Pew Center Summary of the American Power Act of 2010 (Kerry-Lieberman)

This document provides a section-by-section analysis of the American Power Act of 2010 as released in discussion draft form on May 12, 2010. Some details of the discussion draft are not yet finalized, and in this summary those details appear in brackets.

Contents

Sec. 1. Short title; table of contents.

This section titles the bill the "American Power Act" and provides a table of contents.

Sec. 2. Findings.

This section states the findings of Congress on the role of clean energy and energy efficiency in U.S. competitiveness, health, environment, and national security; the potential global impacts of climate change; and other benefits of clean energy.

Sec. 3. Definitions.

This section provides definitions for terms in this Act.

TITLE I—DOMESTIC CLEAN ENERGY DEVELOPMENT

Subtitle A—Nuclear Power

Sec. 1001. Statement of policy.

This section states that it is U.S. policy to facilitate the continued development and growth of a safe nuclear energy industry by reducing financial and technical barriers and providing financial incentives.

PART I—ENCOURAGING DOMESTIC NUCLEAR POWER GENERATION

Sec. 1101. Improvements regarding efficiency of regulatory process.

This section requires the Nuclear Regulatory Commission (NRC), as soon as practicable, to establish and implement an expedited procedure for issuing combined construction and operating licenses for new nuclear reactors that meet certain requirements, including construction on the site of an existing reactor and assured financing. Not later than 90 days after the enactment of this Act, the NRC shall submit to Congress a report with recommendations for such an expedited procedure.

Not later than one year after the data of enactment, the NRC shall submit to Congress a report outlining a technology-neutral approach for licensing new reactors in the future to allow for a more seamless entry of new technologies into the marketplace.

The section also requires that the NRC execute the required changes without in any way detracting from public health and safety.

Sec. 1102. Title 17 innovative technology loan guarantee program.

This section increases the total loan principal that can be guaranteed under the Department of Energy's (DOE) Title XVII Loan Guarantee Program from $47 to $100 billion and increases the portion of which can be used for nuclear loan guarantees from $18.5 to $54 billion.

This section also amends Energy Policy Act of 2005's Title XVII Loan Guarantee Program to create a loan guarantee retention fee for nuclear facilities such that nuclear facilities receiving a DOE loan guarantee will pay an escalating retention fee (calculated as an increasing percentage of the amount of the loan guarantee that will reach five percent 10 years after the completion of construction of a nuclear plant) starting five years after construction is completed.

Sec. 1103. Standby support for certain nuclear plant delays.

This section adds definitions for terms used in the Energy Policy Act of 2005 related to the standby support program that provides insurance in the event of new nuclear plant delays. This section also expands the number of reactors eligible for such standby support from six (as established in the Energy Policy Act of 2005) to 12. Moreover, the standby support program is amended to cover 100 percent of covered costs of delays up to $500 million per reactor (the Energy Policy Act of 2005 limited support to $500 million each for the first two reactors and 50 percent of covered costs of delay up to $250 million each for the next four).

This section also requires the NRC to provide quarterly reports to Congress on the status of nuclear licensing proceedings as well as biannual reports with recommendations for amending laws and regulations to remove barriers to expeditious review of licensing applications.

Sec. 1104. Spent fuel recycling research and development center of excellence.

This section directs the Secretary of Energy to designate one of the National Laboratories as a center of excellence for spent nuclear fuel recycling research and development. The center of excellence will serve as the lead site for research and development with the goal of reducing the quantity of nuclear waste requiring disposal or storage and protecting against nuclear proliferation.

Sec. 1105. Permits and licenses; hearings and judicial review; adjudicatory hearing.

This section amends the Atomic Energy Act of 1954 to make several changes to the requirements and conditions of the nuclear reactor licensing process related to hearings and judicial review.

Sec. 1106. Continuation of service.

This section allows a member of the Nuclear Regulatory Commission to serve past the expiration of the member’s appointment (but not later than the end of the session of Congress that commences after the member’s appointment expires) until a new replacement member has started his or her term of service.

Sec. 1107. Nuclear energy research initiative.

This section amends the nuclear energy research program provision of the Energy Policy Act of 2005 by instructing the Secretary of Energy to conduct research related to modular and small-scale reactors, balance-of-plant issues, cost-efficient manufacturing and construction, licensing issues, and enhanced proliferation controls. Not later than 180 days after enactment of this paragraph, the Secretary of Energy is required to publish a five-year strategy, developed with input from public workshops and subject to annual review and update by the Secretary, for lowering the cost of nuclear reactors. Finally, this section authorizes $50 million for each of fiscal years 2011 through 2015 for carrying out this research program.

Sec. 1108. Inspections, tests, analyses and acceptance criteria.

This section amends the Atomic Energy Act of 1954, to specify that, following the issuance of a combined operating and construction license for a nuclear reactor, the NRC will ensure that requirements for inspections, tests, and analyses are met.

Sec. 1109. Environmental reviews for nuclear energy projects.

This section amends the Atomic Energy Act of 1954 to instruct that environmental impact statements prepared as part of proceedings for combined operating and construction licenses for new nuclear reactors be prepared as supplements to any environmental impact statements already prepared for early site permits. Not later than 90 days from enactment of this subsection, the NRC is required to initiate a rulemaking to amend its regulations to reflect this change.

PART II—EXTENSION OF DUTY SUSPENSION FOR CERTAIN NUCLEAR PARTS

Sec. 1111. Suspension of duty on certain components used in nuclear facilities.

This section extends for ten years the suspension of import duty on certain imported components used in nuclear facilities.

PART III—TAX PROVISIONS

Sec. 1121. 5-year accelerated depreciation period for new nuclear power plants.

This section provides for five-year accelerated depreciation for new nuclear power plants (currently nuclear power plants are depreciated over 15 years).

Sec. 1122. Investment tax credit for nuclear power facilities.

This section adds the following to the Internal Revenue Code of 1986:

> **"Sec. 48E. Nuclear power facility construction credit.**

This section creates an investment tax credit for 10 percent of qualified nuclear power plant facility expenditures for plants placed in service before 2025. The investment tax credit does not apply to plants that qualify for the existing nuclear production tax credit.

Sec. 1123. Inclusion of nuclear power facilities in qualifying advanced energy project credit.

This section expands the advanced energy project credit (which allows for an investment tax credit of 30 percent for qualified investments) to include advanced nuclear power facilities.

Sec. 1124. Modification of credit for production from advanced nuclear power facilities.

This section modifies the existing production tax credit for new nuclear power plants brought online before 2021. This section increases the national limitation on capacity eligible for the full tax credit from 6,000 megawatts to 8,000 megawatts and creates a special rule to allow nuclear plants co-owned by public and non-public entities to make full use of the production tax credit by allowing the public entity to transfer to the non-public entity its tax credit allocation.

Sec. 1125. Treatment of qualified public entities with respect to private activity bonds.

This section allows tax-exempt bonds to be used for public-private partnerships for advanced nuclear power facilities.

Sec. 1126. Grants for qualified nuclear power facility expenditures in lieu of tax credits.

This section provides grants for qualified nuclear power facility expenditures in lieu of tax credits. The amount of the grant will be equal to ten percent of the qualified expenditures. Public power providers and cooperative electric companies are eligible for the grants. Appropriations as necessary are provided for this section.

Subtitle B—Offshore Oil and Gas

Sec. 1201. Findings and purposes.

This section provides the findings of Congress that domestic offshore production advances energy independence; traditional energy sources will continue to be necessary during a clean energy transition; the Deepwater Horizon spill demonstrates the need for clean energy; the spill illustrates the sensitivities of marine and coastal resources; the spill should be investigated; and funds should be dedicated for cleanup.

The purposes of this Act are to establish incentives to develop and deploy clean technologies and to consider: a moratorium on new offshore drilling until the cause of the spill is discovered and the Secretary of the Interior determines it is safe to continue drilling plans; enactment of sufficient liability mechanisms; enactment of precautionary safety measures; investments in preparedness ; studies of spill mitigation; enabling states to be able to veto drilling plans if they could suffer adverse impacts in the event of an accident; establishing revenue sharing with states for coastal protection and accident preparedness; and additional support to protect and restore oceans and coastal areas.

Sec. 1202. Revenue sharing from Outer Continental Shelf areas in certain coastal States.

This section amends Sec. 18 of the Outer Continental Shelf Lands Act to provide coastal states without current offshore oil or gas production 37.5 percent of any lease rental and royalty payments, royalty proceeds from royalties-in-kind, and other revenues from a bidding system.

The Secretary will give 20 percent of that share directly to certain coastal political subdivisions of that state within 300 miles of the geographic center of the leased tract in a manner inversely proportional to the distance. This section also distributes 12.5 percent of Federal royalty revenues (after coastal impact assistance funding is taken out) to the Land and Water Conservation Fund and the remaining 50 percent to deficit reduction. Revenues distributed from a planning area are limited to $500 million annually between 2011 and 2055.

Sec. 1203. Revenue sharing from areas in Alaska Adjacent zone.

This section amends Sec. 18 of the Outer Continental Shelf Lands Act to specify that 33 percent of revenues for the State of Alaska per Sec. 1202 are to be distributed to Alaska Native Corporations within 300 miles of the geographic center of the leased tract in a manner inversely proportional to the distance. Revenues distributed from the Alaska Adjacent Zone are limited to $500 million annually between 2011 and 2055.

Sec. 1204. Reservation of lands and rights.

This section allows a state to enact a law to prohibit leasing for oil and gas or natural gas within 75 miles of its coastline, and with that law allow a Governor to petition the Secretary of the Interior for removal of the state from the applicable five-year plan. The petition will be approved within 90 days.

Sec. 1205. Impact studies.

This section amends Sec. 12 of the Outer Continental Shelf Lands Act to require the Secretary, in consultation with relevant agencies, to prepare an assessment of the probability, potential coastal environmental impact, and potential economic impact on that state and neighboring states of an oil spill in a designated area subject to revenue sharing. If the assessment indicates that a state would be significantly impacted by a spill in areas identified by a five-year plan, the state may enact a law prohibiting oil and gas leasing in that area and no federal leases may be issued.

Subtitle C—Coal

PART I—NATIONAL STRATEGY FOR CARBON CAPTURE AND SEQUESTRATION

Sec. 1401. National strategy.

This section requires that not later than one year after enactment, the Environmental Protection Agency (EPA) Administrator, in consultation with the Secretaries of Energy and the Interior and other applicable federal agency heads, submit a report to Congress establishing a unified and comprehensive strategy to address the key legal, regulatory, and other barriers to the commercial-scale deployment of carbon capture and storage (CCS).

Moreover, this section expresses Congress's finding that it is in the public interest to achieve widespread, commercial-scale deployment of CCS in the United States and throughout Asia and other parts of the world before 2030.

Sec. 1402. Studies and reports.

This section requires a study of the legal framework for geological storage sites for sequestered carbon dioxide (CO_2) to be completed by a task force established by the Administrator and including representatives from the Departments of Interior, Energy, and Transportation as well as members from states, tribes, academia, and nongovernmental organizations. The task force's report must be submitted to Congress within 18 months of the date of enactment. The EPA Administrator is also required to submit a report to Congress within one year of the date of enactment regarding how existing environmental laws for which EPA is responsible apply to CO_2 injection and geological storage.

PART II—CARBON CAPTURE AND SEQUESTRATION DEPLOYMENT

Sec. 1411. Definitions.

This section defines the terms used in this part.

Sec. 1412. Special funding program for development and deployment of carbon capture, sequestration, and conversion technologies.

The Secretary of Energy shall establish, not later than one year after the date of enactment, a special funding program for carbon capture, sequestration, and conversion technologies if the state regulatory authorities (e.g., public utility commissions) of at least 30 states (counting the District of Columbia and Puerto Rico) approve of such a program. Such authorities are required to submit notification of their approval or disapproval within 180 days of enactment.

This section further authorizes the Secretary of Energy to collect assessments for ten years after the special funding program is established and to make funding awards for 15 years after the program's establishment. The Secretary of Energy is required to publish and submit to Congress an annual report on the programs and projects undertaken via the special funding program.

Sec. 1413. Carbon Capture and Sequestration Program Partnership Council.

This section requires the Secretary of Energy to establish and appoint the members of a Carbon Capture and Sequestration Program Partnership Council. This section sets requirements for the representation of different groups (e.g., investor-owned utilities, consumer groups) on the council and establishes rules for the council's functioning and membership. The role of the council is, among other enumerated activities, to advise, assist, consult with, and make recommendations to the Secretary of Energy and the director of the special funding program regarding the program and to review applications for grants and other transactions under the special funding program.

This section also requires the Secretary of Energy, in consultation with the council, to appoint a technical advisory committee to provide independent scientific review of applications to the special funding program.

Sec. 1414. Functions and administration of the special funding program.

This section specifies the functions and administration of the special funding program. The special funding program shall support projects to accelerate the commercial availability of carbon capture and sequestration (CCS) technologies and methods, including technologies that capture and convert carbon dioxide. In order to receive support from the special funding program, a project must be recommended to the Partnership Council by the technical advisory committee, and approved by the Council. The director of the special funding program is instructed to ensure that the program supports commercial-scale demonstration projects that advance technologies to commercial readiness, involve a variety of coal types and other fossil fuels, are geographically diverse, involve diverse sequestration media, and include technologies suitable for new builds as well as those for retrofits. The special funding program should fund projects that capture the carbon dioxide emissions from at least 10 gigawatts (GW) of fossil fueled electricity generation capacity. The special funding program cannot support projects of less than 100 megawatts (MW) and at least 80 percent of funds awarded must go to projects of at least 300MW.

Sec. 1415. Assessments and funding.

This section allows that for each of the ten fiscal years following the establishment of the special funding program, the Secretary of Energy shall collect an assessment on electric utilities for all fossil fuel-based electricity sold to consumers with the per kilowatt hour (kWh) assessment varying by fuel (as shown below).

Fuel	**Assessment rate per kilowatt hour**
Coal	$0.00145
Natural Gas	$0.00074
Oil	$0.00108

The Secretary may adjust the amount of the assessment so that the assessments generate between $2 and $2.1 billion per year.

Sec. 1416. ERCOT.

This section contains provisions to apply the assessment to the Electric Reliability Council of Texas.

Sec. 1417. Determination of fossil fuel-based electricity deliveries.

This section instructs the Secretary of Energy to work with the EPA Administrator and the Energy Information Administration (EIA) to develop regulations for determining the amount of electricity from the different fossil fuels that are delivered by each utility.

Sec. 1418. Compliance with assessments.

This section provides that the Secretary of Energy may bring a court action for noncompliance with the assessment levied by the Secretary.

Sec. 1419. Midcourse review.

This section requires the Comptroller General of the United States to submit a report to Congress evaluating and making recommendations regarding the special funding program, not later than five years after the establishment of the program.

Sec. 1420. Recovery of costs.

This section provides that rate-regulated utilities be allowed to recover the full amount of the costs incurred in complying with this part.

PART III—COMMERCIAL DEPLOYMENT OF CARBON CAPTURE AND SEQUESTRATION TECHNOLOGIES

Sec. 1431. Commercial deployment of carbon capture and permanent sequestration technologies.

This section adds the following section to Title VII of the Clean Air Act (as added by section 2101):

> **"Sec. 794. Commercial deployment of carbon capture and permanent sequestration technologies.**

This section requires, within two years of enactment, the Administrator to promulgate regulations providing for the distribution, from the allowances allocated under Sec. 781, of bonus emission allowances per ton of CO_2 captured and sequestered for the purpose of supporting the commercial deployment of carbon capture and permanent sequestration technologies in electric power generation and industrial operations. The allocated allowance value is intended to support the deployment of approximately 72 GW of total generating capacity coupled with CCS.

To qualify for support under this section, a CCS project at an electricity generating unit must be at a unit that uses coal and/or petroleum coke for at least half of its fuel, achieve an annual reduction in emissions of CO_2 of at least 50 percent, and capture CO_2 at a generator that is at least 200 MW in capacity (or, in the case of a retrofit project, must capture emissions from a portion of the flue gas or fuel gas stream from the equivalent of 200 MW of the generator's total capacity). Qualified projects must geologically sequester or otherwise convert CO_2 to a stable form that will safely and permanently sequester the carbon dioxide. Qualified industrial CCS projects must achieve at least a 50 percent reduction in emissions from sources that would otherwise emit at least 50,000 tons per year of CO_2. Industrial sources that produce liquid transportation fuel from solid fossil fuel feedstock are not eligible.

Phase I of the bonus allowance distribution program is intended to support the early deployment of CCS with 20 GW of electricity generation capacity. Bonus allowances will be awarded according to a specified formula equivalent to fixed dollar per ton CO_2 captured and sequestered where the fixed dollar amounts are a function of the rate of capture and the timing of the project's deployment. Phase I includes a first and second tranche of bonus allowances each of which will support 10 GW of electricity capacity coupled with CCS, with the first tranche offering bonus allowances per ton of CO_2 captured and sequestered equivalent to $50-96 for capture rates of 50 to 90 percent and the second tranche offering bonus allowances per ton of CO_2 captured and sequestered equivalent to $50-85 for capture rates of 50 to 90 percent. A project that notifies the Administrator before 2012 of its intent to deploy CCS and that comes online before 2017 can receive a subsidy rate that is $10 higher per ton than the previously specified amounts.

Phase II of the bonus allowance distribution program shall be administered as a reverse auction with one reverse auction for industrial projects and another for electricity generation projects that has up to five project categories that vary based on such factors as coal type. If the Administrator determines that a reverse auction program will not result in efficient and cost-effective CCS deployment, the Administrator may establish an alternative bonus allowance distribution method. Under the alternative distribution method for Phase II, the Administrator shall establish multiple tranches of bonus allowances each of which would support deployment of CCS with up to 10 GW of electricity generation capacity and within which bonus allowances will be awarded on a first-come, first-served basis using a sliding payment scale that varies with the level of capture. Moreover, the effective dollar per ton of CO_2 captured and sequestered payment level (in the form of bonus allowances) shall decline with each subsequent tranche. Under this alternative bonus allowance distribution method, the Administrator may define bonus allowance rates that vary by coal type and other factors.

In both Phases I and II, the Administrator shall adjust the bonus allowances awarded to a CCS project to reflect the lower cost of projects that also incorporate enhanced hydrocarbon recovery using the captured CO_2.

Eligible projects will receive emission allowances for each of the first 10 calendar years of their commercial operation.

For electricity generators that receive bonus allowances under Phases I and II of the allowance distribution program, those units that were initially permitted between 2009 and 2014 have the number of bonus allowances that they would otherwise be eligible to receive reduced by 20 percent for each year that elapses between (1) the earlier of their first year of operation and 2020 and (2) the year that they first capture and sequester at least 50 percent of their carbon dioxide. Eligible electricity generators initially permitted after 2014 are ineligible for bonus allowances if they do not capture at least 50 percent of their carbon dioxide from commencement of operation.

The Administrator shall distribute not more than 15 percent of allowances allocated for this section to industrial CCS projects. Bonus allowances for industrial projects shall be awarded based on regulations developed by the EPA Administrator that may define a reverse auction or an incentive schedule.

The EPA Administrator shall reserve (on a first-come, first-served basis) allowances allocated for this section's bonus allowance program for projects that are certified to be eligible for bonus allowances and that meet specified criteria for certainty of construction and future operation. The Administrator may also provide an advanced distribution of bonus allowances (i.e., before a CCS project begins operation) in order to offset the incremental upfront costs of deploying CCS (e.g., incremental design, engineering, equipment, permitting, and land costs).

Sec. 1432. Carbon capture and sequestration deployment studies.

The section adds the following to Title VII of the Clean Air Act (as added by section 2101).

"Sec. 789. Carbon capture and sequestration deployment studies.

This section requires not later than the earlier of May 1, 2033, or the date that is one year after the EPA Administrator determines that allowances allocated for CCS bonus allowances are becoming insufficient to meet the goal of supporting deployment of 72 GW of generation capacity coupled with carbon capture, the Comptroller General of the United States (GAO) shall conduct and complete a study on the state of CCS technology, barriers to its deployment, and recommendations for addressing such barriers. Based on this study, the Secretary of Energy may increase the total number of allowances allocated for bonus allowances for a given year by up to 2.5 percent of the total pool of emission allowances, with the allowances taken from the Universal Trust Fund allocation.

PART IV—PERFORMANCE STANDARDS

Sec. 1441. Performance standards for coal-fired power plants.

