrofluorocarbon consumption allowance established by the Administrator for a specific subsequent calendar year under section 10004(g).

(d) TERM.—A producer or importer shall not submit, and the Administrator shall not accept, a borrowed hydrofluorocarbon consumption allowance in partial satisfaction of the compliance obligation under section 10006 for any calendar year that is more than 5 years before the calendar year included in the identification number of the borrowed hydrofluorocarbon consumption allowance.

(e) REPAYMENT OF INTEREST.—For any borrowed hydrofluorocarbon consumption allowance submitted in partial satisfaction of the compliance obligation under section 10006 for a particular calendar year (referred to in this subsection as the "use year"), the number of hydrofluorocarbon consumption allowances or hydrofluorocarbon destruction allowances that the

hydrofluorocarbon producer or hydrofluorocarbon importer is required to submit under section 10006 for the year from which the borrowed hydrofluorocarbon consumption allowance was taken (referred to in this subsection as the ''source year'') shall be increased by an amount equal to the product obtained by multiplying—

(1) 1.1; and

(2) the number of calendar years beginning after the use year but before the source year.

SEC. 10010. HYDROFLUOROCARBON DESTRUCTION ALLOWANCES.

(a) DESTRUCTION OF HYDROFLUOROCARBON.—

(1) IN GENERAL.—The Administrator shall issue hydrofluorocarbon destruction allowances to any hydrofluorocarbon producer or hydrofluorocarbon importer that performs or arranges for recovery and destruction of hydrofluorocarbon from products or equipment.

(2) ISSUANCE AND DENOMINATION.—Hydrofluorocarbon destruction allowances shall be issued on a global warming potential-weighted basis, denominated in terms of metric tons of carbon dioxide.

(3) LIMITATIONS.—

(A) BYPRODUCTS.—No hydrofluorocarbon destruction allowance shall be issued under this section for destruction of hydrofluorocarbon produced as a byproduct in a production process.

(B) CERTAIN PURPOSES.—No hydrofluorocarbon destruction allowance shall be issued under this section for destruction or recycling of hydrofluorocarbon produced for a purpose other than the ultimate sale and use of the product.

(b) REGULATIONS.—

(1) REQUIREMENT.—The regulations promulgated under section 10008(a) shall authorize the issuance of hydrofluorocarbon destruction allowances.

(2) CRITERIA.—Those regulations shall establish appropriate criteria for determining—

(A) the effectiveness of destruction;

(B) the net quantity of global warming potential-weighted hydrofluorocarbon that has been destroyed; and

(C) procedures for verification, registration, and issuance of hydrofluorocarbon destruction allowances.

(c) SATISFACTION OF REQUIREMENTS.—Beginning with calendar year 2012, a hydrofluorocarbon producer or

hydrofluorocarbon importer may satisfy a portion of the hydrofluorocarbon consumption allowance submission requirement under section 10006 by submitting hydrofluorocarbon destruction allowances generated in accordance with the regulations promulgated pursuant to section 10008(a).

(d) OWNERSHIP.—Initial ownership of a hydrofluorocarbon destruction allowance shall be held by the hydrofluorocarbon producer or hydrofluorocarbon importer that performs or arranges for recovery and destruction or recycling of hydrofluorocarbon, including hydrofluorocarbon from products or equipment containing hydrofluorocarbon, unless otherwise specified in a legally binding contract or agreement to which the hydrofluorocarbon producer or hydrofluorocarbon importer is a party.

(e) TRANSFERABILITY.—A hydrofluorocarbon destruction allowance generated pursuant to the regulations promulgated pursuant to subsection (b)—

(1) may be sold, traded, or transferred to any hydrofluorocarbon producer or hydrofluorocarbon importer referred to in section 10005(b); but

(2) shall not be sold, traded, transferred, or used for compliance with any other emission allowance requirement of this Act or any other law.