This section amends the Clean Air Act (as amended by Sec. 2001) by adding at the end the following:

"TITLE VIII—GREENHOUSE GAS STANDARDS

"Sec. 800. Definitions.

This section defines the terms of this Title as being the same as in Title VII, except for "stationary source."

"Sec. 801. Performance standards for new coal-fired power plants.

This section sets performance standards for electric generating units (EGUs) that derive at least 30 percent of their annual heat input from coal, petroleum coke, or a combination thereof, and requires the Administrator to promulgate necessary regulations within two years. An EGU permitted on or after January 1, 2020, is required to achieve an emission limitation of at least a 65 percent reduction of annual CO_2 emissions. An EGU that was initially permitted from January 1, 2009 to December 31, 2019 is required to achieve an emission limitation of at least a 50 percent reduction of annual CO_2 emissions. Compliance with these standards will be required by the earlier of: January 1, 2020; or the date four years after the Administrator has published a report that there are at least three commercially-operating EGUs with a total of 10GW of capacity (at least 3GW through EGUs and up to 1GW through industrial sources) capturing and sequestering at least 12 million tons of CO_2 on an aggregate annualized basis in the United States.

This section directs the Administrator and the Secretary of Energy to jointly submit a review of the status of commercial deployment of CCS technology to Congress. That report will specify the number, size, geologic diversity, technological diversity and tonnage of units employing CCS. Based on this review, the compliance date of January 1, 2020 may be extended to January 1, 2022, if the Administrator and the Secretary submit a joint recommendation with the review and it is approved by Congress by January 1, 2018. Unit-specific extensions of the compliance deadline may also be made for up to 18 months if the Administrator makes a determination, based on a showing by the owner or operator of an EGU submitted by June 1, 2018, that it will be technically infeasible for the covered EGU to meet the standard by that date.

As soon as compliance for this section begins, and at least once every five years thereafter, the Administrator will review the standards for new covered EGUs under this section and, by rule, reduce the maximum CO_2 emissions to reflect the degree of limitations achievable through the best system of emission reduction that the Administrator determines has been adequately demonstrated.

Not later than 18 months after enactment of this title and semiannually thereafter, the Administrator is required to publish a report on the nameplate capacity of commercially-operating units in the United States equipped with CCS technology.

"Sec. 802. Coal-fueled fleet transition program.

This section promotes and accelerates the transition of existing coal-fueled power plants to lower greenhouse gas (GHG) emissions and more energy- efficient technologies while recognizing the advanced planning and financial and regulatory incentives necessary to do so in a manner that maintains electric reliability. This section amends Sec. 168 of the Internal Revenue Code to provide for accelerated depreciation and an investment tax credit for replacements or retrofits of existing coal-fueled power plants.

Within 90 days of enactment, the Administrator is required to establish a task force of relevant federal, state, and local agencies, the electric generating sector, and NGOs to study: the effect of existing federal and state laws on the pace and extent of the transition of existing coal-fueled power plants to lower emission technologies; the effects on electric reliability and reduction of GHG emissions of an exemption from Secs. 111(d), 112, and 169(1) with regard to the installation of additional pollution controls at one or more EGUs; the effect of federal regulations currently under development for non-GHG air pollutant emissions from power plants on power plant emissions, national ambient air quality standards, and transitions to cleaner generation; how existing programs could be streamlined to reduce public health risks; financial incentives including tax incentives, the award of allowances for early closure or replacement of existing coal-fueled power plants, and regulatory changes that would accelerate retirement while addressing control of non-GHG air pollutants; and the effects of such incentives on employment and how adverse effects could be ameliorated.

The task force is required to submit the report to Congress within one year, and the Administrator, the Secretary of Energy, and the Secretary of the Treasury are required to publish a response to the report, including proposed changes to regulation or guidance to implement one or more of the recommendations of the report and promulgate regulations implementing these changes within a currently undetermined timeframe. Any permits or approvals for the authorization of projects covered in this section are to be expedited to the maximum extent practicable.

Subtitle D—Renewable Energy and Energy Efficiency

Sec. 1601. Renewable energy and energy efficiency.

This section emphasizes the importance of large-scale deployment of renewable energy and energy efficiency to achieving the purposes of the Act. It lists the following as necessary measures: mandates for the deployment of clean and renewable energy; innovative mechanisms to provide affordable funding for deployment of renewable technologies and other clean energy technologies; transmission provisions to allow electricity to flow freely from areas of great renewable energy potential to load centers; improved building codes; and improved appliance standards.

Sec. 1602. Rural energy savings program.

The section amends Subtitle D of the Consolidated Farm and Rural Development Act by adding the following:

"Sec. 366. Rural energy savings program.

The section authorizes the Secretary of Agriculture to make loans to public power districts, public utility districts, or similar entities, or any electric cooperative that has repaid, prepaid or is paying an electric loan guaranteed by the Rural Utilities Service to make loans to qualified consumers for implementing energy efficiency measures. Measures are defined as structural improvements and investments in cost-effective, commercial off-the-shelf technologies to reduce home energy use for or at a property served by the eligible utility entity. Loans to qualified consumers will have terms of: a maximum 3 percent interest rate; a term that is not more than 10 years (in order not to impose undue financial burden on the qualified consumer); measures are limited to changes in fixtures to real property or a manufactured home (e.g., not an appliance); repayment will be through additional charges to the electric bill; and an energy audit to determine the impact of the energy efficiency measures will be required.

The section directs the Administrator to distribute allowances allocated pursuant to Sec. 781 of the Clean Air Act in accordance with this section for years 2012 through 2015. The section requires the Secretary of Agriculture to enter into agreements with eligible entities to establish energy efficiency loan demonstration projects within 90 days of enactment. There are authorized to be appropriated to carry out this section such sums as necessary.

Sec. 1603. Support of State renewable energy and energy efficiency programs.

The section directs the Administrator to distribute allowances allocated pursuant Sec. 781 of the Clean Air Act in accordance with this section for years 2012 through 2021. Indian tribes will receive 0.5 percent on a competitive basis, to carry out renewable energy and efficiency programs. The rest of the allowances will be allotted to states as follows: one-third will be divided equally among states, one-third will be distributed based on population, and one-third will be distributed based on energy consumption.

The allowances shall be used to implement programs related to building codes that improve energy efficiency; energy efficient manufactured homes; building energy performance labeling; low-income community energy efficiency improvements; and energy efficiency retrofits of existing buildings. The allowances shall also be used for renewable energy purposes including deployment of technologies to generate electricity from renewable sources and for facilities or equipment to generate electricity or thermal energy from renewable sources in or on buildings in urban areas. The allowances shall also be used for cost-effective energy efficiency programs for end-use consumers of electricity, natural gas, home heating oil or propane. Allowance shall also be used for enabling the development of a Smart Grid for State, local government, and other public buildings and facilities. States cannot use more than ten percent of these allowances to provide the non-Federal share of support for surface transportation capital projects.

States are required to submit reports every two years detailing the use of these allowances, and are subject to penalties (in the form of withheld allowances) if they fail to use their received allowances for the purposes specified in this section.

Sec. 1604. Voluntary renewable energy markets.

This section emphasizes the importance of the voluntary renewable energy markets and states that nothing in this Act is intended to interfere with or prevent the continued operation and growth of these markets. The section directs the Comptroller General of the United States to submit a report within two years of enactment on the efficacy of the voluntary renewable energy market in relation to the pollution reduction and investment programs under the Act.

Subtitle E—Clean Transportation

PART I—ELECTRIC VEHICLE INFRASTRUCTURE

Sec. 1701. National transportation low-emission energy plan; pilot program.

This section requires the Secretary of Energy to develop a plan to determine near- and long-term needs of plug-in electric vehicle (PEV) refueling infrastructure including identifying standards. The DOE shall set an aspirational goal of strategic deployment of PEV infrastructure by 1/1/2020. The Secretary shall also examine the feasibility of Level III charging system for PEVs.

The Secretary shall execute a PEV pilot project in strategic regions, including at least one rural area and one focused on freight, using grants and other financial incentives funded through Clean Vehicle Technology Fund.

PART II—TRANSPORTATION EFFICIENCY

Sec. 1711. Greenhouse gas emission reductions through transportation efficiency.

This section amends Title VIII of the Clean Air Act (as amended by Sec. 1441) to include the following:

"Sec. 803. Greenhouse gas emission reductions through transportation efficiency.

This section requires the Administrator, in consultation with the Secretary of Transportation to direct states, metropolitan planning organizations (MPOs), and air quality agencies to promulgate regulations within 18 months to reduce surface transportation-related emissions including targets and strategies. The Secretary of Transportation shall also set national GHG reduction goals for transportation commensurate with overall goals defined in the Act. The DOT is responsible for assessment, communication, and coordination for national, state, and regional efforts including standardized emissions models and publication of successful strategies. The criteria for MPO and state programs include total GHG emission reductions, GHG emission reductions per capita, historical achievements, increases in mobility, and cost-effectiveness.

Sec. 1712. Investing in transportation greenhouse gas emission reduction programs.

This section allocates 33 percent of allowances for transportation as per Sec. 781(f)(3) (up to $1.875 billion) for investing in transportation GHG reduction programs; up to 10 percent of these allowances are for MPOs to develop plans and strategies and the remainder is for general support of states and MPOs for these programs.

PART III—HIGHWAY TRUST FUND

Sec. 1721. Augmenting the Highway Trust Fund.

This section amends Part G of title VII of the Clean Air Act (as amended by Sec. 3102) by inserting after Sec. 784 the following:

"Sec. 785. Highway Trust Fund.

This section allocates 33 percent of allowances for transportation as per Sec. 781(f) (up to $2.5 billion) to the Highway Trust Fund for safety, effectiveness, and efficiency of transportation through measures that include GHG emission reductions as defined in Sec. 803.

Subtitle F—Clean Energy Research and Development

Sec. 1801. Clean energy technology research and development.

This section provides continuing support for research and development (R&D) activities that will enhance U.S. security through: reductions of energy imports from foreign sources; reductions of energy-related pollution; and energy efficiency improvements in one or more economic sectors, while promoting U.S. leadership in the development and deployment of advanced energy technologies.

Clean energy technology is defined as technology that produces energy from solar, wind, geothermal, biomass, tidal, wave, ocean or other renewable energy resources, or nuclear energy; more efficiently transmits, distributes or stores energy or reduces energy emissions or other pollution; enhances building, industry, or manufacturing process efficiency; enables the development of the Smart Grid described in Sec. 1301 of Energy Security and Independence Act of 2007; produces an advanced or sustainable material with an energy or energy efficiency application; enhances water security; and improves energy efficiency of transportation.

Allowances for clean energy technology will be distributed on a competitive basis to higher education institutions, companies, research foundations, trade and industry research collaborations, consortia of such entities, or other appropriate R&D entities, taking into account the goals of Advanced Research Projects Agency – Energy.

The Secretary is responsible for assessing the success of programs under this section and terminating those programs that are not achieving their stated goals.

TITLE II—GREENHOUSE GAS POLLUTION REDUCTION

Subtitle A—Reducing Greenhouse Gas Pollution

Sec. 2001. Reducing greenhouse gas pollution.

This section amends the Clean Air Act by adding the following to the end:

"TITLE VII—GREENHOUSE GAS POLLUTION REDUCTION AND INVESTMENT PROGRAM

"PART A—GREENHOUSE GAS POLLUTION REDUCTION TARGETS

"Sec. 701. Findings.

This section provides Congressional findings that climate change poses a significant threat to the national security, economy, public health and welfare, and environment of the United States and other countries; scientific studies find climate change is anthropogenic; all emission increments contribute to climate change; controlling large and small sources is essential; climate change injures people in the United States as a group and individually; lack of certainty of risks does negate harm to people; other countries look to the United States for climate leadership; full implementation of this title is necessary to mitigate risks; and climate risks will get even larger unless this title is fully implemented and enforced expeditiously.

"Sec. 702. Economy-wide reduction goals.

This section establishes the goals of this Title as economy-wide reductions of U.S. GHG emissions to:

- 95.25 percent of 2005 levels by 2013
- 83 percent of 2005 levels by 2020
- 58 percent of 2005 levels by 2030
- 17 percent of 2005 levels by 2050

"Sec. 703. Reduction targets for specified sources.

This section establishes the limit for capped sources for each calendar year beginning in 2013:

- 95.25 percent of 2005 levels by 2013
- 83 percent of 2005 levels by 2020
- 58 percent of 2005 levels by 2030
- 17 percent of 2005 levels by 2050

"Sec. 704. Supplemental pollution reductions.

This section allows funds made available through Sec. 5004 to be used to achieve reductions of GHG emissions from reduced deforestation in developing countries in addition to the reductions under this Title.

"Sec. 705. Review and program recommendations.

This section requires the Administrator, in consultation with appropriate federal agencies, to issue a report by July 1, 2013 and every four years thereafter including: an analysis of key specified scientific findings and data on global climate change; an analysis of capabilities to report, monitor, and verify aggregate GHG emissions and reductions worldwide and in the United States from covered entities, offsets, entities regulated by performance standards, and from sources and sinks; an analysis of the status of worldwide GHG reduction efforts and whether reductions will avoid GHG concentrations of 450 parts per million (ppm), a global temperature rise of 2 degrees Celsius, or other thresholds (this item is not included in the first report); and an analysis of the technological feasibility of achieving additional reductions of GHG emissions including consideration of key external reports, participation of technical experts, and technology reviews. Relevant recommended actions will be made in each section of the report, and appropriations for the reports as necessary are authorized.

"PART B—DESIGNATION AND REGISTRATION OF GREENHOUSE GASES

"Sec. 711. Designation of greenhouse gases.

This section defines which gases are regulated under the act as GHGs:

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Sulfur hexafluoride (SF_6);
- Hydrofluorocarbons (HFCs) from a chemical manufacturing process at an industrial stationary source;
- Any perfluorocarbon (PFC);
- Nitrogen trifluoride (NF_3); and

- Any other anthropogenic gas designated as a GHG by the Administrator.

The section also sets out the process by which the Administrator can designate another anthropogenic gas as a GHG, including the process by which any person can petition the Administrator to make such a designation. Gases regulated under Title VI (HFCs) would be exempt from this provision.

"Sec. 712. Carbon dioxide equivalent value of greenhouse gases.

This section sets the CO_2 equivalents of GHGs for the purposes of the bill as follows:

GHG (1 metric ton)	CO_2 equivalent (metric tons)
CO_2	1
Methane	25
Nitrous Oxide	298
HFC-23	14,800
HFC-125	3,500
HFC-134a	1,430
HFC-143a	4,470
HFC-152a	124
HFC-227ea	3,220
HFC-236fa	9,810
HFC-4310mee	1,640
CF_4	7,390
C_2F_6	12,200
C_4F_{10}	8,860
C_6F_{14}	9,300
SF_6	22,800
NF_3	17,200

The section also requires the Administrator, not later than February 1, 2017, and not less than every five years thereafter, to review and, if appropriate, revise the CO_2 equivalent (CO_2e) values established under this section.

"Sec. 713. Greenhouse gas registry.

This section requires the Administrator, not later than 6 months after enactment, to issue regulations establishing a federal GHG registry. All reporting entities are required to report their GHG emissions. Reporting entities include any entity that has emitted, produced, imported or delivered in 2008 or any subsequent year at the compliance threshold level of CO_2e for that entity. If the Administrator determines that it would help achieve the purposes of the Act the reporting threshold may be lowered. If for the same reasons the Administrator determines to include in the registry other entities or any vehicle fleet with emissions of more than 25,000 tons of CO_2e annually, or any other entity that emits a GHG at any level, then those entities may be designated “reporting entities” as well, and required to report their emissions. Entities that sell or deliver electricity to energy-intensive industrial facilities, refiners that receive allowance under Sec. 781, or producers or importers of liquid fuels the combustion of which would lead to the emission of more than 25,000 tons of CO_2e annually must also report.

The Administrator is required to take into account the best practices from the most recent federal, state, tribal, and international reporting protocols, including the protocols from the Climate Registry and other mandatory state or multistate authorized programs.

"Sec. 714. Perfluorocarbon and other nonhydrofluorocarbon fluorinated substance production regulation.

This section requires the Administrator, within one year of enactment, to determine, based on the maximum reductions possible, whether fluorinated gases emitted during the production of nonhydrofluorocarbon fluorinated substances should be regulated through the emission reduction program of Sec. 722, or separately under a best achievable performance standard that would be reviewed every two years.

"PART C—PROGRAM RULES

"Sec. 721. Emission allowances.

This section establishes the quantity of allowances for years 2013-2050.

Calendar Year	Emission allowances (in millions)
2013	4,722
2014	4,635
2015	4,548
2016	5,284
2017	5,417
2018	5,310
2019	5,202
2020	5,095
2021	4,941
2022	4,788
2023	4,634
2024	4,481
2025	4,327
2026	4,174
2027	4,021
2028	3,867

2029	3,714
2030	3,560
2031	3,434
2032	3,308
2033	3,183
2034	3,057
2035	2,931
2036	2,805
2037	2,679
2038	2,553
2039	2,428
2040	2,302
2041	2,176
2042	2,050
2043	1,924
2044	1,798
2045	1,673
2046	1,547
2047	1,421
2048	1,295
2049	1,169
2050 and each year thereafter	1,043

In addition, the section authorizes the Administrator to adjust the allowance schedule, based on the formula below, if the Administrator makes one or more of the following determinations:

- U.S. GHG emissions in 2005 were more or less than a level [yet to be determined];
- The types of entities covered by the cap-and-trade system in 2013 were responsible for more or less than [66.2%] of U.S. GHG emissions in 2005;
- The types of entities covered by the cap-and-trade system in 2016 were responsible for more or less than [84.5%] of U.S. GHG emissions in 2005.

- The section also directs the Administrator to promulgate—not later than 24 months after enactment—regulations for the establishment and distribution of compensatory allowances for the following activities:
  - The destruction, in 2013 or later, of fluorinated gases that are GHGs if emission allowances were retired for their production, and if their destruction was not required under any other provision of law;
  - The non-emissive use, in 2013 or later, of petroleum- or coal-based liquid or gaseous fuel, pet-coke, natural gas liquid, or natural gas as a feedstock, if emission allowances were retired for the GHGs that would have been emitted from their combustion; and

- The consumptive use, in 2013 or later, of fluorinated gases in a manufacturing process, including semiconductor research or manufacturing, if emission allowances were retired for the production of such gas.

The section also provides a sense of the Senate that the United States should pursue the development of a global framework for the regulation of GHG emissions from civil aircraft working through the International Civil Aviation Organization and with foreign governments. The Administrator, in consultation with the Administrator of the Federal Aviation Administration (FAA) and with the Secretary of State, may establish programs to distribute compensatory allowances for domestic and foreign purchasers, respectively, of domestic fuel used in foreign air transportation. It also requires the Administrators of EPA and FAA to submit a study and recommendations to Congress on the extent to which regulations are effectively and efficiently regulating the emission of GHGs by air carriers and foreign air carriers engaged in foreign air transport originating in the United States.

The section also directs the Administrator to complete an assessment by March 31, 2014, of the regulation of non-HFC fluorinated gases, and gives the Administrator authority to determine the most appropriate point of regulation for these compounds, at either the producer/importer level or at the downstream point of emissions.

"Sec. 722. Prohibition of excess emissions.

This section sets out the compliance obligations for covered entities under the cap-and-trade system.

The following covered entities (as defined in Sec. 700) are required to hold emission allowances as of April 1, 2014, for their previous year's GHG emissions:

- Electricity sources must hold one emission allowance for each ton of CO_2e emitted in the previous calendar year, excluding emissions resulting from the use of renewable biomass or gas derived from renewable biomass.
- Industrial gas producers and importers must hold 1 emission allowance for each ton of CO_2e of fossil-based carbon dioxide, nitrous oxide, or any other fluorinated gas that is a greenhouse gas (except for nitrogen trifluoride), or any combination thereof, produced or imported by such covered entity during the previous calendar year for sale or distribution in interstate commerce.
- Geological sequestration sites must hold 1 emission allowance for each ton of CO_2e emitted in the previous calendar year.
- R&D facilities must hold one emission allowance for each ton of CO_2e emitted during the previous calendar year.
- Algae-based fuel producers must hold allowances for CO_2 from another covered entity is used to grow the algae or for the CO_2 emitted from combustion of fuel produced from such algae, but not for both.

- Refined product providers must hold the number of emission allowances purchased from the Administrator through Sec. 729 during the 30-day period beginning at the end of each quarter.

The following sources are required to hold emission allowances as of April 1, 2017, for their previous year's GHG emissions:

- Nitrogen trifluoride sources (source (D) as defined in Sec. 700) must hold 1 emission allowance for each ton of CO_2e of nitrogen trifluoride that such entity emitted in the previous calendar year.
- Industrial stationary sources (sources (F), (G), or (H) as defined in Sec. 700) must hold 1 emission allowance for each ton of CO_2e emitted in the previous calendar year, excluding emissions resulting from the combustion or use of renewable biomass, gas derived from renewable biomass, or any fluorinated gas that is a GHG purchased for use at that covered entity, except for nitrogen trifluoride.
- Industrial fossil fuel-fired combustion devices (sources (I), as defined in Sec. 700) must hold 1 emission allowance for each ton of CO_2e emitted in the previous calendar year, excluding emissions resulting from the combustion of renewable biomass or gas derived from renewable biomass.

As of April 1, 2017, natural gas local distribution companies (LDCs) (sources (J), as defined in Sec. 700) must hold one emission allowance for each ton of CO_2e emitted from the combustion of the natural gas such entity delivered to customers in the previous calendar year to customers that are not covered entities, assuming no capture and sequestration of that GHG.

Fugitive emissions are not included except for where the value of such emissions can be provided with sufficient precision, reliability, accessibility, and timeliness to ensure the integrity of the scheme.

This section does not apply to fuels that are exported for sale or use. This section also states that the owner of natural gas liquids is subject to compliance if the refined product provider is not responsible for distribution. This section also states that not more than one allowance shall be required for the same emission if more than one paragraph applies to an entity.

Offsets

Covered entities are allowed to satisfy a percentage of their compliance obligations by using offset credits. This percentage is equal to 2 billion tons / (2 billion tons + prior year's cap) x 100.

The overall number of offsets that can be used for compliance is capped at 2 billion tons per year with up to 25 percent allowed from international sources. The Administrator may permit an increase in the number of international offsets to up to 1 billion tons if domestic supplies prove to be limited, but the overall 2 billion ton limit still applies. The President may recommend to Congress that the total number of allowable offsets be adjusted up or down.

Covered entities are permitted to demonstrate compliance by substituting an international offset credit in lieu of an emission allowance.

Covered entities are also permitted to use international emissions allowances (see Sec. 728) and compensatory allowances (see Sec. 721 above) in lieu of an emission allowance.

Among other provisions, this section also directs the Administrator—in 2020 and once every eight years thereafter—to review the CO_2e emissions coverage thresholds for covered entities in categories B, C, D, G, H, and I of Sec. 700(12). The Administrator has the authority, by rule, to lower the threshold to not less than 10,000 tons of CO_2e.

The Administrator is also ordered to carry out a program of education and outreach to assist covered entities and others about compliance with this title.

"Sec. 723. Penalty for noncompliance.

This section establishes the penalty for noncompliance as equal to the number of emission allowances the entity failed to hold by the deadline, multiplied by twice the fair market value of emission allowances issued for emissions occurring in the calendar year for which the emission allowances were due. In addition, the owner of a covered entity that fails to comply shall also be required to surrender, during the following year, emission allowances equal to the entity's excess emissions. In other words, if a covered entity emits a ton of CO_2e and doesn't surrender an allowance, it must pay a double penalty, and still has to surrender in the following year an allowance for those excess emissions in the prior year.

"Sec. 724. Trading.

This section says that anyone can sell, exchange, transfer, hold for compliance, or request retirement of an emission allowance, without restriction; these rights are not restricted to those entities that are required to comply with the Act. An allowance tracking system shall be established to facilitate the orderly functioning of allowance and offset credit markets, and appropriate information will be published on the Internet.

"Sec. 725. Banking and borrowing.

This section allows the full and unlimited banking of allowances, though the Administrator is given some authority to restrict that in the future if necessary.

The provisions for borrowing distinguish between borrowing for one year and borrowing for two to five years. Borrowing from more than five years in the future is not allowed. Unlimited next-year borrowing is allowed. A covered entity may use an allowance without any penalty (interest) to meet its compliance requirement for emissions in the calendar year immediately preceding the vintage year for the allowance. This section also allows entities to satisfy up to 15% of their compliance obligation with allowances borrowed from vintage years up to five years in the future. Entities must prepay interest on borrowed allowances at a rate obtained by multiplying 0.08 by the number of years between the calendar year in which the allowances are being used to satisfy a compliance obligation and the vintage year of the allowance.

"Sec. 726. Cost Containment Reserve.

This section requires the Administrator to establish a Cost Containment Reserve of 4 billion allowances, consisting of 1.5 percent of the allowances from each year 2013 to 2021, 2.5 percent from 2022 to 2029, 5 percent from 2030 to 2050, all allowances unsold prior to April 1 of the calendar year following the vintage year, and all Cost Containment Reserve allowances made available for sale but unsold.

Allowances from the Cost Containment Reserve will be sold starting in 2014 for the 90-day period ending on the date of compliance, and any entity may use Reserve allowances for up to 15 percent of compliance. Only covered entities may purchase Cost Containment Reserve Allowances. The price will be offered at $25 per allowance in 2013 and will increase at a rate of five percent plus the Consumer Price Index every year thereafter.

The Administrator is ordered to use proceeds from the sale of Cost Containment Reserve allowances for the purchase of international offsets, or domestic offsets if no international ones are available, at conversion rates of one Reserve allowance for 80 percent of each international offset retired and 100 percent of each domestic offset retired. Purchased offsets shall used to maintain the reserve at the threshold initially established by this section.

A covered entity may use a Cost Containment Reserve allowance only in the year in which it was sold, and may not bank allowances during the same year or purchase Cost Containment Reserve allowances within [90 days] of selling allowances or offsets.

"Sec. 727. Permits.

This section mandates that for any stationary sources covered by Title V of the Clean Air Act (CAA), compliance with obligations for GHG emission allowances is incorporated into those Title V permits. Any transfers of allowances will automatically amend Title V permits and not require additional administrative actions. EPA shall issue regulations to implement these permitting requirements and states and tribes shall submit revised permit programs for approval.

"Sec. 728. International emission allowances.

This section sets out the standards by which the Administrator may, by rule and in consultation with the Secretary of State, designate an international climate change program as a qualifying one, thereby enabling emission allowances from that system to be used to meet requirements in the system established by the Act.

An international program may qualify if it is run by a national or supranational foreign government, and imposes a mandatory absolute tonnage limit on GHG emissions from one or more foreign countries, or from one or more economic sectors in such a country or countries. The program must also be at least as stringent as the program established by the Act, including comparable monitoring, compliance, quality of offsets, and restrictions on the use of offsets.

The section further sets out provisions ensuring that international allowances used in the United States are appropriately retired from further use.

"Sec. 729. Compliance for transportation fuels and refined petroleum products.

This section requires refined product providers of transportation fuels, as defined in Sec. 700 (the title holder of the refined product inside a terminal and others), to purchase allowances from the allowances set aside in Sec. 790(f) in order to demonstrate compliance with the program. The price of allowances purchased from the set aside will be equal to the most recent auction clearing price for allowances, which the Administrator will announce 30 days before the start of the first quarter of 2013 and quarterly thereafter. Then, during the 30 days at the beginning of each quarter, each refined product provider will pay an amount to the Administrator equal to the announced price of allowances that quarter multiplied by the attributable GHG emissions of the refined production for which the provider is required to demonstrate compliance during that quarter, with the emissions factor for covered fuels established by the Administrator. The Administrator will then transfer the purchased allowances into the account of the refined product provider.

Allowances purchased in this manner may only be used by refined product providers for compliance for the preceding quarter and may not be traded, sold, banked, or borrowed. The Administrator is required to set aside and make available for purchases as many allowances in a quarter as are necessary for refined product provider compliance. Unsold allowances from the set aside that are not purchased by the end of the quarter will be offered for sale at auction the next quarter.

Not later than January 1, 2033, the Administrator, in consultation with the Secretary of Energy, will conduct a study to assess the compliance method in this section with respect to effectiveness, efficiency, fairness, and impact on emission reductions. Based on the study and other information, one year later, the Administrator, in consultation with the Secretary of Energy, will make a determination whether the compliance method in this section continues to be appropriate or should be modified through regulation. If the determination is that the method continues to be appropriate, a similar review must be conducted every five years thereafter.

This section also orders the Administrator (as part of the regulations required under Sec. 730) to determine whether, on average, at least 99.5 percent of annual GHG emissions from the emissive use of natural gas liquids, including the use of natural gas liquid for producing other types of refined product for combustion at covered entities, are covered by regulation under

Sec. 722 and to include other natural gas liquids in the regulatory definition of emissive natural gas liquids as necessary to ensure coverage.

"Sec. 730. Regulations.

This section requires the Administrator to promulgate regulations to carry out this title within two years of enactment. It also orders the Administrator to consult with states in the Western Climate Initiative, Regional Greenhouse Gas Initiative, the Midwest Governors Accord, and other states in developing regulations and implementing the emission reductions program in this title.

"PART D—OFFSET CREDIT PROGRAM FOR DOMESTIC EMISSION REDUCTIONS

"Sec. 731. Definitions.

This section defines the terms for this part. The "Advisory Committee" means the Greenhouse Gas Emission Reduction and Sequestration Advisory Committee" as established under Sec. 732(a)(1). The term "appropriate official" means the Secretary of Agriculture (Secretary) with respect to any domestic agriculture or forestry offset project, and the Administrator of the EPA (Administrator) with respect to all other offset projects. The term "emission reduction" means the reduction, avoidance, destruction, or sequestration of GHG emissions.

"Sec. 732. Advisory committee.

This section directs the Secretary and Administrator, not later than 60 days after enactment of this Act, to jointly establish the "Greenhouse Gas Emission Reduction and Sequestration Advisory Committee" to provide scientific and technical advice on the establishment and implementation of an offset program. This section also determines that the Advisory Committee shall be composed of not less than nine and not more than 15 individuals with relevant education, training and experience, selected jointly by the Secretary and Administrator.

The duties of the Advisory Committee include submitting reports on offset project types and on emission reduction integrity. The Advisory Committee is directed, not later than 180 days after it is established, to make available to the public a report containing recommendations regarding the types of offset project categories that should be considered eligible to generate offset credits and relevant scientific data regarding practices for those categories. In doing so the Advisory Committee is required to consider a variety of factors, including whether the activity is required by law or represents business-as-usual practices, availability of data, potential for accurate quantification of reductions, corresponding environmental impacts, and potential supply of reductions available.

The section also directs the Advisory Committee, not later than 240 days after it is established, to submit a report containing priority recommendations on how to ensure the emission integrity of the offsets including with regard to quantifying credits, determining additionality, accounting for leakage, accounting for uncertainty, methods to measure and verify project results, addressing reversals, and minimizing burdens on project representatives. If the final regulations differ from the recommendations of the Advisory Committee, the Secretary and Administrator must provide an explanation for the difference.

Not later than January 1, 2017, and every five years thereafter, the Advisory Committee must submit to the Administrator and Secretary and make publicly available an analysis of relevant scientific and technical information related to offsets. This includes a requirement to: review approved and potential methodologies, studies, project monitoring, verification reports, and audits; evaluate net emission effects of implemented offsets projects; and recommend changes to methodologies, protocols or project types, or to the overall offset program to ensure that the offsets do not compromise the integrity of the annual GHG limitations and avoid or minimize adverse effects to human health or the environment.

"Sec. 733. Establishment of domestic offsets program.

This section directs the Secretary and the Administrator, not less than 18 months after enactment of this Act, to establish a program to govern the creation of credits from emission reductions from uncapped domestic sources and sinks. The Administrator and Secretary are directed to promulgate regulations that: ensure that offsets are additional, measurable, verifiable, and enforceable emission reductions; authorize the issuance of offset credits with respect to qualifying projects that result in reductions; provide for implementation; and establish a process to accept and respond to public comments regarding the program.

The Administrator and Secretary are directed to protect emission reduction integrity while minimizing burdens on offset project representatives, prioritizing rulemaking for activities that present the fewest technical challenges and have the greatest certainty of net atmospheric benefit, and minimizing, to the maximum extent practicable, adverse effects on human health or the environment resulting from the implementation of offset projects.

The section also explicitly defines the Department of Agriculture's role to include, with respect to projects relating to emission reductions from agriculture and forestry: gathering data on carbon stocks and fluxes; administering as the lead agency the duties under Secs. 734, 735, 736, and 739 (which address eligibility, requirements, approval and audits and reviews) for agriculture and forestry projects; making available to landowners data and other information necessary to estimate carbon sequestration rates; making available technical assistance to landowners undertaking activities in preparation for the sale of carbon credits; providing training for third-party verifiers pursuant to Sec. 107; conducting outreach and training through land-grant colleges; and promulgating regulations necessary to carry out the functions of the Secretary under this part.

"Sec. 734. Eligible projects.

This section directs the appropriate official to establish and maintain a list of project types eligible to generate offset credits and provide an explanation for any differences between the list of eligible projects and the recommendations of the Advisory Committee. The appropriate officials are also directed to establish an initial list of project types, and they are to include on that list, at a minimum, activities that provide emission reductions, including:

- (A) Methane collection at mines, landfills, and natural gas systems;
- (B) Projects involving fugitive emissions from oil and gas sectors that would otherwise have been flared or vented;
- (C) Non-landfill projects involving collection, combustion, or avoidance of emissions from organic waste streams (including manure management, composting, anaerobic digesters);
- (D) Afforestation or reforestation of acreage not forested as of January 1, 2009;
- (E) Forest management resulting in increase in carbon stores, including harvested wood products;
- (F) Forest-based manufactured products;
- (G) Capturing and sequestering uncapped GHG emissions with or without enhanced oil recovery in active or depleted oil, carbon dioxide, natural gas reservoirs, or other geologic formations;
- (H) Recycling and waste minimization projects;
- (I) Abatement of production of nitrous oxide at nitric acid production facilities;
- (J) Biochar production and use;
- (K) Destruction of ozone-depleting substances that have been phased out of production;
- (L) Agricultural, grassland, and rangeland sequestration and management practices including—
  - (i) Altered tillage practices, including avoided abandonment of conservation practices;
  - (ii) Winter cover cropping, continuous cropping, and other means to increase biomass returned to soil;
  - (iii) Use of technology to improve management of nitrogen fertilizer use;
  - (iv) Reduction in methane emissions from rice cultivation;
  - (v) Reduction in carbon emissions from organically managed soils and farming practices used on certified organic farms;
  - (vi) Changes in animal management practices, including dietary modifications;
  - (vii) Resource-conserving crop rotations of at least 3 years; and
  - (viii) Practices that will increase the sequestration of carbon in soils on cropland, native and planted grazing land, grassland, etc.
- (M) Changes in carbon stocks attributed to land management change, including –
  - (i) Improved management or restoration of cropland, grassland, rangeland, and forestland;
  - (ii) Avoided conversion that would otherwise release carbon;
  - (iii) Reduced deforestation;
  - (iv) Management and restoration of peatland or wetland;
  - (v) Urban tree-planting, landscaping, greenway construction, and maintenance;

(vi) Sequestration of GHGs through management of tree crops;
(vii) Adaptation of plant traits or new technologies that increase sequestration by forests; and
(viii) Projects to restore or prevent the conversion, loss, or degradation of vegetated marine coastal habitats;

(N) Projects that reduce emissions from manure and effluent, including –
(i) Waste aeration;
(ii) Biogas capture and combustion; and
(iii) Improved management or application to agricultural land; and

(O) Reduction of intensity of GHG per unit of agricultural production.

The section also provides that at any time, after taking into consideration relevant recommendations of the Advisory Committee, the appropriate official may, by regulation, add additional types of projects. Not later than January 1, 2015, and every three years thereafter, the appropriate official shall determine whether to remove types of projects. Project types can only be removed by regulation; and only if: the type of project has become required by law; the environmental harm from the type of project exceeds the GHG abatement benefits; the project activity has become predominant; or the project type does not meet the requirements of this Title.

Any person may petition the appropriate official to add or remove a project type to the list. The petitioner must show that the type of project is, or is not, capable of generating emission reductions. The appropriate officials must respond to such petitions within 180 days or receipt.

"Sec. 735. Requirements for offset projects.

This section directs the appropriate officials to establish one or more standardized methodologies for each project type within 18 months of the inclusion of a project type on the eligible list. For each project type, the methodologies shall be capable of and used for determining additionality, establishing activity baselines, determining reductions achieved, and accounting for and mitigating leakage.

The methodologies for determining additionality must ensure, at a minimum, that any GHG reduction results from activities that are not required by law, were not commenced prior to January 1, 2009 (with exceptions for early actions), and that exceed the activity baseline.

The section also requires that for each type of project, the methodologies include mechanisms to account for any actual or potential reversal of the sequestration, with an adequate margin of safety. At least one mechanism (an offset reserve, insurance, or some other mechanism) that satisfies the requirements of this part must be prescribed.

If an offsets reserve is used, for each project the appropriate official shall subtract and reserve a quantity of credits, based on the risk of reversal, and hold those credits in the reserve. If an intentional reversal occurs, the offset project representative shall place into the reserve a quantity of credits equal to 150 percent of the number of credits that were cancelled due to the reversal. If an unintentional reversal occurs, except in cases where the Secretary determines a project representative faced undue hardship because of a catastrophic occurrence, the offset project developer must place into the offset reserve a quantity of credits equal to the lesser of (a) half of the number of offset credits that were reserved for the offset project or (b) half the number of reserve offset credits that were canceled due to the reversal.

For each type of agricultural or forestry sequestration project with methodologies under this section, the Secretary may create one or more additional mechanisms in order to ensure that activities maintain the integrity of the overall GHG emission limitations. The mechanisms that the Secretary shall use for this provision include—

(I) A specific duration of the intended sequestration activity;
(II) Clear liability for carbon accounting;
(III) Sequential activities for maintaining the quantity of emission reductions achieved pursuant to an agreement;
(IV) Adequate monitoring and accounting systems to maintain the emission reduction targets;
(V) Carbon easements; or
(VI) Any other option that meets the requirements of this section as determined by the Secretary.

The section provides that crediting periods for offset projects shall be not less than five nor greater than ten years, except for forestry projects, which shall not exceed 30 years.

For each methodology or standard proposed, this section requires the appropriate official to conduct and make available for public comment an analysis of how the methodology meets the requirements of this section, including considerations of alternative approaches and include an updated analysis in the record of the final rule establishing the methodology.

The appropriate officials are to give due consideration to methodologies for offset projects existing as of the date of enactment of this Act.

This section also allows offset projects to meet the requirements of the section while receiving additional payment from another source for an ecological service other than emission reductions, including conservation program payments.

The Secretary must, in consultation with appropriate Federal agencies, when promulgating regulations for offsets from land management-related projects, require that offset projects support biological diversity to the maximum extent practicable and in a cost-effective manner.

"Sec. 736. Approval of offset projects.

This section states that offset project representatives must submit to the appropriate official a petition for approval of the project, which must include designation of an offset project representative. Not later than 30 days after receiving a petition the appropriate official shall make a determination on whether to approve and notify the offset project representative in writing of the determinations. The appropriate official may provide for accreditation of third parties to provide recommendations on approvals.

The section also allows the appropriate official to establish voluntary preapproval review to assess preliminary eligibility for an offset project at the request of the project representative. Findings of such preliminary reviews will be made within 30 days and are not binding upon the appropriate official.

"Sec. 737. Verification of offset projects.

This section directs the Secretary and the Administrator to jointly establish requirements for verification of the quantity of GHG emission reductions that have resulted from an offset project. Project representatives are required to submit a report prepared by an accredited third party verifier providing information needed to determine the quantity of emission reductions that have resulted from the project. Not later than 90 days after receiving a complete verification report, the appropriate official must make a determination of the quantity of reductions and notify the project representative.

The appropriate officials are to jointly establish a process and requirements for periodic accreditation of third-party verifiers.

"Sec. 738. Issuance of offset credits.

This section directs the Administrator, in consultation with the Secretary regarding domestic agricultural and forestry projects, to issue one offset credit to a project representative for each ton of CO_2e in reductions from a project that the appropriate official has verified in accordance with the requirements under Sec. 737.

"Sec. 739. Audits and reviews.