TITLE XI—AMENDMENTS TO CLEAN AIR ACT

SEC. 11001. NATIONAL RECYCLING AND EMISSION REDUCTION PROGRAM.

Section 608 of the Clean Air Act (42 U.S.C. 7671g) is amended—

(1) by redesignating subsections (a) through (c) as subsections (b) through (d), respectively;

(2) by inserting before subsection (b) (as so redesignated) the following:

"(a) DEFINITION OF HYDROFLUOROCARBON SUBSTITUTE.—In this section, the term 'hydrofluorocarbon substitute' means a hydrofluorocarbon—

"(1) with a global warming potential of more than 150; and

"(2) that is used in or for types of equipment, appliances, or processes that previously relied on class I or class II substances.";

(3) in subsection (b) (as so redesignated)—

(A) in the matter following paragraph (3), by striking "Such regulations" and inserting the following:

"(5) The regulations";

(B) by redesignating paragraph (3) as paragraph (4); and

(C) by inserting after paragraph (2) the following:

"(3)(A) Not later than 1 year after the date of enactment of the Lieberman-Warner Climate Security Act of 2008, the Administrator shall promulgate regulations establishing standards and requirements regarding the sale or distribution, or offer for sale and distribution in interstate commerce, use, and disposal of hydrofluorocarbon substitutes for class I and class II substances not covered by paragraph (1), including the use, recycling, and disposal of those hydrofluorocarbon substitutes during the maintenance, service, repair, or disposal of appliances and industrial process refrigeration equipment.

"(B) The standards and requirements established under subparagraph (A) shall take effect not later than 1 year after the date of promulgation of the regulations.";

(4) in subsection (c) (as so redesignated)—

(A) by redesignating paragraphs (1) through (3) as subparagraphs (A) through (C), respectively, and indenting the subparagraphs appropriately;

(B) by striking the subsection designation and heading and all that follows through "following—" and inserting the following:

"(c) SAFE DISPOSAL.—The regulations under subsection (b) shall—

"(1) establish standards and requirements for the safe disposal of class I and II substances and hydrofluorocarbon substitutes for those substances; and

"(2) include each of the following:";

(C) in subparagraph (A) (as redesignated by subparagraph (A)), by inserting "(or hydrofluorocarbon substitutes for those substances)" after "class I or class II substances"; and

(D) in paragraphs (2) and (3), by inserting "(or a hydrofluorocarbon substitutes for such a substance)" after "class I or class II substance" each place it appears.

SEC. 11002. SERVICING OF MOTOR VEHICLE AIR CONDITIONERS.

Section 609 of the Clean Air Act (42 U.S.C. 7671h) is amended—

(1) in subsection (b), by adding at the end the following:

"(5) The term 'hydrofluorocarbon substitute' means a hydrofluorocarbon—

"(A) with a global warming potential of more than 150; and

"(B) that is used in or for types of equipment, appliances, or processes that previously relied on class I or class II substances."; and

(2) in subsection (e)—

(A) by striking the subsection designation and heading and all that follows through "Effective" and inserting the following:

"(e) SMALL CONTAINERS OF CLASS I OR CLASS II SUBSTANCES AND HYDROFLUOROCARBON SUBSTITUTES.—

"(1) CLASS I OR CLASS II SUBSTANCES.—Effective beginning"; and

(B) by adding at the end the following:

"(2) HYDROFLUOROCARBON SUBSTITUTES.—Effective beginning January 1, 2010, it shall be unlawful for any person to sell or distribute, or offer for sale or distribution, in interstate commerce to any person (other than a person performing service for consideration on motor vehicle air-conditioning systems in compliance with this section) any hydrofluorocarbon substitute that is—

"(A) suitable for use in a motor vehicle air-conditioning system; and

"(B) in a container that contains less than 20 pounds of the hydrofluorocarbon substitute.".

SEC. 11003. CARBON DIOXIDE REDUCTION.