This section directs the appropriate officials to conduct random audits of offset projects. These audits must be for a representative sample of project types, geographical areas, verification standards and verifiers, and administrative processes of the offset program, giving priority to offset projects in categories that generate relatively large quantities of credits or about which there is relatively less empirical data. The results of all audits shall be made publicly available. The appropriate official may delegate the responsibility for conducting audits to a State or tribal government.

"Sec. 740. Early offset supply.

The Administrator of a regulatory or voluntary GHG offset program may apply to the Administrator and Secretary for approval as a qualified early offset program. This section directs the Administrator, in conjunction with the Secretary, to approve as a qualified early offset program any regulatory or voluntary offset program that—

(A) Was established before January 1, 2009;
(B) Has developed project-type standards (i) through a public consultation process or a public peer review process; (ii) that require credited emission reductions be measurable, additional, verifiable, enforceable, and permanent; and (iii) that have been made available to the public;
(C) Requires all reductions be verified by a State regulatory agency or accredited third-party entity;
(D) Requires that all issued credits be registered in a publicly accessible registry;
(E) Requires that offset project representatives meet applicable financial assurance requirements; and
(F) Ensures that no credits are issued for activities for which the administrator of the early offset program has funded, solicited, or served as a fund administrator for the development of the project or activity that caused the emission reduction.

The Administrator, in conjunction with the Secretary, will determine that an offset program is not a qualified early offset program with respect to a particular project type if the methodology for that project type fails to ensure credits are only for reductions that are measurable, additional, verifiable, enforceable, and permanent. The officials also shall revoke the approval of a qualified early offset program if the program does not meet the criteria described above. The Administrator, in conjunction with the Secretary, shall issue offset credits for each ton of emission reduction achieved after January 1, 2004, under offset projects that commenced after January 1, 2001, and for which a credit was issued under a qualified early offset program.

Offset credits shall be issued under this section only for a crediting period that starts not later than the date on which the regulations for methodologies take effect and does not exceed the shorter of ten years or the established crediting period for the project (in accordance with the rules of the qualified early offset program).

"Sec. 741. Productivity study; program review and revision.

This section requires the Secretary to conduct an annual assessment of the amount of agricultural land that has been removed from agricultural production due to participation of landowners in afforestation projects under an offset program. The study has to account for positive or negative effects of offset programs on food, feed, and fiber production, commodity prices, livestock production, food prices, and the environment. If the Secretary determines that afforestation offsets projects are resulting in serious adverse effects on U.S. agriculture or the public interest, the Secretary may take action to limit new enrollments in offset programs in a manner determined necessary to eliminate adverse effects. This can be done by restricting the total quantity of land that can be enrolled in afforestation offset projects, limiting participation to owners of certain types of agricultural land, or some other mechanism.

At least once every five years, the Administrator, in consultation with the Secretary, is to review, based on new or updated information and taking into account the recommendations of the Advisory Committee, the list of eligible project types (Sec. 734), the methodologies established (Sec. 735), the reversal requirements (Sec. 735), measures to improve accountability of the offsets program, and any other requirements to ensure the environmental integrity and effective operation of this title. As part of this review, the officials are to make any additions to or revisions of the provisions of the offset program as appropriate to meet the requirements of this part.

"Sec. 742. Additional regulatory standards for emission reductions.

This section states that the Administrator is not authorized to create additional regulations for emission reductions from approved offset projects until January 1, 2020 solely on the basis of the effect of those emissions on climate change. It also states that no person shall be required to hold allowances for emissions resulting from the use of gas as an energy source if the gas is derived from a domestic methane offset project approved under this title.

"PART E—OFFSET CREDIT PROGRAM FOR INTERNATIONAL EMISSION REDUCTIONS

"Sec. 751. Definitions.

This section sets out the definitions of this part. The term "Advisory Committee" means the International Offsets Integrity Advisory Committee.

"Sec. 752. International Offsets Integrity Advisory Committee.

This section requires the Administrator to establish the Advisory Committee not later than 60 days after the enactment of this title. This Advisory Committee and the one established under Sec. 732 may share membership. The duties of the Advisory Committee include providing recommendations regarding offset project types that should be considered for eligibility under Sec. 754, providing advice and comment on offset methodologies per Sec. 755, providing advice regarding scientific and technical issues associated with the implementation of this part, providing comments on areas in which further knowledge is required to appraise adequacy of methodologies, and describing research efforts necessary to provide required information.

"Sec. 753. Establishment of international offsets program.

This section requires, not later than two years after enactment of this Act, the Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for

International Development (USAID), to establish a program for the issuance of international offset credits for activities that reduce or avoid emissions, or increase sequestration, in a developing country.

Regulations for international offset credits must ensure that credits represent verifiable and additional reductions, ensure that credits are only issued for permanent reductions, include reductions in GHGs achieved through destruction of methane and conversion of methane to CO_2, and establish a process to accept and respond to comments from third parties within the United States regarding this part.

This section permits the Administrator to issue international offset credits only if the U.S. is party to a bilateral or multilateral agreement or arrangement that includes the country in which the project has occurred, the country is a developing country, and the agreement ensures that all offset requirements apply to the issuance of international offset credits and the project is eligible to receive service of process in the United States for all civil and regulatory actions.

This section states that international offset credits may be issued only if the credit is pursuant to the categories described in Sec. 756 (a), (b), or (c) except if, for two consecutive years, the auction price for allowances reaches the cost containment reserve price and total quantity of international offsets held by covered entities for each of these two years does not exceed the limit on international offsets. If these two things occur, the Administrator may establish supplemental categories of international offsets if: the country in which the activities would take place is implementing a low-carbon development plan, the activities in the offset category are different from those in Sec. 756 (a), (b), or (c), and the activities ensure adequate treatment of leakage, additionality, and permanence.

"Sec. 754. Eligible project types.

This section requires the Administrator to establish a list of types of projects eligible to generate offset credits in developing countries, taking into consideration and explaining differences from the recommendations of the Advisory Committee. An initial eligibility list must be established not later than one year after enactment. At any time by rule the Administrator may add or remove project types from the list. Any person of the United States may petition the Administrator to modify the list, and must show that the type of project does or does not meet the requirements of this part and provide evidence to support the petition. The Administrator must respond within one year of a petition, and may not deny a petition on the basis of inadequate agency resources.

"Sec. 755. Requirements for international offset projects.

This section requires the Administrator, for each type of offset listed as eligible under Sec. 754, to establish: a standardized methodology for determining additionality, including that the activities are not required by law, were not commenced prior to January 1, 2009 (with exceptions for early actions), are not receiving support under this Act, and exceed the activity baseline; a standardized methodology for establishing activity baselines; a standardized methodology for determining the extent of reductions; and a standardized methodology for accounting for leakage.

The section requires the Administrator to establish requirements to account for reversals, including a requirement to report any reversal, assign responsibility for holding credits in the event of reversals, and provisions to discourage repeated intentional reversals. The Administrator shall prescribe at least one of an offsets reserve, insurance, or some other mechanism to address reversals. The offsets reserve must be pursuant to Sec. 734(b)(2), the domestic offsets reserve provision.

Crediting periods for international forestry offset projects shall not exceed 20 years.

The Administrator can modify or omit a requirement of Secs. 754, 755, or 757 if the application of that requirement in the context of one of the categories in Sec. 756 is not feasible or would result in the creation of credits that would not be eligible to satisfy commitments made by the U.S. pursuant to the UN Framework Convention on Climate Change (UNFCCC), and as long as the modification does not affect the integrity of the GHG limitations established.

"Sec. 756. Categories of international offset credits.

This section establishes three categories of projects eligible for international offsets: sectoral crediting, credits issued by an international body, and credits from reduced deforestation.

Sector-based crediting

“Sectoral basis” means the issuance of international offset credits for the quantity of sector-wide emission reductions achieved relative to a baseline level of emissions. The Administrator, in consultation with the Secretary of State and the Administrator of USAID, is directed to identify sectors within specific countries where issuance of offset credits on a sectoral basis is appropriate.

In general, sectoral crediting is appropriate for sectors in countries that have comparatively high GHG emissions or comparatively greater levels of economic development and that, if located in the United States, would be subject to a compliance obligation under Sec. 722.

The Administrator is required, in consultation with the Secretary of State and the Administrator of USAID, to consider the following factors when determining the sectors and countries for which international offsets should be awarded only on a sectoral basis:

- Country GDP;
- Total country GHG emissions;
- Whether the comparable sector of the U.S. economy is covered by compliance obligation;
- The hetero- or homogeneity of sources within the sector;

- Whether the sector provides products and services sold in internationally competitive markets;
- The risk of leakage if credits were issued on a project-level basis;
- The capability of accurately measuring, monitoring, reporting and verifying the performance of sources across a sector; and
- Such other factors that the officials determine are appropriate to ensure integrity of the U.S. GHG emission limitations and encourage countries to take nationally appropriate mitigation actions.

Credits issued by an international body
The Administrator, in consultation with the Secretary of State, may issue international offset credits in exchange for offset credits used by an international body established under the UNFCCC or a succeeding treaty if that body has implemented substantive and procedural requirements for the relevant project type that are of equal or greater integrity as those of the U.S. domestic offset program. After January 1, 2016, no offset credits shall be issued if the project activity was in a country and sector identified by the Administrator under the sector-based criteria unless the instrument issued by the international body is consistent with the requirements for the sector-based crediting.

Offsets from reduced deforestation
The Administrator is directed to issue international offset credits for reduced deforestation activities if:

- The activity occurs in an eligible country/state/province;
- The quantity of credits is determined by comparing the national emissions from deforestation to a national deforestation baseline;
- The reduction occurred before the issuance of the credit, and it has been demonstrated using ground-based inventories, remote sensing technology and other methodologies;
- Appropriate adjustments are made to account for circumstances specific to the country;
- The country within which the activity occurs has in place a publicly available strategic plan;
- The activity is designed and managed in accordance with practices that: improve livelihoods of forest communities, maintain natural biodiversity, do not adversely impact permanence of forest carbon stocks, promote native forest species and avoid introduction of invasive nonnative species, give due respect to the rights of and consult with local communities, share profits and benefits derived from offset credits with local communities, and have third party independent oversight;
- The reduction is consistent with UNFCCC agreements; and
- In the case that offsets are determined by comparing the national emissions from deforestation relative to a baseline, a list of activities to reduce deforestation is available, the social and environmental impacts of the activities are monitored, and the distribution of revenues is transparent.

The Administrator, in consultation with the Secretary of State and the Administrator of USAID, is to establish a list of developing countries (or states and provinces in developing countries) that have the capacity to participate in deforestation and forest degradation reduction activities, including enhanced forest sequestration. This capacity is defined as the technical ability to monitor and verify forest carbon fluxes, institutional ability to reduce emissions from deforestation and degradation, and the establishment of a land use or forest sector strategic plan.

The Administrator is directed to seek to ensure the establishment and enforcement of legal regimes, standards and safeguards by countries in which projects occur that: give due regard to the rights and interests of local communities, indigenous peoples and vulnerable social groups; promote consultation with local communities during the project; and encourage sharing of profits with local communities and indigenous peoples.

Among other requirements, national deforestation baselines must account for all significant sources of GHG emissions from deforestation in the country, take into consideration the average historical deforestation rates of the country during a period of at least five years to show that only reductions that are in addition to existing commitments will generate offsets; establish a trajectory that will result in zero net deforestation not later than 20 years after the baseline is established including a spatially explicit land use plan; and be adjusted over time to take account of changing national circumstances.

The Administrator has the discretion to issue offset credits directly to an offset project representative and include forest degradation and soil carbon losses associated with forested wetlands or peat lands within the meaning of deforestation.

"Sec. 757. Approval of offset projects.

This section requires the Administrator, as part of the regulations under Sec. 753, to include provisions for the approval of offset projects that are in accordance with the domestic offsets provisions, except as modified here.

For international offset projects, the petition for approval must be signed by a responsible official to certify the accuracy of the information, and designate a party who is authorized to provide access to the appropriate officials or an authorized representative to the project. Complete petitions must be made available on the internet, and the Administrator must approve or deny the petition in writing within 90 days.

"Sec. 758. Verification of offset projects.

This section requires the Administrator to create a process by which the accreditation of third-party verifiers can be revoked if the Administrator determines the verifier fails to maintain professional qualifications or for another good cause. The same requirements are placed on the Administrator with respect to verification of international offsets as for domestic offsets.

"Sec. 759. Issuance of offset credits.

This section requires the Administrator to issue international offset credits in the same manner as for domestic offsets.

"Sec. 760. Audits.

This section requires the Administrator to conduct audits of activities under this part in the same manner as for domestic offsets.

"Sec. 761. Program review and revision.

This section requires the Administrator to review, at least once every five years, and based on new information or the recommendations of the Advisory Committee, update and revise the list of eligible project types (Sec. 754), the methodologies (Sec. 755), the reversal requirements (Sec. 755), measures for accountability of the offsets program, and another other requirements for integrity of this part.

"Sec. 762. Environmental considerations.

This section requires, for any project type listed as eligible under Sec. 754, the Administrator to establish criteria: to ensure that native species are given primary consideration in the projects; to prohibit the use of invasive plants; in accordance with widely accepted forestry practices (where applicable); to ensure the area was not converted from native ecosystems unless the conversion happened at least ten years before the date of enactment or January 1, 2009; and to ensure the use of offsets would be eligible to satisfy emission reduction commitments made by the U.S. in multilateral agreements.

"Sec. 763. Incorporation by reference.

This section defines references made in this part.

Sec. 2002. Definitions.

This section amends title VII of the Clean Air Act (as amended by Sec. 2001) by adding the following section before Part A:

"Sec. 700. Definitions.

This section sets out the definitions for terms contained in the Title. It includes, but is not limited to:

- Attributable Greenhouse Gas Emissions;
- Covered Entity;
- Developing Country;
- Emission;
- Industrial Source; and
- Renewable Biomass.

A "Covered entity" is:

(A) Any electricity source;

(B) Any refined product provider;

(C) Any stationary source that produces, and any entity that (or any group of two or more affiliated entities that, in the aggregate) imports, for sale or distribution in commerce, in bulk or in products designated by the Administrator, during 2008 or any subsequent year more than 25,000 tons of CO_2e of:

(i) Fossil fuel-based carbon dioxide (CO_2);

(ii) Nitrous oxide (N_2O);

(iii) Perfluorocarbons (PFCs);

(iv) Sulfur hexafluoride (SF_6);

(v) Any other fluorinated gas, except for nitrogen trifluoride, that is a greenhouse gas, as designated by the Administrator under (b) or (c) of Sec. 711; or

(vi) Any combination of greenhouse gases described in clauses (i) through (v).

(D) Any stationary source that has emitted 25,000 or more tons of CO_2 equivalent of nitrogen trifluoride in 2008 or any subsequent year;

(E) Any geologic sequestration site.

(F) Any stationary source in the following industrial sectors:

(i) Adipic acid production;
(ii) Primary aluminum production;
(iii) Ammonia manufacturing;
(iv) Cement production, excluding grinding-only operations;
(v) Hydrochlorofluorocarbon (HCFC) production;
(vi) Lime manufacturing;
(vii) Nitric acid production;
(viii) Petroleum refining;
(ix) Phosphoric acid production;
(x) Silicon carbide production;
(xi) Soda ash production;
(xii) Titanium dioxide production;
(xiii) Coal-based liquid or gaseous fuel production.

(G) Any stationary source in the chemical or petrochemical sector that, in 2008 or any subsequent year:

(i) Produces acrylonitrile, carbon black, ethylene, ethylene dichloride, ethylene oxide, or methanol; or

(ii) Produces a chemical or petrochemical product if producing that product results in annual combustion plus process emissions of 25,000 or more tons of CO_2e.

(H) Any stationary source that:

(i) Is in one of the following industrial sectors: ethanol production; ferroalloy production; fluorinated gas production; food processing; glass production; hydrogen production; iron and steel production; lead production; pulp and paper manufacturing; and zinc production; and

(ii) Has emitted 25,000 or more tons of CO_2e in 2008 or any subsequent year.

(I) Any fossil fuel-fired combustion device (such as a boiler) or grouping of such devices that:

(i) Is all or part of an industrial source not specified in subparagraph (D), (F), (G) or (H); and

(ii) Has emitted 25,000 or more tons of CO_2e in 2008 or any subsequent year.

(J) Any natural gas LDC that (or any group of two or more affiliated natural gas local distribution companies that, in the aggregate) in 2008 or any subsequent year delivers 460,000,000 cubic feet or more of natural gas to customers that are not covered entities.

A "refined product provider" is defined as the title holder of the refined product inside a terminal. If the refined product does not pass through a terminal, "refined product provider" means (i) the owner of the refined product that is not destined for a terminal at the time the refined product is removed from the refinery; (ii) the owner of the emissive natural gas liquid when the liquid becomes merchantable; '(iii) the entity that enters refined product into the United States for consumption, use, or warehousing; or '(iv) a coal-based liquid fuel producer in the case of coal-based liquid fuel. The term '"refined product provider'" does not include the owner of a refined product with respect to a refined product that is moved by bulk transfer to any other terminal, refinery, or storage facility.

Subtitle B—Disposition of Allowances

Sec. 2101. Disposition of allowances for global warming pollution reduction program.

This section amends Title VII of the Clean Air Act, as added by this Act, by adding at the end:

"PART G—DISPOSITION OF ALLOWANCES

"Sec. 781. Allocation of emission allowances.

This section details for what purposes emission allowances are to be allocated. It directs the Administrator to allocate emission allowances in the amounts specified in "Appendix A:

Allocation of Emissions Allowances," as percentages of the total number of allowances identified in Sec. 721.

"Sec. 786. Exchange for State allowances.

This section requires the Administrator, not later than one year after enactment, to issue regulations allowing any person in the United States to exchange emission allowances issued before the later of December, 31, 2011 and the first calendar year for which allowances are allocated under Sec. 781, by the State of California, the Western Climate Initiative or the Regional Greenhouse Gas Initiative for emission allowances established by this Act. A person exchanging these allowances shall receive an amount of allowances sufficient to compensate for the cost of obtaining and holding the original allowances. The federal emission allowances disbursed shall be deducted from the allowances to be auctioned pursuant to Sec. 781.

"Sec. 787. Deficit Reduction Fund.

This section establishes a Deficit Reduction Fund within the Treasury to be made available without fiscal year limitation and subject to appropriation for deficit reduction.

"Sec. 788. Early action recognition.

This section requires the Administrator to issue regulations within 18 months of enactment for distributing one-third of the allowances pursuant to Sec. 781(e)(7) allowing for the exchange of offset credits issued before January 2009 by a state, local, or voluntary offset program and the compensation in the form of emission allowances to entities for documented early reductions or avoidance of GHG emissions before January 2009 (one-third of allowances). The Administrator shall distribute two-thirds of the allowances pursuant to Sec.781(e)(7) to eligible states that, by the date of enactment, have established a cap and trade program, to be used for entities and programs designed to decrease GHG emissions.

"Sec. 790. Auction procedures.

This section requires the Administrator to establish regulations for the conduct of auctions authorized under this Act.

This section sets out the requirements for allowance auctions. The auctions are to be held four times per year at regular intervals, with the first auction to be held no later than March 31, 2012. Except for auctions held in 2012, each auction will include a portion of allowances from future vintage years, up to four years in advance. The auctions will be open only to covered entities and regulated GHG market participants and follow a uniform price format. The implementing agency will set purchase limits as necessary to prevent manipulation of prices at any quarterly auction.

The section gives the Administrator the authority to revise allowance auction regulations, as long as they are not revised in order to maximize revenues to the federal government.

The section establishes a reserve auction price of $12 for auctions occurring in 2013. For future years, the reserve auction price shall be the last year's minimum price increased by three percent plus the rate of inflation.

This section requires the Administrator to issue regulations setting aside a portion of allowances for purchase by transportation fuels and refined product providers under Sec.729. Not later than 14 days prior to the auction of allowances for a quarter, the Administrator and EIA will estimate the number of allowances refined product providers are expected to purchase for compliance and set aside this number of allowances out of those available for auction for that quarter. If the number of allowances set aside for purchase by refined product providers is in excess of a percentage (to be determined by the Administrator by regulation) of the allowances available for auction, the Administrator may borrow allowances from one year in the future and make available a sufficient number of allowances each quarter for sale at auction. The number of allowances available for auction will also be considered in deciding whether additional allowances should be borrowed from future years to ensure that adequate market liquidity exists.