(a) FINDINGS.—Congress finds that—

(1) oil used for transportation contributes significantly to air pollution, including global warming pollution, water pollution, and other adverse impacts on the environment;

(2) to reduce emissions of global warming pollutants, the United States should increasingly rely on advanced clean fuels for transportation; and

(3) a comparison of life-cycle greenhouse gas emissions of conventional transportation fuels and low-carbon transportation fuels should be based on comparable fuels, such as a comparison of gasoline to gasoline and diesel fuel to diesel fuel.

(b) DEFINITIONS.—Section 211(o)(1) of the Clean Air Act (42 U.S.C. 7545(o)(1)) is amended—

(1) by redesignating subparagraphs (B), (C), and (D) as subparagraphs (J), (G), and (H), respectively, and moving those subparagraphs so as to appear in alphabetical order;

(2) by inserting after subparagraph (A) the following:

"(B) CULTIVATED NOXIOUS PLANT.—The term 'cultivated noxious plant' means a plant that is included on—

"(i) the Federal noxious weed list maintained by the Animal and Plant Health Inspection Service; or

"(ii) any equivalent State list.

"(C) FUEL EMISSION BASELINE.—The term 'fuel emission baseline' means the average lifecycle greenhouse gas emissions per unit of energy of conventional transportation fuels in commerce in the United States in calendar year 2008, as determined by the Administrator under paragraph (11).

"(D) FUEL PROVIDER.—

"(i) IN GENERAL.—The term 'fuel provider' means an obligated party (as described in section 80.1106 of title 40, Code of Federal Regulations (or a successor regulation)).

"(ii) INCLUSIONS.—The term 'fuel provider' includes, as the Administrator determines to be appropriate, an individual or

entity that produces, blends, or imports gasoline or any other transportation fuel in commerce in, or into, the United States.

"(E) GREENHOUSE GAS.—The term 'greenhouse gas' means any of—

"(i) carbon dioxide;

"(ii) methane;

"(iii) nitrous oxide;

"(iv) hydrofluorocarbons;

"(v) perfluorocarbons;

"(vi) sulfur hexafluoride; and

"(vii) any other emission or effect (such as particulate matter or a change in albedo) that the Administrator determines to be a significant factor in global warming as a result of the use of transportation fuel.

"(F) LIFECYCLE GREENHOUSE GAS EMISSIONS.—

"(i) IN GENERAL.—The term 'lifecycle greenhouse gas emissions' means, with respect to a transportation fuel, the aggregate quantity of greenhouse gases emitted per British thermal unit of fuel, as determined by the Administrator, from production through use of the fuel, as calculated to en-

sure that any nonrecurring emission is not amortized over a period of more than 20 years to ensure that required improvements in greenhouse gas emissions occur within that period.

"(ii) INCLUSIONS.—The term 'lifecycle greenhouse gas emissions' includes emissions associated with—

"(I) feedstock production (including direct and indirect land-use changes) or extraction;

"(II) feedstock refining;

"(III) distribution of a fuel; and

"(IV) use of a fuel."; and

(3) by inserting after subparagraph (H) (as redesignated by paragraph (1)) the following:

"(I) TRANSPORTATION FUEL.—The term 'transportation fuel' means fuel used to power motor vehicles, nonroad engines, or aircraft.".

(c) ADVANCED CLEAN FUEL PROGRAM.—Section 211(o) of the Clean Air Act (42 U.S.C. 7545(o)) is amended by adding at the end the following:

"(11) ADVANCED CLEAN FUEL PERFORMANCE STANDARD.—

"(A) STANDARD.—

"(i) IN GENERAL.—Not later than January 1, 2010, the Administrator shall, by regulation—

"(I) establish a methodology for use in determining the lifecycle greenhouse gas emissions of all transportation fuels in commerce;

"(II) determine the fuel emission baseline;

"(III) establish a transportation fuel certification and marketing process to determine the lifecycle greenhouse gas emissions of conventional transportation fuels and renewable fuels being sold or introduced into commerce in the United States that allows—

"(aa) for a simple certification using default values; and

"(bb) fuel providers to opt in to the use of a standardized certification tool that would provide verifiable and auditable greenhouse gas ratings for fuels of the providers through the use of additional, certified data;

"(IV) in accordance with clause (ii), establish a requirement applicable to each fuel provider to reduce the average lifecycle greenhouse gas emissions per unit of energy of the aggregate quantity of transportation fuel produced, blended, or imported by the fuel provider to a level that is, to the maximum extent practicable—

"(aa) by not later than calendar year 2011, at least equal to or less than the fuel emission baseline;

"(bb) by not later than calendar year 2015, 5 percent less than the fuel emission baseline; and

"(cc) by not later than calendar year 2020, 10 percent less than the fuel emission baseline; and

"(V) permit alternative reliable estimation methods to be used for the purpose of this clause during the first

5 years that the requirement described in subclause (IV) is in effect.

"(ii) AIR QUALITY IMPACTS.—For the purpose of this subparagraph, in the case of any air quality-related adverse lifecycle impact resulting from emissions from motor vehicles using renewable fuel, the Administrator shall ensure, by regulation promulgated under this title, that gasoline containing renewable fuel does not result in—

"(I) average per-gallon motor vehicle emissions (measured on a mass basis) of air pollutants in excess of those emissions attributable to gasoline sold or introduced into commerce in the United States in calendar year 2007; or

"(II) a violation of any motor vehicle emission or fuel content limitation under any other provision of this Act.

"(iii) CALENDAR YEAR 2025 AND THEREAFTER.—For calendar year 2025, and each fifth calendar year thereafter, the Administrator, in consultation with the

Secretary of Agriculture and the Secretary of Energy, shall revise the applicable performance standard to require that each fuel provider shall additionally reduce, to the maximum extent practicable, the average lifecycle greenhouse gas emissions per unit of energy of the aggregate quantity of transportation fuel introduced by the fuel provider into commerce in the United States.

"(iv) REVISION OF REGULATIONS.—In accordance with the purposes of the Lieberman-Warner Climate Security Act of 2008, the Administrator may, as appropriate, revise the regulations promulgated under clause (i) as necessary to reflect or respond to changes in the transportation fuel market or other relevant circumstances.

"(v) METHOD OF CALCULATION.—In calculating the lifecycle greenhouse gas emissions of hydrogen or electricity (when used as a transportation fuel) pursuant to clause (i)(I), the Administrator shall—

"(I) include emissions resulting from the production of the hydrogen or electricity; and

"(II) consider to be equivalent to the energy delivered by 1 gallon of ethanol the energy delivered by—

"(aa) 6.4 kilowatt-hours of electricity;

"(bb) 132 standard cubic feet of hydrogen; or

"(cc) 1.25 gallons of liquid hydrogen.

"(vi) BEST AVAILABLE SCIENCE.—In carrying out this paragraph, the Administrator shall use the best available scientific and technical information to determine the lifecycle greenhouse gas emissions of transportation fuels derived from—

"(I) planted crops and crop residue produced and harvested from agricultural land that—

"(aa) has been cleared and, if the land was previously wetland, drained before the date of enactment of this paragraph, and that is actively managed or fallow and nonforested; and

"(bb) is in compliance with a conservation plan that meets the standards, guidelines, and restrictions under subtitles B and C of chapter 1 of subtitle D of title XII of the Food Security Act of 1985 (16 U.S.C. 3831 et seq.);

"(II) planted trees and tree residue from actively-managed tree plantations on non-Federal land that has been cleared and, if the land was previously wetland, drained before the date of enactment of this paragraph;

"(III) animal waste material, and animal byproducts;

"(IV) slash and pre-commercial thinnings from non-Federal forestland other than—

"(aa) old-growth forest or late successional forest; and

"(bb) ecological communities with a global or State ranking of critically imperiled, imperiled, or rare pursuant to a State natural heritage program;

"(V) biomass obtained from the immediate vicinity of buildings and other areas regularly occupied by individuals, or of public infrastructure, that is at risk from wildfire;

"(VI) algae;

"(VII) separated food waste or yard waste;

"(VIII) electricity, including the entire lifecycle of the fuel;

"(IX) 1 or more fossil fuels, including the entire lifecycle of the fuels; and

"(X) hydrogen, including the entire lifecycle of the fuel.