<u>"Sec. 791. Auctioning allowances for other entities.</u>

This section permits any entity in possession of emission allowances to request that the Administrator auction the allowances on consignment. In every case where the Administrator acts as an agent of another entity for the purposes of auctioning allowances, the Administrator is not obligated to obtain the highest price possible for the emission allowances, and instead is required to follow the principles set out for conducting auctions in Sec.790. The United States shall, within 90 days of receipt, transfer the proceeds from the auction to the entity that held the allowances.

<u>"Sec. 792. Oversight of allocations and auction proceeds.</u>

This section requires the Comptroller General of the United States to review programs administered by the federal government that distribute emission allowances or funds from any federal auction of allowances beginning in January 2015 and every two years thereafter.

<u>"Sec. 793. Protection of affected parties.</u>

The section allows a holder of allowances or offsets to file a petition for review of an action by the Administrator that may affect the value of integrity of such allowances or offsets.

<u>"Sec. 797. Presidential determination.</u>

This section allows the President to make a determination that a multilateral agreement has been reached with other major GHG emitting countries that, with the United States, are responsible for more than 67 percent of global GHG emissions, would substantially reduce the risk of climate change, and that one or more funds are available with the capacity to effectively address the preparation of developing countries to participate in international markets for offset credits, minimize the impacts of climate change, and facilitate the deployment of clean energy. Not earlier than 90 days after making this determination, the President my direct the Administrator to allocate not more than five percent of the allowances established under Sec. 721 to one or more of these funds.

"Sec. 798. Merchant generator efficiency incentive.

This section requires, not later than 180 days after the date of enactment, the Administrator to establish a program to improve the efficiency and reduce the carbon intensity of the generation of the merchant coal unit fleet by providing incentives for owners or operators to permanently retire or repower these units. The incentives shall be in the form of emission allowances from those dedicated to merchant coal generators in accordance with a formula equal the product of .5, the average annual emissions of the unit, and an undetermined phase-down factor. The incentive will be available to support retirement or repowering of not more than 35 GW of merchant coal capacity.

Subtitle C—Achieving Fast Mitigation

PART I—HYDROFLUOROCARBONS

Sec. 2201. Hydrofluorocarbons.

The section amends Title VI of the Clean Air Act to add Sec. 619 which requires the regulation of hydrofluorocarbons (HFCs).

"Sec. 619. Hydrofluorocarbons.

This section provides a list of HFCs as class II, group II substances under Title VI of the CAA and calls for EPA to issue regulations that require the phase-down of consumption of listed compounds, bans nonessential uses, mandates recycling, and labeling and evaluates the safety of substitutes for HFCs.

The section sets out a separate program (distinct from other GHG programs) that caps emissions of HFCs and phases down their consumption over time. The limitations begin in 2013 at 87.5 percent of baseline levels and gradually decline over time until 2033 and beyond when 15 percent of baseline emissions are permitted. Baseline emissions are calculated based on the average HFCs consumed (defined as the average amount of HFCs produced or imported plus the amount contained in imported products minus any amount of HFCs exported) in 2004 to 2006, but cannot be either higher or lower than the amounts specified in the Act.

Allowances are divided into two pools: 80 percent are designated for producers/importers and the remaining 20 percent are placed in a secondary pool. Of the producers/importers pool, ten percent is to be auctioned in 2013, 30 percent in 2014, 40 percent in 2015 and so on, until 90 percent is auctioned in 2020 and beyond. A minimum bid price is established at $1.20 in 2013 and increases $0.20 per year, reaching $2.00 in 2017 with further increases reflecting changes in the consumer price index). The non-auctioned part of the producer/importer pool is offered for sale initially at a set price of $1.20 per allowance with increases over time and a gradual shift to being set based on the auction price. The secondary pool is offered for sale at the price set by the non-auctioned producer/importer pool and these allowances are offered for sale primarily to users of HFCs (e.g., firms manufacturing products containing or made with HFCs), importers of products containing HFCs, and if any allowances remain to producers and importers of the HFCs themselves. Revenues from auctions and sales are placed in a newly created fund for the purposes of supporting recycling, for the purchase of best-in-class appliances, for design and retooling to use substitutes, and to support the Multilateral Fund under the Montreal protocol or any similar international treaty obligation.

The section sets limits on who may participate in auctions and purchase allowances from the secondary pool and the quantities that entities may purchase. It also provides for access to allowances for new market entrants and eliminates the need for allowances for imports of products containing HFCs once an international agreement on HFCs takes effect.

To provide compliance flexibility, allowances may be banked and offsets may be created through the destruction of CFCs and HCFCs (once they have been phased out), with credit equal to 80 percent of the carbon dioxide equivalency of the destroyed compound.

The section also provides for essential uses to be exempt from the phase-down, requires product labeling, bans nonessential uses, mandates recycling, and provides for a review of the substitutes developed to replace HFCs. It also allows for modification of any provision necessary to be consistent with any international treaty which the United States ratifies.

PART II—BLACK CARBON

Sec. 2211. Report on black carbon sources, impacts, and reduction opportunities.

The section calls for designated agencies led by EPA to prepare a three-phase report: the first phase is due April 30, 2011 and is to examine the sources, impacts on climate and public health, and reduction opportunities (both domestic and international); the second phase is due not later than November 2011, or one year after enactment of this Act, and is to examine existing and potential programs to support actions to reduce emissions and implementation mechanisms to support such actions; and the final phase is due by May 2012 and is to focus on identifying research needs to better understand impacts and develop technological options.

Sec. 2212. Black carbon mitigation.

The section amends Title VIII of the Clean Air Act, as added by this Act, to include the following:

"Sec. 805. Black carbon.

This section requires, within two years after enactment, that the EPA Administrator shall propose regulations to limit black carbon emissions under existing CAA authorities or make a determination that existing requirements already achieve the greatest degree of emission reductions achievable. If new regulations are proposed, they are to be finalized within 3 years after enactment of this legislation.

Sec. 2213. Black carbon reduction retrofit grant program.

This section amends Subtitle G of Title VII of the Energy Policy Act of 2005 (as amended by Sec. 1413) by adding at the end the following:

"Sec. 795. Black carbon reduction retrofit grant program.

This section requires the EPA Administrator to establish a voluntary grant program to support the cost of purchasing and installing diesel particulate filters on heavy-duty trucks. Such sums as necessary are authorized for appropriation to carry out this section.

Sec. 2214. Enhanced soil sequestration.

This section authorizes the Secretary of Agriculture to provide grants for up to 60 facilities to conduct research, development, demonstration and deployment of biochar production technologies that utilize waste biomass feedstocks and that sequester carbon from the atmosphere. Such sums as necessary are authorized for appropriation to carry out this section.

PART III—INTERNATIONAL METHANE

Sec. 2221. Sense of the Senate on international methane.

This section offers a sense of the Senate that methane is the second leading contributor to climate change, and that given its short atmospheric lifetime, reductions in emissions present a promising opportunity to achieve near-term progress.   It is the sense of the Senate that the U.S. should redouble efforts, both domestically and internationally, to achieve cost-effective reductions in emissions of methane.

PART IV—STUDY ON FAST MITIGATION STRATEGIES

Sec. 2231. Interagency study on fast mitigation strategies.

This section requires that the EPA Administrator lead an interagency study on policies and measures that could achieve fast mitigation, the public health and environmental co-benefits of such actions and their impacts on regional changes in climate. This study is to be completed within two years after enactment of this legislation.

Subtitle D—Ensuring Regulatory Predictability for Greenhouse Gases

Sec. 2301. Criteria pollutants.

This section prohibits any GHG from being listed as a criteria air pollutant under Sec. 108(a) of the Clean Air Act on the basis of its effect on climate change or ocean acidification.

Sec. 2302. Standards of performance for greenhouse gases.

This section amends Sec. 111 of the Clean Air Act to prohibit the use of performance standards for GHGs for capped sources, except for regulations that could apply to electricity generating units

Sec. 2303. Hazardous air pollutants.

This section prohibits any GHG from being listed as a hazardous air pollutant under Sec. 112 of the Clean Air Act on the basis of its effect on climate change or ocean acidification.

Sec. 2304. International air pollution.

This section prohibits the application of Sec. 115 of the Clean Air Act on the basis of its effect on climate change or ocean acidification.

Sec. 2305. Retention of State authority.

This section amends Sec. 116 of the Clean Air Act to reflect the prohibition on state regulation of GHGs through allowance or offset programs as specified in Sec. 806.

Sec. 2306. New source review.

This section prohibits the application of significant deterioration provisions (PSD) under the Clean Air Act (Part C, Title I) to GHG emissions for facilities initially permitted or modified after January 1, 2009.

Sec. 2307. Permit programs.

This section amends Sec. 502(a) of the Clean Air Act to prohibit stationary sources from being permitted solely on the basis of GHG emissions that are regulated only due to their impact on climate change.

Subtitle E—Regulation of Greenhouse Gas Markets

Sec. 2401. Definitions.

This section provides definitions for the subtitle by amending Sec. 1a of the Commodity Exchange Act (CEA). "Greenhouse clearing organization" is defined as a derivatives clearing organization that has been approved to provide payment, settlement, or clearing for greenhouse gas instruments. "Greenhouse gas instrument" is defined as a greenhouse gas allowance, or any other type of instrument or a subset of such instruments that may be designated by the EPA Administrator. "Greenhouse instrument trading organization" means electronic trading facilities registered with the Commission. "Regulated greenhouse gas market participant" is defined as a person other than a compliance entity as specified in regulations, based on an assessment of the market structure and a determination that additional participants are necessary for a liquid and well-functioning market that would ensure not more than a reasonable rate of economic return.

Sec. 2402. Jurisdiction of Commission; restriction of futures trading.

This section amends Sec. 4(c) of the CEA by restricting the Commission from granting exemptions pursuant to this subsection from any provision of this Act or an amendment made by this Act, relating to an agreement, contract, or transaction in a GHG instrument.

Sec. 2403. Swap transactions.

This section amends Sec. 2(g) of the CEA by adding GHG instruments to the exclusion on swap transactions.

Sec. 2404. Excessive speculation.

This section amends Sec. 4a of the CEA by inserting the following:

"Sec. 4a. Excessive speculation.

This section requires the Commission to establish limits on the quantity of trading that may be done in GHG instruments, or the quantity of the instruments that may be owned, held, or traded, as the Commission determines to be necessary. In determining whether a person has exceeded an established limit, both the direct and indirect instruments held and traded by the person (or two or more persons acting pursuant to an expressed or implied agreement or understanding) shall be taken into consideration.

This section also adds that nothing in this section prohibits or impairs the adoption by a GHG instrument trading organization of any bylaw, rule, regulation, or resolution establishing limits on the quantity of either trading that may be done in GHG instruments or the instruments that may be owned or held by any person. If the Commission establishes a limit, any limit established by a GHG instrument trading organization cannot be higher. It shall be a violation of this Act for any person to violate any limit established.

Sec. 2405. Fraud prohibition.

This section amends Sec. 4b(a)(2) of the CEA by including GHG instruments.

Sec. 2406. Prohibited transactions.

This section amends Sec. 4c(a)(1) of the CEA by adding GHG instruments.

Sec. 2407. Manipulation prohibition.

This section amends several paragraphs in Sections 6 and 9 of the CEA to include GHG instruments under the prohibition of manipulation of the market prices of the commodity.

Sec. 2408. Trading of greenhouse gas instruments.

This section amends Sec. 4 of the CEA by adding requirements for GHG instrument trading. It limits participation in transactions for GHG instruments unless the person: is a regulated GHG market participant or a compliance entity; is registered with the Commission; conducts the trading subject to the rules of a GHG instrument trading organization; conducts activities in compliance any rule, regulation, or order; and clears the trades through a GHG trading organization.

This section does not apply to the issuance, auction, or retirement of a greenhouse instrument by or through the EPA Administrator; or an agreement, contract, or transaction in a GHG instrument that is traded or executed on a designated contract market, and does not provide for physical delivery of the GHG instrument.

Sec. 2409. Registration for regulated greenhouse gas market participants and compliance entities.

The CEA is amended by inserting after Sec. 4q the following:

> **"Sec. 4r. Registration for regulated greenhouse gas market participants and compliance entities.**

This section requires regulated GHG market participants and compliance entities to register with the Commission, providing such information and facts as the Commission deems necessary. The Commission may prescribe rules relating to regulated GHG market participants and compliance entities, including rules that limit activities of regulated GHG market participants and compliance entities.

Each regulated GHG market participant and compliance entity shall ensure conformance to each business conduct standard that the Commission may prescribe by regulations or rules that address: prevention of fraud, manipulation, and other abusive practices; the adherence to all applicable position limits; GHG allowance short sales; recordkeeping, reporting, and disclosure reports; and such other matters the Commission deems necessary or appropriate.

Sec. 2410. Greenhouse gas instrument trading organizations.

The CEA is amended by inserting after Sec. 5g the following:

"Sec. 5h. Greenhouse gas instrument trading organizations.

This section requires operating GHG instrument trading organizations to register with the Commission. In general, a registered GHG instrument trading organization may make available for trading to any regulated GHG market participant or compliance entity any GHG instrument. A board of trade that operates a GHG instrument trading organization or contract market is required to identify whether GHG trades are taking place electronically.

GHG instrument trading organizations will comply with the core principles specified in this section: to monitor and enforce compliance with any of the rules of the organization; to establish and enforce trading and participation rules that will deter abuses and have the capacity to detect, investigate, and enforce those rules; to allow only trading in GHG instruments that are not readily subject to manipulation; to establish and enforce rules or terms and conditions defining, or specifications detailing, trading procedures to be used in entering and executing orders; to establish and enforce rules that will allow the GHG instrument trading organization to obtain any necessary information to carry out any of the functions described in this section; to establish and enforce rules to ensure fair and equitable trading; to establish disciplinary procedures to respond to violations by market participants; to adopt and enforce rules to provide for the exercise of emergency authority in consultation with the Commission; to provide real-time publication of trading information; to provide a competitive, open, and efficient market and a mechanism for executing transactions; to maintain rules and procedures to provide for the recording and safe storage of all identifying trade information; to provide facilities for dispute resolutions; to establish and enforce appropriate fitness standards for directors, members of any disciplinary committee, and any other person with direct access to the GHG instrument trading organization; and to avoid adopting any rules or taking any actions that result in any unreasonable restraint of trade, or impose any material anticompetitive burden on trading on or through a GHG instrument trading organization.

Sec. 2411. Greenhouse gas clearing organizations.

The CEA is amended by inserting after Sec. 5b the following:

"Sec. 5b–1. Greenhouse gas clearing organizations.

This section makes it unlawful for any person not registered with the Commission as a derivatives clearing organization, or approved by the Commission to directly or indirectly to perform the functions of a GHG clearing organization.

Sec. 2412. GHG allowance short sales.

The CEA is amended by inserting after Sec. 5h (as added by Sec. 2410) the following:

"Sec. 5i. Short sale transactions.

This section prohibits any short sale of a regulated GHG instrument except pursuant to a rule or regulation of the Commission that allows the short sale under certain terms and conditions.

Sec. 2413. Greenhouse gas market emergency and suspension authority.

The CEA is amended by inserting after Sec. 8d the following:

"Sec. 8e. Greenhouse gas market emergency and suspension authority.

This section defines GHG market emergency as a major market disturbance characterized by or constituting: a sudden and excessive fluctuation of prices of GHG instruments that threaten fair and orderly markets; a substantial disruption of the safe or efficient operation of the national system for clearance and settlement of transactions; or a major disturbance that substantially disrupts, or threatens to substantially disrupt, the functioning of markets, or any significant portion of markets; or the transmission or processing of transactions. If the Commission determines that if it is in the public interest, it can suspend trading of all GHG instruments on any GHG instrument trading organization for not more than 90 calendar days.

In general, the Commission can also issue a GHG market emergency order if it is the public interest to maintain or restore fair and orderly markets, and to ensure prompt, accurate, and safe clearance and settlement of transactions. A GHG market emergency order may not continue in effect for more than ten business days. However, the Commission can extend the emergency order to not more than 30 calendar days if it determines the greenhouse market emergency situation still exists. In exercising this authority, the Commission is not be required to comply with standard rulemaking procedures.

In general, a GHG market emergency order is subject to review by the U.S. Court of Appeals for the D.C. Circuit. A reviewing court cannot enter a stay, writ of mandamus, or similar reliefs unless the court finds, after notice and hearing, that the action of the Commission was arbitrary, capricious, an abuse of discretion, or not in accordance with the law.

Sec. 2414. Territorial application.

This section amends Sec. 12 of the CEA by stating that provisions of this Act relating to GHG instruments do not apply to activities outside the U.S. unless the activities have a direct and significant connection with activities in or effect on U.S. commerce or contravene rules or regulations the Commission prescribes as appropriate to prevent the evasion of any provision of this Act.

Sec. 2415. Memorandum and information sharing.

This section amends Sec. 12 of the CEA by requiring a memorandum of understanding, within one year of enactment, between the Commission, EPA Administrator, Chair of FERC, the Secretary of Treasury, and the Secretary of Agriculture to establish procedures to share information that may be requested for enforcement or surveillance; to review the respective enforcement and market oversight authorities of the agencies; to apply the respective authorities of the agencies that ensure effective and coordinated regulation in the public interest; and to ensure that the respective enforcement mechanisms and sanctions authorities of agencies are sufficient to deter and punish violations of this Act.

In addition this section requires no later than one year after enactment of this subsection, the Commission and the EPA Administrator enter into a memorandum of understanding to make available to the Administrator such information available to the Commission as will enable the Administrator to determine the ownership of GHG instruments on a real-time basis.

Sec. 2416. Conforming amendments.

This section makes conforming amendments across multiple Acts.

Subtitle F—Miscellaneous

Sec. 2501. Miscellaneous.

"Sec. 806. State programs.

This section allows implementation grants to states. States and tribes may submit comprehensive plans detailing how they plan to meet the Act's implementation requirements and use funds received under the Act.

This section also prohibits states from implementing or enforcing cap and trade programs for greenhouse gases, beginning January 1 of the first calendar year in which federal allowances are issued. However, states may still adopt targets, standards, and limits on GHGs achieved through means other than cap and trade, including emission standards for vehicles and fuel standards.

"Sec. 807. Forestry sector greenhouse gas accounting.

This section requires the Administrator, with the Secretaries of the Interior and Agriculture, to provide an annual accounting of sequestration and emissions of GHGs from forestry, and transfers of carbon through forest products from the forest sector to other sectors. The requirement applies to all public, private, and tribal land of ownerships larger than 5,000 acres on which forest harvesting, deforestation, or other conversion occurs. The Administrator must use existing authority and methods to carry out this section.

"Sec. 808. Studies on impacts of renewable biomass use.

Not later than six years after enactment, and every five years after, the Administrator, in consultation with the Secretaries of Agriculture and Interior, must conduct a study and report to Congress on the impacts of the use and combustion of renewable biomass and gas or liquid fuel derived from renewable biomass.

The report must include the quantity of GHG emissions from the combustion of renewable biomass-based fuels, the net GHG benefits of using renewable biomass (including direct and indirect emissions), other environmental issues, and resource conservation issues.

The Secretary of Agriculture is required, not later than six years after the date of enactment and five years thereafter, to conduct a study and report to Congress on the impacts of Title VII on food production as a result of the use of renewable biomass, including impacts on the cost of food and on each food production industry.

The Administrator and the Secretary are required to consult the states, Indian tribes, and other stakeholders when conducting these studies.

Based on these studies, the Administrator must submit to Congress recommendations on whether and how the compliance obligations under Sec. 722 should be modified to require covered entities to hold allowances for emissions associated with combustion of renewable biomass.

"Sec. 809. Review of definition of renewable biomass.

Not later than one year after enactment, the National Academies of Science shall conduct a study evaluating how sources of renewable biomass contribute to the goals of increasing the energy independence of the U.S., protecting the environment, and reducing GHG emissions. The Administrator is then to submit to Congress recommendations on whether and how to modify the non-federal land and federal lands portion of the definition of 'renewable biomass' in Sec. 700.

Sec. 2502. Enforcement.

This section amends Sec. 307(b) of the Clean Air Act to allow any person to file a petition for review of action by the Administrator of actions under the Hazardous Air Pollutants section. It allows the court to remand any action without vacatur, if vacatur would impair or delay protection of the environment or public health or otherwise undermine the timely achievement of the purposes of the Clean Air Act, if a court finds actions of the Administrator to be unlawful, and the Administrator is required to complete final action as a result within one year?, unless the court on motion determines another time period is consistent with this Act. It also amends Sec. 307(d)(7)(B) to require the Administrator to take final action on a petition for reconsideration within 150 days and allowing petitioners to seek judicial review of denials.