"(vii) EQUIVALENT EMISSIONS.—In carrying out this paragraph, the Administrator shall consider transportation fuel derived from cultivated noxious plants, and transportation fuel derived from biomass sources other than those sources described in clause (vi), to have emissions equivalent to the greater of—

"(I) the lifecycle greenhouse gas emissions; or

"(II) the fuel emission baseline.

"(B) ELECTION TO PARTICIPATE.—An electricity provider may elect to participate in the program under this section if the electricity provider provides and separately tracks electricity for transportation through a meter that—

"(i) measures the electricity used for transportation separately from electricity used for other purposes; and

"(ii) allows for load management and time-of-use rates.

"(C) CREDITS.—

"(i) IN GENERAL.—The regulations promulgated to carry out this paragraph shall permit fuel providers to receive credits for achieving, during a calendar year, greater reductions in lifecycle greenhouse gas emissions of the fuel provided, blended, or imported by the fuel provider than are required under subparagraph (A)(i)(IV).

"(ii) METHOD OF CALCULATION.—The number of credits received by a fuel provider as described clause (i) for a calendar year shall be calculated by multiplying—

"(I) the aggregate quantity of fuel produced, distributed, or imported by the fuel provider in the calendar year; and

"(II) the difference between—

"(aa) the lifecycle greenhouse gas emissions of that quantity of fuel; and

"(bb) the maximum lifecycle greenhouse gas emissions of that quantity of fuel permitted for the calendar year under subparagraph (A)(i)(IV).

"(D) COMPLIANCE.—

"(i) IN GENERAL.—Each fuel provider subject to this paragraph shall demonstrate compliance with this paragraph, including, as necessary, through the use of credits banked or purchased.

"(ii) NO LIMITATION ON TRADING OR BANKING.—There shall be no limit on the ability of any fuel provider to trade or bank credits pursuant to this subparagraph.

"(iii) USE OF BANKED CREDITS.—A fuel provider may use banked credits under

this subparagraph with no discount or other adjustment to the credits.

"(iv) BORROWING.—A fuel provider may not borrow credits from future years for use under this subparagraph.

"(v) TYPES OF CREDITS.—To encourage innovation in transportation fuels—

"(I) only credits created in the production of transportation fuels may be used for the purpose of compliance described in clause (i); and

"(II) credits created by or in other sectors, such as manufacturing, may not be used for that purpose.

"(E) NO EFFECT ON STATE AUTHORITY OR MORE STRINGENT REQUIREMENTS.—Nothing in this subsection—

"(i) affects the authority of a State to establish, or to maintain in effect, any transportation fuel performance standard or other similar standard that is more stringent than a standard established under this paragraph; or

"(ii) supercedes or otherwise affects any more stringent requirement under any other provision of this Act.".

(d) WATER QUALITY PROTECTION.—Section 211(c)(1) of the Clean Air Act (42 U.S.C. 7545(c)(1)) is amended—

(1) by striking "nonroad vehicle (A) if in the judgment of the Administrator" and inserting the following: "nonroad vehicle—

"(A) if, in the judgment of the Administrator, any fuel or fuel additive or";

(2) by striking ", or (B) if" and inserting the following: "; or

"(B) if"; and

(3) in subparagraph (A), by striking "air pollution which" and inserting "air pollution or water pollution (including any degradation in the quality of groundwater) that".