Sec. 2503. Conforming amendments.

This section offers conforming and technical amendments to the Clean Air Act.

TITLE III—CONSUMER PROTECTION

Subtitle A—Investing in Low-carbon Electricity and Energy Efficiency for Consumer Protection

Sec. 3001. Electricity consumers.

This section amends Part G of Title VII of the Clean Air Act (as added by Sec. 2101(a)) to include the following:

"Sec. 782. Electricity consumers.

This section directs the Administrator to distribute to electricity LDCs, for the benefit of retail ratepayers, the quantity of emission allowances allocated for the vintage years pursuant to this Act. The Administrator is authorized to withhold from distribution to electricity LDCs at most: 14.3 percent of the quantity of emission allowances for each vintage year, and 105 percent of the emission allowances of the relevant vintage year that the Administrator anticipates will be distributed to merchant coal units and long-term contracts generators. The Administrator is also authorized to distribute future vintage year emission allowances to long-term contract generators in the case of a shortfall of emission allowances during any vintage year. For each vintage year, the Administrator shall distribute 75 percent of the emission allowances available for distribution for electricity consumer protection through Sec. 781(a)(1), after reserving emission allowances for distribution to merchant coal (10 percent) and long-term contract generators (4.3 percent), among individual electricity LDCs on a pro rata basis, based on the annual average CO_2 emissions attributable to generation of electricity delivered at retail during the base period.

For 2013, the base period of an electricity local distribution company shall be: 2006 through 2008, any three consecutive years occurring between January 1, 1999 and December 31, 2008, or 2012 for an LDC that is located outside the Pacific Northwest and purchased long-term excess federal power and Hungry Horse Reservation power from the Bonneville Power Administration and will no longer receive long-term excess federal power from these sources. For base periods 2014 and thereafter, the base period shall be the period selected for 2013, or calendar 2012 in the case of an LDC that owns, co-owns, or purchase through a power purchase agreement.

The Administrator, in consultation with Energy Information Agency (EIA), shall determine the annual quantity of CO_2 emissions attributable to generation of electricity delivered at retail by each LDC. In general, the annual quantity of CO_2 emissions attribute to the generation of electricity delivered at retail by electric LDC shall be based on the quantity and type of fossil fuel-based electricity delivered at retail by the LDC and appropriate emission factors for CO_2 emissions. The Administrator shall determine the average emission factor associated with generation owned and used by the electricity LDC and the proportion of overall retail deliveries served by electricity from that generation. For electricity that an LDC procured through power purchase contracts with a remaining term of 10 years or longer as of 2013, the Administrator shall use the emission factor for that particular source for the electricity purchased from that source and delivered at retail. For any other retail deliveries not covered, the Administrator shall use the emission factor for the North American Electric Reliability Council region or regions in which LDC is located.

After reserving emission allowances for distribution for each vintage year, the Administrator shall distribute 75 percent of the emission allowances available for distribution among LDCs on a pro rata basis, based on the average annual CO_2 attributable to generation of electricity delivered at retail by the LDC during the base period. The other 25 percent of emission allowances will be distributed based on the average annual retail electricity deliveries of each electricity LDC for the base period. This section requires regulations to ensure against excess distribution of allowances, a quantity of emission allowances that is greater than the annual quantity of CO_2 emissions attributable to the generation of electricity delivered for the base period. Any emission allowances withheld from distribution to an LDC shall be distributed among all remaining LDCs.

Emission allowances distributed to LDCs under this section shall be used exclusively for the benefit of the retail ratepayers, and may not be used to support electricity sales or deliveries to individuals or entities other than those ratepayers. The ratepayer benefits are to be distributed on a pro rata basis: based on electricity delivers to each class, and equitably among individual ratepayers within each ratepayer class. In general, the LDC shall not use the value of emission allowances distributed to provide any ratepayer a rebate that is based solely on the quantity of electricity delivered to the ratepayer. The LDC shall provide the rebates with regard to the fixed portion of ratepayer bills; or as a fixed credit or rebate on electricity bills. If compliance with the requirements of this title in an increase in electricity costs for residential or industrial retail ratepayers of an LDC, the LDC must pass through the pro rata shared (based on deliveries to each ratepayer class) volume of the emission allowances in order to reduce electricity cost impacts on industrial and residential retail class ratepayers.

No LDC is eligible to receive emission allowances for ratepayer benefit unless the state regulatory authority (with authority over the retail rates of the LDC, or the entity with authority to regulate or establish retail electricity rates) has, after public notice and an opportunity for comment, promulgated a regulation or completed a rate proceeding to ensure that allowances will be used under the conditions described above for ratepayer benefit.

In accordance with this subsection, the Administrator shall prescribe requirements governing program implementation plans and reports to be submitted. Starting no later than April 30, 2012, and every five years thereafter through 2027, each LDC shall submit to the Administrator a plan, approved by a State regulatory authority or entity, describing the measures to be carried out by the LDC for the disposition of the value of emission allowances to be received. And no later than June 30, 2014, and annually thereafter through 2031, each LDC shall submit to the Administrator and relevant State regulatory authority or entity, a report describing the disposition value of any emission allowance received by the LDC during the preceding calendar year. The Administrator shall audit a representative sample of LDCs to ensure that emission allowances distributed have been used exclusively for the benefit of retail ratepayers and that LDCs are complying with the requirements, and make the report available to the public, starting in 2013 and annually thereafter. The Comptroller General of the United States, incorporating results from the most recent audit report of the Administrator, shall conduct an in-depth evaluation and make the report available to the public, no later than April 30, 2016, and every 3 years thereafter through 2027. The Administrator shall also submit to Congress a report including an evaluation of the disposition of the value of emission allowances received and recommendations on ways to more effectively direct the value of allowances to reduce costs for consumers, and contain the overall costs of GHG emission reduction program starting no later than April 30, 2015, and every 3 years thereafter through 2026. Also, not later than one year after the date of enactment of this title, the Administrator shall submit to Congress a report on the projected effect of the allowance distribution system under this section on retail electricity rates for the customers of regulated utilities with wholesale power sales.

Not later than March 1, 2014, and annually thereafter, the Administrator shall distribute emission allowances of the preceding vintage year to the owner or operator of the preceding vintage year in a quantity equal to the product obtained by multiplying 0.5, the qualifying emissions for the merchant coal unit for the preceding calendar year, and the phase-down factor for the preceding calendar year.

The qualifying emissions for a merchant coal unit for a calendar year shall be equal to the product obtained by multiplying the number of megawatt hours of merchant coal unit sales generated during the calendar year and the average CO_2 emissions per megawatt hour generated by the unit during the base period. The number of megawatt hours of merchant coal unit generated during the calendar year shall be reduced based on the portion of the CO_2 emissions of the unit that are captured and sequestered or attribute to the combustion or gasification of biomass.

For the purposes of this subsection, the base period of a merchant coal unit shall be calendar years 2006 through 2008; or in the case of a new merchant coal unit, the first calendar year of operations of the unit, if the unit commences operations before January 1, 2012; calendar year 2012 if the unit commences operations during the period between January 1, 2012 and September 30, 2012; or calendar year 2013 if the unit commences operation between October 1, 2012, and December 31, 2012.

The Administrator shall identify an annual phase-down factor applicable to the distribution to merchant coal units for 2013 through 2029 that corresponds to the overall decline in the quantity of emission allowances allocated to the electricity sector for those years.

The Administrator, in consultation with FERC, shall conduct a study not later than five years after the date of enactment to determine whether the allocation formula results in windfall profits, or substantially disparate treatment of merchant coal generators operating in different markets or regions. If the study makes a positive determination, the Administrator must promulgate regulations within 18 months of the study, readjusting the allocation formula to mitigate the windfall profits and disparate treatment.

Of the total quantity of emission allowances for distribution to the electricity sector for each vintage year the Administrator will distribute not more than 10 percent to merchant coal units. Not later than March 1, 2014, and annually thereafter through 2030, the Administrator shall distribute to the owner or operator of each long-term contract generator a quantity of emission allowances of the proceeding vintage year that is equal to the number of tons of CO_2 emitted as a result of a qualifying electricity sales agreement and the incremental number of tons of CO_2 emitted solely as a result of qualifying thermal sales. The Administrator will not distribute more than 4.3 percent of the total quantity of emission allowances available for the vintage year for distribution to the electricity sector.

Subtitle B—Investing in Low-carbon Heating and Energy Efficiency for Consumer Protection

Sec. 3101. Natural gas consumers.

This section amends Part G of the Clean Air Act (as amended by the previous section) by inserting after Sec. 782:

"Sec. 783. Natural gas consumers.

This section requires the Administrator to distribute to natural gas LDCs, for the benefit of the retail ratepayers, the quantity of emission allowances allocated for the following vintage years based on the annual average retail natural gas deliveries of each natural gas LDC for the period 2006 through 2008; or another three consecutive calendar-year period between January 1, 1999 and December 31, 2008. Before distribution of emission allowances for 2019, and every 3 years after, the Administrator shall update the distribution formula to reflect changes in the natural gas LDC service territory. For each successful three-year period, the Administrator shall distribute emission allowances on a pro rata basis based on the product obtained by multiplying the average annual natural gas deliveries per customer of each natural gas LDC during the period 2006 through 2008 or some an alternative 3-year period; and the number of customers of each natural gas LDC during the most calendar year for which the formula is updated.

Emissions distributed to a natural gas LDC under this section shall be used exclusively for the benefit of retail ratepayers and may not be used to support natural gas sales or deliveries to individuals or entities other than those ratepayers. A natural gas LDC shall not use the value of emission allowances distributed under this section to provide any ratepayer a rebate that is based solely on the quantity of natural gas delivered to the rate payer. Not less than 20 percent of the emission allowances distributed to natural gas LDCs per calendar year must be used for cost-effective energy efficiency programs for natural gas consumers.

Natural gas LDCs are only eligible to receive emission allowances under this section once a state regulatory entity over natural gas LDCs or another authority to regulate retail rates, has promulgated a regulation or completed a rate proceeding.

Each natural gas LDC is required to submit a plan approved by the state regulatory or other authority to the Administrator, not later than April 30, 2015, and every five years thereafter through 2025, describing the manner in which the natural gas company will dispose of the value of emission allowances to be received. Not later than June 30, 2017, and annually thereafter through 2031, each natural gas LDC must submit to the Administrator a report, approved by the state regulatory or other authority, describing the disposition of the value of any emission allowances received by the natural gas LDC during the preceding calendar year.

For each calendar year, the Administrator will audit a significant sample of natural gas LDCs to ensure that natural gas LDCs are complying with the requirements in this section and to ensure emission allowances distributed have been used for the exclusive benefit of the ratepayer. In general, not later than April 30, 2018, and every three years thereafter through calendar year 2026, the Comptroller General of the United States, incorporating results from the most recent audit reports of the Administrator, shall conduct an in-depth evaluation based on multiple criteria of and make available to the public a report on the investments pursuant to this section.

Sec. 3102. Home heating oil and propane consumers.

This section amends Part G of title VII of the Clean Air Act (as amended by the previous section).

"Sec. 784. Home heating oil and propane consumers.
The section requires the Administrator to distribute emission allowances among the States for each vintage year on a pro rata basis, based on the ratio that: the carbon content of home heating oil and propane sold to consumers within each State during the preceding year for residential or commercial uses bears to the carbon content of home heating oil and propane sold to consumes within the U.S. during the preceding year for residential or commercial uses.

The section instructs states to use emission allowances distributed under this section exclusively for the benefit of consumers of home heating oil and propane for residential or commercial purposes through cost-effective energy efficiency programs for consumers; or rebates or other direct financial assistance programs for consumers.

In administering this section, states are instructed to use not less than 50 percent of the value of emission allowances for cost-effective energy efficiency programs to reduce the overall fuel costs to consumers, deliver consumer support through existing energy efficiency and consumer energy assistance programs or delivery mechanisms, and seek to coordinate the administration and delivery of energy efficiency and consumer energy assistance programs.

Not later than one year after the date of receipt of the emission allowances, states must submit a report to the Administrator, in accordance with the Administrator's requirements. And not later than 18 months after the date of enactment of this title, the Administrator, in consultation with the Secretary of the Interior and Indian tribes, must promulgate regulations establishing a program to distribute the emission allowances made available to Indian tribes under this section.

If the Administrator determines a state or Indian tribe is not in compliance with this section, the Administrator may withhold a portion of the emission allowances, the quantity of which is equal to up to twice the quantity of the emission allowances that the state or Indian tribe failed to use in according with the requirement of this section.

Subtitle C—Consumer Relief

Sec. 3201. Funding for working families refundable relief program.

This section states that for each calendar year 2013 through 2029, the proceeds from auctioning 2.5 percent of emission allowances established for each year will be made available for the working families refundable relief program.

Sec. 3202. Refundable credit for working families relief.

This section amends Subpart C of Part IV of Subchapter A of Chapter 1 of the Internal Revenue Code of 1986 by inserting:

"Sec. 36D. Working families relief.

This section states that in the case of an eligible taxpayer, a credit equal to the working families relief amount can be used against the tax imposed by this subtitle for the taxable year beginning December 31, 2012. The amount allowable as credit for the taxable year will be reduced (but not below zero) by 0.5 percent for every $10 by which the taxpayer's household income for the taxable year exceeds the credit cap. The credit cap amount for any calendar year is the amount which is equal to the excess of 250 percent of the poverty line for the size of the family involved for the calendar year, over $2,000. This section also defines an eligible taxpayer as an individual whose household income for the taxable year is not less than the amount which is equal to the excess of 150 percent of the poverty line, over $1,000, and who is a nonresident alien individual.

The working family relief amount for any taxable year is the amount equal to the relief amount for the calendar year in which such taxable year begins, multiplied by the scale factor applicable to the eligible taxpayer's family size. The relief amount for each calendar year shall be determined by the Secretary based on expected revenues from the previous section. If there is a significant difference in the amount of aggregate credits with respect to the funding provided in the previous section, the Secretary may adjust the relief program for the following year.

The value of the credit provided under this section shall not be considered income or resources for any purpose under any federal, state, or local law, and no participating states or political subdivision of a state shall decrease assistance otherwise provided because of the receipt of a credit.

This section shall not apply to any taxable year beginning after December 31, 2029.

Sec. 3203. Funding for energy refund program.

This section requires, starting in 2013 and annually thereafter, an amount equal to the proceeds from auctioning 12.5 percent of emission allowances established for each year, be available for the Energy Refund Program.

Sec. 3204. Energy refund program.

This section amends Title XXII of the Social Security Act

"Sec. 2201. Energy refund program.

This section establishes the Energy Refund Program, which is administered by the Secretary, in consultation with the Commissioner of Social Security and the Secretary of Agriculture. A household is considered eligible if the gross household income does not exceed 150 percent of the poverty line, the state agency in which the household is located determines that the household is participating in some type of nutrition assistance program, and the household consists of a single individual or married couple; the program is limited to U.S. citizens, nationals, and legal residents.

An eligible household shall be entitled to receive monthly cash payments under this section in an amount equal to the monthly energy refund amount determined by EIA. Not later than August 31 of each relevant fiscal year, EIA shall estimate the annual total loss in purchasing power that will result from this Act in the next fiscal year for households of each size with gross income equal to 150 percent of the poverty line. The amount of the monthly energy refund for an eligible household shall be: for households with 1-4 members, 1/12 of EIA's estimates, rounded to the nearest dollar; and for households with more than 5 members, 1/12 of EIA's of EIA's arithmetic mean value. For any fiscal year after 2026, for which there is not enough funds, the Secretary shall direct State agencies to reduce the amount of such refunds on a pro rata basis to ensure that the program is deficit neutral.

The energy refund shall be delivered in monthly installments via direct deposit, the state's electronic benefit transfer system, or another federal or state mechanism. These systems of payment shall protect the privacy of energy refund applicants and recipients, provide energy fund recipients with choices, ensure ease of use and access to funds, protect in a cost-effective manner against improper access of funds, ensure interoperability of the Energy Refund Program between states and permit monitoring and investigation by authorized law enforcement agencies, and shall include standards to protect applicant and recipient households from fraud and abuse. State agencies shall assume responsibility for the certification of applicant households and for the issuance of refunds. Subject to standards deemed appropriate by the Secretary, the State agency shall reimburse each State agency for 100 percent of administrative costs. The section also directs the Secretary to streamline eligibility for certain beneficiaries of federal programs

The value of the refund provided under this section shall not be considered income or resources for any purpose under any federal, state, or local laws, including, but not limited to, laws relating to income tax, or public assistance programs, and no participating state or political subdivision thereof shall decrease any assistance otherwise provided an individual(s) because of the receipt of a refund from this section.

Sec. 3205. Study on mechanisms for delivering universal refund.

This section directs the Comptroller General of the United States to complete and submit a study to Congress on the feasibility of administering consumer refunds on a per capita basis by means of a monthly electronic transfer.

Sec. 3206. Establishment of Universal Trust Fund.

This section establishes a Universal Trust Fund beginning in calendar year 2026 in the Treasury of the United States. Of the amounts deposited into the Universal Trust Fund for each calendar year, 25 percent shall be used for deficit reduction; and 75 percent shall be used for the universal refund program.

Sec. 3207. Universal refund.

This section amends Subpart C of Part IV of Subchapter A of Chapter 1 of the Internal Revenue Code of 1986 by inserting:

"Sec. 36E. Universal refund.

This section establishes a credit (universal relief fund) against the tax imposed for the taxable year beginning after December 31, 2025. The universal relief amount is equal to the relief amount for the calendar year multiplied by the scale factor applicable to the eligible taxpayer's family size. The scale factor with respect to any eligible taxpayer for any taxable year shall be determined by the following: If the taxpayer's family size for a taxable year is 1, the scale factor is 1.0; if the family size is 2, the scale factor is 1.35; if the family size is 3, the scale factor is 1.69; if the family size is 4, the scale factor is 2.04; if the family size is 5 or more, the scale factor is 2.38.

The value of the credit provided under this section shall not be considered income or resources for any purposes under any federal, state, or local law, and no participating state or political subdivision of a state shall decrease any assistance otherwise provided 1 or more individuals because of the receipt of a credit under this section.

Subtitle D—Advocating for Consumers

Sec. 3301. Office of Consumer Advocacy.

This section establishes an independent Office of Consumer Advocacy to serve as an advocate for the public interest. The Office shall be headed by a Director appointed by the President, with the advice and consent of the Senate. To be eligible for appointment, an individual shall be a member of the Federal Bar and have experience in public utility proceedings. The office may represent, and appeal on behalf of, energy customers on matters concerning rates or service of public utilities and natural gas companies under the jurisdiction of the Commission; monitor and review energy customer complaints and grievances on matters concerning rates or service of public utilities and natural gas companies; investigate independently, or within the context of formal proceedings, the services provided by, the rates charged by, and the valuation of the properties of, public utilities, and natural gas companies; develop means to ensure that the interests of energy consumers are adequately represented in the course of any hearing; collect data concerning rates or service of public utilities and natural gas companies; and prepare and issue reports and recommendations.

The Director shall establish an advisory committee to be known as the "Consumer Advocacy Advisory Committee" to review public utility and natural gas company rates, services, and disputes; and to make recommendations to the Director. The Director shall appoint 5 members to the Advisory Committee, including 2 individuals that represent State Utility Consumer Advocates; and 1 individual from an NGO to represent consumers.

Nothing in this section affects the rights or obligations of State Utility Consumer Advocates. This section also appropriates such sums as are necessary to carry out this section.

TITLE IV—JOB PROTECTION AND GROWTH

Subtitle A—Protecting American Manufacturing Jobs and Preventing Carbon Leakage

Sec. 4001. Ensuring real reductions in industrial emissions.

"PART F—ENSURING REAL REDUCTIONS IN INDUSTRIAL EMISSIONS

"Sec. 771. Purposes.

This section sets out the purposes of this part. These include: 1) aiming to promote a strong global effort to reduce GHG emissions and avoid dangerous climate change; 2) avoiding leakage of GHG emissions to countries outside the United States as a result of direct and indirect compliance costs, and compensating the owners and operators of entities in eligible domestic industrial sectors for GHG emission control costs, but not for costs resulting from other market dynamics; 3) ensuring that compensation is sufficient to prevent carbon leakage while still rewarding innovation and facility-level energy efficiency improvements; and 4) eliminating or reducing assistance when it is no longer necessary. Additionally, the provisions in this portion of the Act are intended to spur foreign countries, particularly fast-growing developing countries, to reduce their GHG emissions through mechanisms that are consistent with international agreements and obligations.

"Sec. 772. Definitions.

This section sets out definitions for this part of the Act. "Carbon leakage" is defined as any substantial increase in GHG emissions by industrial entities located in countries without commensurate GHG regulation, provided that such increase is caused by an incremental cost of production increase in the United States resulting from the implementation of the Act.

"SUBPART 1—EMISSION ALLOWANCE REBATE PROGRAM

"Sec. 773. Eligible industrial sectors.

This section requires that EPA shall publish, not later than June 30, 2011, a list of industrial sectors eligible to receive emission allowance rebates, to be updated in 2013 and every four years thereafter. Presumptive eligibility to receive rebates shall be based on meeting two conditions: having an energy or GHG intensity of at least five percent, and having a trade intensity of at least 15 percent. Sectors with an energy or greenhouse gas intensity of at least 20 percent would also qualify, regardless of trade intensity.

Energy intensity is calculated by dividing the cost of purchased electricity and fuel costs of the sector by the value of the shipments of the sector. GHG intensity is calculated by dividing: 1) the number 20 multiplied by total tons of CO_2e (including emissions from direct fuel combustion, process emissions, and indirect emissions from electricity use) of the sector, by 2) the value of the shipments of the sector. Trade intensity is calculated by dividing the value of the total imports and exports of a sector by the sum of the value of its shipments plus the value of its imports.

Additional industrial sectors are able to petition EPA to become eligible upon a showing that they meet the specified criteria. Petroleum refining is not considered an eligible sector under this section, but is addressed under Sec. 781.

"Sec. 774. Distribution of emission allowance rebates.

This section directs the Administrator to annually distribute emission allowances to the owners and operators of entities in eligible energy-intensive, trade-exposed industries (See Appendix). From 2013 through 2015, allowances are distributed for indirect costs only (based on entities' indirect carbon factors, defined below). From 2016 to 2025, entities receive allowances based on both their direct and indirect carbon factors. For non-covered, eligible entities, the rebates would be based on an entity's indirect carbon factor only. Unless modified by Presidential determination under Sec. 776, beginning in 2026, the level of allowance distribution decreases by 20 percent (of the allowances available each year from 2016 to2025) each year until phasing out completely in 2030. If a facility ceases to be eligible (i.e., ceases operations) the owner would no longer receive allowances and would have to surrender any received for future years, and would have to return, on a pro-rated basis, any received for the year in which the facility ceases to be eligible.

The direct carbon factor is calculated by multiplying the average output of the covered entity for the two years preceding the rebate distribution year by the average direct greenhouse gas emissions (in CO_2e) per unit of output for all covered entities in the sector. The indirect carbon factor for an entity is the product of its average output (for the two years preceding the rebate distribution year) multiplied by both its electricity emissions intensity factor (the emissions intensity of each facility's electric power supplier) and the electricity efficiency factor (the sector average electricity use per unit of output).

The electricity emissions intensity factor (in tons of CO_2e/kWh) is determined by dividing: 1) the annual sum of the hourly product of the electricity purchased by an entity, multiplied by the cost the seller of the electricity passes to the entity per ton of CO_2e per kWh, by 2) the total kWh of electricity purchased by the entity from that seller in that year. The electricity efficiency factor is the average amount of electricity (in kWh) used per unit of output for all entities in the relevant sector/subsector. If an entity's electricity provider receives free allowances and uses them for the benefit of industrial consumers, the Administrator can adjust the indirect carbon factor to avoid granting the entity allowance rebates for avoided costs.

Direct and indirect carbon factors for eligible facilities are calculated using average output data for the two years preceding the year of distribution, and the most recent sectoral emissions intensity data (GHG per unit of production). Average direct GHG emissions per unit of output, for all covered entities in each eligible sector, are calculated every four years using the most recent five years of data. To help guarantee improvements in efficiency, the average direct GHG emissions per unit of output for a sector will never be greater than it was in a previous calculation. Similarly, when recalculated, the electricity emissions intensity factor will not be greater than it was in a previous year.

"SUBPART 2—PROMOTING INTERNATIONAL REDUCTIONS IN INDUSTRIAL EMISSIONS

"Sec. 775. International negotiations.

This section states that Congress finds the purposes described in Sec. 771 can best be achieved through international agreements. As a statement of policy, it further states that the United States should work through the UNFCCC and other forums to achieve binding agreements, including sectoral agreements, committing all major greenhouse gas emitting nations to contribute equitably to the reduction of global GHG emissions.

This section states that the President must notify each foreign country that is subject to the International Reserve Allocation program (described in the next section) of both the policy goals in this section, and that, beginning in January 2020**,** if the President determines that the allowance rebate program described above is not sufficient to compensate eligible sectors for their compliance costs, the international reserve requirement may apply to covered goods produced in that sector in their country.

"Sec. 776. Presidential reports and determinations.

This section requires the President, not later than January 1, 2019, and every two years thereafter, to submit a report to Congress on the effectiveness of the allowance rebates granted to energy intensive, trade exposed industries in mitigating carbon leakage in eligible sectors, and if an international reserve allowance program is warranted for each sector. Unless a binding international agreement consistent with the policy goals in Sec. 775 is in place, beginning in 2020 the President shall require emission allowances (called international reserve allowances) to accompany imported products in energy-intensive, trade-exposed sectors (although as described in Sec. 777 below, the President may choose not to establish such a program for a given sector, but rather grant it more allowances).

The program would not apply if more than 70 percent of global production in a given sector comes from countries that meet one or more of the following conditions: they are party to an international treaty and have agreed to emissions reductions at least as stringent as those in the U.S.; they are parties to an international sectoral agreement to which the United States is a party; or they have energy or GHG intensities in that sector no higher than in the U.S. If 70 percent or less of global production comes from countries meeting one or more of these criteria, as soon as possible (but no later than June 30, 2023) the President shall assess how effectively the allowance rebates to eligible sectors and electricity provider allowance allocations are addressing leakage, and the extent to which the reserve allowance program has addressed (or could address) leakage in those sectors. Based on these findings, for a given sector the President may extend the level and duration of the allowance rebate program, apply or continue to apply an international reserve allowance program, or both.

"Sec. 777. International reserve allowance program.

This section requires the Administrator to issue, by January 1, 2020, regulations establishing the international reserve allowance program, including regulations ensuring that the price for international reserve allowances is equivalent to the auction clearing price for emission allowances, and establishing a methodology for determining how many international reserve allowances importers must submit with covered goods. These regulations require the submission of appropriate amounts of such allowances in conjunction with the importation into the United States of a covered good produced by any eligible energy-intensive, trade-exposed sector or subsector.

Countries are considered exempt from these requirements if they meet the criteria in section 776, are considered Least Developed Countries, or account for less than 0.5 percent of total global GHG emissions and less than five percent of global production in a particular sector. In establishing the number of international reserve allowances, the Administrator shall take into account the allowance rebates received by eligible sectors, and if they are sufficient to offset a sector's direct and indirect costs, no international reserve allowances will be made available in that sector (i.e., the reserve allowance program will not go into effect as long as the allowance rebates to eligible sectors fully offset their compliance costs). International reserve allowances may not be held by covered entities for domestic? compliance purposes pursuant to section 722.

The President may choose *not* to establish an international reserve allowance program if he determines (and certifies to Congress) that doing so is not in the national interest; however, additional allowances (in a quantity sufficient to address carbon leakage) must be made available to sectors for which such a program is not established.

"Sec. 778. Iron and steel sector.

This section specifies that entities using integrated iron and steel-making technologies and entities using electric arc furnace technologies shall be considered as the same industrial sector.

Sec. 4002. Domestic fuel production.

This section amends Part G of Title VII of the Clean Air Act (as amended by Sec. 2213) by adding:

"Sec. 796. Allocations to refineries.

This section provides emission allowance rebates to petroleum refineries in a manner that promotes energy efficiency and a reduction in GHG emissions. Allowance rebates will be provided for vintage years 2013 through 2026, and allocation factors for each refinery are calculated by multiplying a refinery's intensity factor (its emissions per unit of output divided by the overall emissions intensity of the petroleum refining sector) by its production factor (the quotient obtained by dividing its output by the overall output of the petroleum refining sector). The Administrator shall consider whether or not the refinery's electricity provider received emission allowances that were used for the benefit of the refinery. The Administrator must also calculate a total sectoral allocation factor, based on the sum of all individual refinery allocation factors; refineries receive allowances based on the product of 1) their allocation factor divided by the sectoral allocation factor, multiplied by 2) the total number of allowances available under this section in a given year.

Sec. 4003. Advanced energy project credit.

This section amends the Sec. 48C of IRS code to increase the total amount of credits available for advanced energy projects from $2.3 billion to $7.3 billion and extend the application period from two to three years, and the period of issuance from three to five years.

Sec. 4004. Report on the utilization of tax incentives.

This section requires the Comptroller General of the United States to provide to Congress an evaluation of all existing energy tax incentives by January 1, 2013. The report shall include recommendations regarding whether each incentives should be terminated, extended, or modified.

Subtitle B—Clean Energy Technology and Jobs

PART I—CLEAN ENERGY CAREER DEVELOPMENT

Sec. 4101. Clean energy curriculum development grants.

This section authorizes the Secretary of Education to award grants, on a competitive basis, to support the development of programs of study that are focused on emerging careers and jobs in clean energy, renewable energy, energy efficiency, climate change mitigation, and climate change adaptation. Eligible partnerships for the development of these programs can include local education agencies, career or technical education schools, post-secondary institutions, and community representatives including businesses, labor organizations, and industry.

Sec. 4102. Development of information and resources clearinghouse for vocational education and job training in renewable energy sectors.

This section requires the Secretary of Labor, in consultation with the Departments of Energy and Education, within 18 months of enactment, to develop an internet-based information and resources clearinghouse to aid career and technical education and job training programs for the renewable energy sectors.

Sec. 4103. Clean energy construction careers demonstration project.

This section requires the Secretary of Labor, within 180 days of enactment, to establish a green construction demonstration project aimed at promoting middle class careers among targeted workers while advancing efficiency and performance in the green construction sector.

PART II—TRANSPORTATION

SUBPART A—INVESTING IN CLEAN VEHICLES

Sec. 4111. Investing in clean vehicles.

The U.S. Treasury Department? shall create a "Clean Vehicle Technology Fund" (CVTF) for the EPA to provide grants to vehicle manufacturers and component suppliers for vehicles assembled in the U.S. The CVTF applies to advanced light-duty vehicles as well as plug-in electric drive or hybrid electric, hybrid hydraulic, and fuel-cell drive medium- and heavy-duty vehicles. The CVTF is to give at least 25 percent of funds for plug-in electric vehicle (PEV) development and manufacturing; no funds are to go to manufacturers that do not comply with CAFE standards; 20 percent of funds are for deployment support; and five percent of funds are for the PEV pilot program defined in Sec. 1701.

SUBPART B—POWERING VEHICLES WITH NATURAL GAS

Sec. 4121. Credit for qualified natural gas motor vehicles.

This section extends the Liquefied or Compressed Natural Gas (NG) vehicle tax credit to 2020 and sets it at $10,000 for vehicles less than 8,500 pounds, $20,000 for vehicles between 8,500 and 14,000 pounds, $50,000 for vehicles between 14,000 and 26,000 pounds, and $80,000 for vehicles more than 26,000 pounds. For vehicles less than 8,500 pounds, the tax credit is available for purchasers that own at least 10 vehicles and buy at least 3 NG vehicles.

The definition of a mixed fuel vehicle is changed to 65 percent CNG/LNG and 35 percent petroleum-based or 75 percent alternative fuel and 25 percent petroleum-based.

The NG vehicle credit is made available for those that qualify for Alternative Minimum Tax.

Sec. 4122. Natural gas vehicle bonds.

This section amends the Internal Revenue Service code to add the following:

"Sec. 54G. Natural gas vehicle bonds.

This section allows state and local governments to issue bonds to finance natural gas projects for up to $3 billion nationally through 2019.

Sec. 4123. Incentives for manufacturing facilities producing vehicles fueled by compressed or liquefied natural gas.

This section amends the Internal Revenue Service code to add the following:

"Sec. 179F. Expensing for manufacturing facilities producing vehicles fueled by compressed natural gas or liquefied natural gas.

This section allows natural gas vehicle production facilities built before 1/1/2015 to deduct? 100 percent of the cost for tax purposes. The deduction is 50 percent if the facility is built before 1/1/2020.

Sec. 4124. Study of increasing natural gas and liquefied petroleum gas vehicles in Federal fleet.

This section requires the General Services Administration, the EPA, and the Department of Energy to conduct a study of how to increase the number of light-, medium-, and heavy-duty vehicles powered by natural gas or liquefied petroleum gas in the federal fleet.

SUBPART C—COMMUNITY INFORMATION

Sec. 4131. Notice of hydraulic fracturing operations.

This section requires hydraulic fracturing companies to disclose all chemicals used in hydraulic fracturing operations to the public on the Internet.

SUBPART D—ADDITIONAL GREENHOUSE GAS STANDARDS

Sec. 4141. Emission standards for mobile sources.

This section amends the Clean Air Act by adding the following section:

"Sec. 804. Greenhouse gas emission standards for mobile sources.

This section includes engines that are not internal combustion engines (e.g., electric vehicles) in the definition of nonroad vehicle engines. By December 31, 2010, the EPA shall promulgate GHG emission standards for new heavy-duty engines and vehicles. The EPA shall also define GHG emission standards for appropriate nonroad engines vehicle and vehicles. The EPA shall also establish new GHG emission standards for light-duty vehicles after model year 2016.

PART III—AGRICULTURE

Sec. 4151. Definitions.

This section offers the definitions for this part.

Sec. 4152. Carbon conservation program.

This section directs the Secretary of Agriculture to establish, and jointly administer with the Secretary of the Interior, a carbon conservation program. The Chief of the Forest Service is designated to carry out all forestry-related components.

The purpose of the program is to provide incentives for activities that reduce GHG emissions or permanently store carbon. Projects conducted under this title cannot receive offset credits for the same activity under Title I. Other purposes include rewarding the continuation by early adopters of conservation practices, supporting the development of new methodologies for landowners related to offset projects under Title I, improving management of privately-owned and Federal land, and avoiding the conversion of land that would result in increased GHG emissions.

In carrying out this program, the Secretaries are directed to provide incentives for projects that reduce GHG emissions or sequester carbon through conservation easements, sequestration contracts, timber harvest or grazing contracts, or any combination of these.

The Secretary of Agriculture is to enroll acreage in this program through the use of permanent easements. To be eligible for enrollment, the easements need to provide measureable carbon sequestration benefit.

The Secretary of Agriculture may also offer sequestration contracts for a period of ten years. A non-forestry contract holder may withdraw from a contract without penalty after five years. The compensation provided under a contract is to be commensurate with the emission reductions obtained and the duration of the reductions. Once a contract for a project under this subsection expires, future reductions may be eligible to receive offset credits pursuant to Title I. Regulations for addressing reversals must be developed.

The Secretaries are directed to offer financial incentives through timber harvest contracts entered into by the Forest Service or Bureau of Land Management for projects that sequester or reduce GHGs. Similarly, the Secretaries are directed to offer incentives to leaseholders through grazing contracts entered into by these agencies.

Sec. 4153. Carbon Conservation Fund.

This section establishes a separate account in the Treasury to carry out this title. All amounts deposited into the fund are to be available without further appropriation or limitation.

PART IV—MANUFACTURING AND TECHNOLOGY

Sec. 4161. Low-carbon industrial technologies research and development.

This section directs the Secretary of Commerce to establish a "National Industrial Innovation Institute," which would be charged with supporting the development of technologies that improve the competitiveness of, and job creation in, the domestic manufacturing sector. While the Institute would be federally funded, it would be managed by a nonprofit, nongovernmental organization. The institute is specifically directed to carry out research and development projects that improve the efficiency and competitiveness of domestic manufacturing and reduce the energy consumption and greenhouse gas emissions of domestic manufacturers.

Additionally, the Secretary of Commerce and the Secretary of Energy are required to enter into a memorandum of understanding, no later than 180 days following enactment, to improve collaboration between the Commerce Department's Hollings Manufacturing Partnership Program and the Energy Department's Industrial Technologies Program. Funds are authorized to be appropriated in the amount necessary to carry out this section.

Sec. 4162. Technical amendments.

This section offers technical amendments to U.S. code that establishes the Hollings Manufacturing Partnership Program.

TITLE V—INTERNATIONAL CLIMATE CHANGE ACTIVITIES

Sec. 5001. Statement of policy.

This section states that it is the policy of the United States: to recognize that global climate change is a potentially significant national and global security threat multiplier; to protect Americans from the impacts of climate change through global emissions reductions; to recognize that? global climate change will have a disproportionate impact on developing countries; to take measures to address emissions from, and drivers of, deforestation; to recognize that it is the national interest of the U.S. to assist developing countries to reduce and ultimately halve emissions from deforestation; to support the deployment of clean energy technologies through exports; to provide assistance to developing countries with varying climate change adaptation challenges?; to provide predictable, stable, and sufficient financing to support global climate change goals and leverage private financing mechanisms; to engage in bilateral and multilateral approaches; and to recognize the strengths of the UNFCC as a primary forum for an agreement on global climate change.

Sec. 5002. Definitions.

This section defines various terms used in this title.

Sec. 5003. Strategic Interagency Board on International Climate Investment.

This section establishes the Strategic Interagency Board on International Climate Investment within 90 days after the enactment of this Act. The Board is composed of various Secretaries, Administrators of EPA and USAID, and such other relevant officials as the President may designate. The duties of the Board shall include assessing, monitoring, and evaluating the progress and contributions of relevant departments and agencies of the federal government in supporting financing for international climate change activities.

Sec. 5004. Emissions reductions through reduced deforestation.

Within two years of enactment of this Act, the Administrator of USAID, in consultation with the Administrator of the EPA, Secretary of Agriculture, and the head of any other appropriate agency, shall establish a program to provide assistance to reduce GHG emissions from deforestation in developing countries. The objective of this program shall be: to achieve emission reductions of at least 720 million tons of CO_2 equivalent in 2020, a cumulative amount of at least 6 billion tons of CO_2 equivalent by December 31, 2025, and additional emission reductions in subsequent years; to build capacity to reduce deforestation at the national level in developing countries experiencing deforestation; to preserve existing forest carbon stocks in countries where forest carbon may be vulnerable to international leakage; to build scientific knowledge and institutional capacity to help developing countries; and to reduce deforestation in ways that reduce the vulnerability and increase the resilience to climate impacts for forests and forest-dependent products.

An eligible country is a developing country that the Administrator determines: is experiencing deforestation or forest degradation or has standing forest carbon stocks that may be at risk of deforestation or degradation; has legal regimes, standards, and safeguards to ensure that the rights and interests of indigenous people and forest-dependent communities are protected; and has entered into a bilateral or multilateral agreement or arrangement with the U.S., or is part of an international program supported by the U.S. If a developing country does not meet the aforementioned requirements, they may receive assistance for the purpose of building capacity to meet such a requirement.

The Administrator may support activities to achieve objectives, including activities such as: national deforestation reduction; subnational deforestation and forest degradation reduction; measuring, monitoring, and verifying deforestation, avoided deforestation, and rates of deforestation; leakage prevention; the development and implementation of measurement, monitoring, reporting, and verification capacities and governance structures; the identification of, and actions to address the drivers of land use emissions; the development and strengthening of governance capacities to reduce deforestation and other land use emissions and to combat illegal logging and associated trade; the provision of incentives for policy reforms to achieve the objectives; the development of pilot projects to examine where mitigation and adaptation activities in forest ecosystems coincide, and explore means for enhancing the resilience of forest ecosystems and forest-dependent communities; the promotion of mechanisms to deliver resources for local action and to meet the needs/interest of local parties; and monitoring and evaluation of the results and activities under this section.

The Administrator shall establish program criteria that: ensure that emission reductions achieved through supported activities are additional, measurable, verifiable, and monitored, and account for leakage, uncertainty and permanence; require the establishment of a national deforestation baseline for each country with national deforestation reduction activities; provide that each national deforestation baseline is national in scope, consistent with nationally appropriate mitigation commitments or actions; establish a trajectory that would result in zero net deforestation within 20 years after the date on which the baseline is established, is adjusted over time to account for changing national circumstances, and is designed to account for all significant sources of GHG emissions from deforestation in the country; apply a conservative discount factor to reflect the uncertainty regarding the levels of reductions achieved for subnational deforestation reduction activities that lack standardized or precise measures and monitoring techniques; and seek to ensure the establishment and enforcement of legal regimes, standards, processes, and safeguards by the country in which the activities occur.

If the Administrator determines, in consultation with the EPA Administrator, that sufficient methodologies and technical capacities exist to measure, monitor, and account for the emissions referred to above, the Administrator may expand the eligible activities under this title, as appropriate, to include reduced soil carbon-derived emissions associated with deforestation and degradation of forested wetlands and peatlands, or other land use types. The Administrator shall also establish a publicly accessible registry of the emission reductions achieved through support provided under this title each year, after appropriately discounting for uncertainty and other relevant factors as required by the program standards.

The Administrator shall also establish and implement an international deforestation reduction program insurance account for noncompletion or reversal. And beginning 8 years after the date on which a country entered into the agreement or arrangement required under this section, the Administrator shall determined whether assistance should be provided to country under this title for subnational deforestation reduction activities. The Administrator may extend support for an additional 5 years if the Administrator determines the country is making substantial progress towards adopting and implementing a program to achieve reductions in deforestation measured against a national baseline, the GHG emissions reductions achieved are not resulting in significant leakage and reductions achieved are being appropriately discounted to account for any leakage that is occurring.

Subject to the direction of the President, the Administrator shall seek to align activities under this section with broader development, poverty alleviation, or natural resource management objectives and initiatives in the recipient country.

The provisions of assistance for activities under this title shall be used to supplement, not supplant, any other federal, state, or local support available to carry out such qualifying activities. There are authorized to be appropriated to carry out this section such sums as are necessary.

Sec. 5005. International Climate Change Adaptation and Global Security Program.

This section establishes an International Climate Change Adaptation and Global Security Program to provide assistance in accordance with the requirements of this title. Assistance under this program shall be used to supplement, not supplant, any other federal, state, or local resources available to carry out activities. The program shall distribute support: in the form of bilateral assistance; to multilateral funds or international institutions pursuant to UNFCCC; or any combination thereof.

For any fiscal year, the Secretary of State, or such other federal agency head as the President may designate, shall oversee the distribution of assistance and provide not less than 40 percent, and not more than 60 percent, of the assistance available to carry out the Program to one or more multilateral funds or international institutions that meet the requirements of this section. The Secretary of State shall notify the appropriate Congressional committees not later than 15 days before providing assistance to a multilateral fund or international institution. An eligible multilateral fund or international institution is one established pursuant to the UNFCCC or an agreement negotiation under the UNFCCC and that meets specific requirements outlined in Sec. 5005(d)(2).

The Administrator shall provide assistance to the most vulnerable developing countries for the development of national or regional climate change adaptation plans, including a systematic assessment of socio-economic vulnerabilities; programs and activities to support the development of associated national policies; planning, financing, and execution of adaptation programs and activities; the development of gender-sensitive frameworks, strategies, and policies; to support investments, capacity-building activities, and other assistance to reduce vulnerability and promote community-level resilience; to support climate change adaptation research in or for the most vulnerable developing countries; to support the deployment of technologies to help the most vulnerable developing countries to respond to the destabilizing impacts of climate change; to encourage the engagement of local communities; and to carry out other appropriate programs or activities.

In carrying out this section, the Administrator will support activities and programs: to promote resilience and adaption to water scarcity; to support the enhancement and diversification of agriculture, forestry, and other livelihoods; to encourage the protection and rehabilitation of natural ecosystems in order to provide increased resilience to climate change for local communities; to support disaster risk management; to support investments and other assistance in sustainable infrastructure; to increase data access and strengthen early warning systems; to support other programs and activities; and to support activities that promote healthy and productive marine and coastal ecosystems.

In prioritizing assistance under this section, the Administrator shall give priority to countries and communities that are the most vulnerable to the adverse impacts of climate change. The Administrator shall also seek to ensure that local communities in areas in which any programs or activities are carried out pursuant to this section, are engaged in the design, implementation, monitoring, and evaluation of the programs and activities. Appropriations as necessary are authorized for this section.

Sec. 5006. Evaluation and reports.

The section requires the Strategic Interagency Board on International Climate Investment to establish and implement a system to monitor and evaluate the effectiveness and efficiency of assistance provided under this title. Not later than one year after the date of enactment of this Act, and annually thereafter, the Board shall submit to the appropriate committees of Congress a report that describes the steps federal agencies have taken and progress made toward accomplishing the objectives of this section; and ramifications of any potentially destabilizing impacts climate change may have on U.S. interests. Within three years after enactment of this Act, and triennially thereafter, the Board, in cooperation with the National Academy of Sciences, shall review the global needs and opportunities for climate change investment in developing countries, and submit to Congress a report that describes the findings of the review.

Sec. 5007. Report on major economies climate actions.

This section requires the Secretary of State, working with the Board, to prepare a biannual interagency report on climate change and energy policy for the five highest greenhouse emitting countries that are not members of the OECD. The purposes of the report are: to provide a better understanding of the steps that the five highest non-OECD countries are taking to reduce GHG emissions; to identify the means by which the United States can assist such countries in achieving such a reduction; and to assess the climate change and energy policy commitments and actions of such countries.

The context of the report shall include: a summary of the scope, rigor, and effectiveness of the actions being taken; a summary of the national or subnational plans, policies, programs, laws, regulations, incentive mechanisms, and other measures in such countries that are expected to result in, or have resulted in, reduction in energy use and GHG emissions; and recommendations for areas in which U.S. capacity building or other support could assist such countries in improving implementation or compliance with such plans, policies, programs, laws, regulations, incentive mechanisms, and other measures.

No later than 15 months after the date of enactment of this Act, and every 180 days thereafter, the Secretary of State shall submit the report prepared under this section.

TITLE VI—COMMUNITY PROTECTION FROM CLIMATE CHANGE IMPACTS

Sec. 6001. Definitions.

This section defines key terms specific to this part.

Sec. 6002. Council on Environmental Quality.

This section requires the Chair of the Council on Environmental Quality (CEQ) to advise the President on implementation and development of the Natural Resources Climate Change Adaptation Strategy required under Sec. 6004(a) and the federal natural resource agencies adaptation plans required under Sec. 6006; to serve as the Chair of the Natural Resources Climate Change Adaptation Panel established under Sec. 6003(a); and to coordinate federal agency strategies, plans, and activities related to natural resources adaptation.

Sec. 6003. Natural Resources Climate Change Adaptation Panel.

This section requires the President, not later than 90 days after enactment, to establish a Natural Resources Climate Change Adaptation Panel (“the Panel”) chaired by CEQ. The Panel consists of the heads of:

- National Oceanic and Atmospheric Administration (NOAA);
- the Forest Service;
- the National Park Service;
- the U.S. Fish and Wildlife Service;
- the Bureau of Land Management;
- the U.S. Geological Service (USGS);
- the Bureau of Reclamation;
- the Bureau of Indian Affairs;
- EPA;

- the Army Corps of Engineers;
- the CEQ; and
- other federal agencies or departments as appropriate.

<u>Sec. 6004. Natural Resources Climate Change Adaptation Strategy.</u>

This section requires the Panel—not later than one year after enactment—to develop a Natural Resources Climate Change Adaptation Strategy ("the Strategy") for making natural resources more resilient and able to adapt to the impacts of climate change. The section also contains provisions further detailing the process for developing, revising, and implementing the Strategy, as well as required components of the Strategy.

<u>Sec. 6005. Natural resources adaptation science and information.</u>

This section requires the NOAA Administrator and the Director of USGS, not later than 90 days after enactment, to establish procedures to provide science and information necessary to address climate change impacts on natural resources. The procedures shall be implemented through a National Climate Change and Wildlife Science Center established within the USGS and the National Climate Service within NOAA.

This section also establishes a Science Advisory Board to advise the Secretaries of Commerce and Interior on the state of the science regarding impacts and adaptation strategies.

<u>Sec. 6006. Federal natural resource agency adaptation plans.</u>

This section requires each federal agency or department with representation on the Panel—not later than one year after development of the Strategy—to complete an agency adaptation plan. The plans will implement the Strategy; detail the agency's ongoing and expanded actions, and changes in decision-making processes necessary to increase the resiliency of natural resources within the agency's jurisdiction, as well as those affected by the agency's decisions, to the impacts of climate change; and include an implementation timeline. Each agency is required to provide opportunities for public review and comment on the agency adaptation plan and to submit the plan to the President for approval. The section also contains provisions further detailing the required components, implementation, and review and revision of each plan.

<u>Sec. 6007. State natural resources adaptation plans.</u>

This section requires each state, not later than one year after the development of a the Strategy required by Sec. 6004, to prepare a natural resources adaptation plan detailing the state's current and projected efforts to address the impacts of climate change on natural resources and coastal areas within the state's jurisdiction, in order to be eligible for funds from the Natural Resources Climate Change Adaptation Account. The plans are subject to review and approval by the Secretary of the Interior and, as applicable, the Secretary of Commerce. In addition to other requirements, the state plans should take into consideration other existing plans (e.g., coastal zone management, Endangered Species Act recovery plans, etc.) and shall be updated every five years.

Sec. 6008. Natural Resources Climate Change Adaptation Account.

[Note: This section appears to allocate the same pool of allowances from CAA Sec. 781(d)(1)(A) to both states and federal agencies, resulting in allocation of 200% of the allowances. This bill does not explicitly split the allowances between these recipients.]

This section specifies that emission allowances allocated under Sec. 781(d)(1)(A) of the Clean Air Act, as described in Sec. 2101, shall be provided to the states to carry out natural resource adaptation activities in accordance with State adaptation plans (approved under section 6007). These shall be distributed as follows:

- 84 percent to State wildlife agencies;
- 16 percent to State coastal agencies.

This section also specifies that allowances allocated under Sec. 781(d)(1)(A) of the Clean Air Act be distributed to federal agencies and departments for activities consistent with adaptation plans approved under Sec. 6006 as follows :

- 28 percent to the DOI for agency adaptation activities and the National Fish and Wildlife Habitat and Corridors Information Program (Sec. 6009);
- 8 percent to the DOI for cooperative grant programs;
- 5 percent to the DOI for financial assistance to Indian tribes for adaptation efforts;
- 20 percent to the existing Land and Water Conservation Fund;
- 8 percent to the Forest Service for adaptation activities in national forests and grasslands, and State and private forests;
- 11 percent to the Department of Commerce for adaptation activities in coastal, estuarine, and marine habitats; and
- 12 percent to the EPA and 8% to the Corps of Engineers for large-scale freshwater and estuarine protection and restoration activities.

The section also requires a ten percent non-federal match.

Sec. 6009. National Fish and Wildlife Habitat and Corridors Information Program.

This section requires, within 180 days of enactment, that the Secretary of the Interior establish a National Wildlife Habitat and Corridors Information Program to inform planning and development decisions by states and Indian tribes.

Sec. 6010. Additional provisions regarding Indian tribes.

This section provides an exemption of Indian cultural items and resources from Freedom of Information Act disclosure if it would cause harm or significant invasion of privacy. This section also requires federal departments, states, and Indian tribes to coordinate protection of treaty-reserved rights of Indian tribes to gather first foods.

Sec. 6011. Additional climate change adaptation programs.

This section allows the Administrator of NOAA and Director of USGS to establish additional adaptation programs for water systems, flood control, wildland fire, and coastal state economic protection, including activities addressing impacts on coastal watersheds.

TITLE VII—BUDGETARY EFFECTS

Sec. 7001. Budgetary effects.

This section requires that the budgetary effects of this Act, for the purpose of complying with the Statutory Pay-As-You-Go-Act of 2010, be determined by references to the latest statement titled "Budgetary Effects of PAYGO Legislation."

Appendix A: Allocation of Emission Allowances as described in Sec. 781

Year	Total Available Allowances (millions)	Percentage of Allowances Reserved for Cost Containment Auction	Percentage of Allowances to be Auctioned	Percentage of Allowances to be Allocated
	Sec. 721(e)	Sec. 726	Sec. 781	Sec. 781
2013	4722	1.50%	24.30%	74.20%
2014	4635	1.50%	24.30%	74.20%
2015	4548	1.50%	24.30%	74.20%
2016	5524	1.50%	23.11%	75.39%
2017	5417	1.50%	22.99%	75.51%
2018	5310	1.50%	22.99%	75.51%
2019	5202	1.50%	22.89%	75.61%
2020	5095	1.50%	20.25%	78.25%
2021	4941	1.50%	20.05%	78.45%
2022	4788	2.50%	18.79%	78.71%
2023	4634	2.50%	18.79%	78.71%
2024	4481	2.50%	18.79%	78.71%
2025	4327	2.50%	18.79%	78.71%
2026	4174	2.50%	26.74%	70.76%
2027	4021	2.50%	40.09%	57.41%
2028	3867	2.50%	52.44%	45.06%
2029	3714	2.50%	65.79%	31.71%
2030	3560	5.00%	74.54%	20.46%
2031	3434	5.00%	74.54%	20.46%
2032	3308	5.00%	74.54%	20.46%
2033	3183	5.00%	74.54%	20.46%
2034	3057	5.00%	74.54%	20.46%
2035	2931	5.00%	95.00%	0.00%
2036	2805	5.00%	95.00%	0.00%
2037	2679	5.00%	95.00%	0.00%
2038	2553	5.00%	95.00%	0.00%
2039	2428	5.00%	95.00%	0.00%
2040	2302	5.00%	95.00%	0.00%
2041	2176	5.00%	95.00%	0.00%
2042	2050	5.00%	95.00%	0.00%
2043	1924	5.00%	95.00%	0.00%
2044	1798	5.00%	95.00%	0.00%
2045	1673	5.00%	95.00%	0.00%
2046	1547	5.00%	95.00%	0.00%
2047	1421	5.00%	95.00%	0.00%
2048	1295	5.00%	95.00%	0.00%
2049	1169	5.00%	95.00%	0.00%
2050	1043	5.00%	95.00%	0.00%

Year	Electricity Consumers (Includes allocation for merchant coal and long-term-power contracts)	Natural Gas Consumers	Home Heating Oil and Propane Consumers	Dispropor-tionately Impacted Consumers	Universal Trust Fund (of these amounts, 25% will be used for deficit reduction and 75% for the universal refund program)	Energy Intensive Trade-Exposed Industries	Industrial Energy Efficiency
	Sec. 781(a)(1)	Sec.781(a)(2)	Sec.781(a)(3)	Sec.781(a)(4)	Sec.781(a)(5)	Sec.781(b)(1)	Sec.781(b)(2)
2013	51.00%	0.00%	1.9%	12.3%	0.0%	2.00%	0.50%
2014	51.00%	0.00%	1.9%	12.3%	0.0%	2.00%	0.50%
2015	51.00%	0.00%	1.9%	12.3%	0.0%	2.00%	0.50%
2016	35.0%	9.00%	1.5%	12.3%	0.0%	15.0%	0.0%
2017	35.0%	9.00%	1.5%	12.3%	0.0%	15.0%	0.0%
2018	35.0%	9.00%	1.5%	12.3%	0.0%	15.0%	0.0%
2019	35.0%	9.00%	1.5%	12.3%	0.0%	15.0%	0.0%
2020	35.0%	9.00%	1.5%	10.6%	0.0%	15.0%	0.0%
2021	35.0%	9.00%	1.5%	10.6%	0.0%	15.0%	0.0%
2022	35.0%	9.00%	1.5%	10.6%	0.0%	15.0%	0.0%
2023	35.0%	9.00%	1.5%	10.6%	0.0%	15.0%	0.0%
2024	35.0%	9.00%	1.5%	10.6%	0.0%	15.0%	0.0%
2025	35.0%	9.00%	1.5%	10.6%	0.0%	15.0%	0.0%
2026	32.0%	7.20%	1.2%	10.6%	8.1%	12.0%	0.0%
2027	24.0%	5.40%	0.9%	10.6%	21.5%	9.0%	0.0%
2028	16.5%	3.60%	0.6%	10.6%	33.7%	6.0%	0.0%
2029	8.5%	1.80%	0.3%	10.6%	47.1%	3.0%	0.0%
2030	0.0%	0.00%	0.0%	11.5%	54.5%	0.0%	0.0%
2031	0.0%	0.00%	0.0%	11.5%	54.5%	0.0%	0.0%
2032	0.0%	0.00%	0.0%	11.5%	54.5%	0.0%	0.0%
2033	0.0%	0.00%	0.0%	11.5%	54.5%	0.0%	0.0%
2034	0.0%	0.00%	0.0%	11.5%	54.5%	0.0%	0.0%
2035	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2036	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2037	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2038	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2039	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2040	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2041	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2042	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2043	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2044	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2045	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2046	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2047	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2048	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2049	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%
2050	0.0%	0.00%	0.0%	12.5%	77.8%	0.0%	0.0%

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Year	Refiners	Deployment of Carbon Capture and Seques-tration Technology	Clean Vehicle Technology	Low-carbon Industrial Techno-logies R&D	Clean Energy Technology R&D	Energy Efficiency and Renewable Energy	Domestic Natural Resource Adaptation
	Sec.781(b)(3)	Sec.781(c)(1)	Sec.781(c)(2)	Sec.781(c)(3)	Sec.781(c)(4)	Sec.781(c)(5)	Sec.781(d)(A)
2013	4.30%	0.0%	1.0%	1.0%	2.0%	2.5%	0.00%
2014	4.30%	0.0%	1.0%	1.0%	2.0%	2.5%	0.00%
2015	4.30%	0.0%	1.0%	1.0%	2.0%	2.5%	0.00%
2016	3.75%	0.0%	1.0%	1.0%	2.0%	2.0%	0.00%
2017	3.75%	0.8%	1.0%	1.0%	2.0%	2.0%	0.00%
2018	3.75%	0.8%	1.0%	1.0%	2.0%	2.0%	0.00%
2019	3.75%	0.8%	1.0%	1.0%	2.0%	1.0%	0.75%
2020	3.75%	4.5%	1.0%	1.0%	2.0%	1.0%	0.75%
2021	3.75%	5.0%	0.5%	0.5%	2.0%	0.5%	1.10%
2022	3.75%	7.4%	0.0%	0.0%	0.0%	0.0%	1.60%
2023	3.75%	7.4%	0.0%	0.0%	0.0%	0.0%	1.60%
2024	3.75%	7.4%	0.0%	0.0%	0.0%	0.0%	1.60%
2025	3.75%	7.4%	0.0%	0.0%	0.0%	0.0%	1.60%
2026	3.00%	8.0%	0.0%	0.0%	0.0%	0.0%	1.75%
2027	2.25%	8.0%	0.0%	0.0%	0.0%	0.0%	2.00%
2028	1.50%	8.0%	0.0%	0.0%	0.0%	0.0%	2.50%
2029	0.75%	8.0%	0.0%	0.0%	0.0%	0.0%	2.75%
2030	0.00%	10.0%	0.0%	0.0%	0.0%	0.0%	3.00%
2031	0.00%	10.0%	0.0%	0.0%	0.0%	0.0%	3.00%
2032	0.00%	10.0%	0.0%	0.0%	0.0%	0.0%	3.00%
2033	0.00%	10.0%	0.0%	0.0%	0.0%	0.0%	3.00%
2034	0.00%	10.0%	0.0%	0.0%	0.0%	0.0%	3.00%
2035	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2036	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2037	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2038	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2039	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2040	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2041	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2042	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2043	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2044	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2045	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2046	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2047	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2048	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2049	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
2050	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%

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Year	International Adaptation and Global Security	Early Action	Highway Trust Fund	National Surface Transporta-tion System	Transportation on GHG Reduction Programs	Cost Containment Reserve	Remaining Allowances (Deficit Reduction)*
	Sec.781(d)(B)	Sec.781(e)	Sec.781(f)(1)	Sec.781(f)(2)	Sec.781(f)(3)	Sec.726	Sec.781(h)
2013	0.00%	1.00%	4.00%	4.00%	4.00%	1.50%	7.00%
2014	0.00%	1.00%	4.00%	4.00%	4.00%	1.50%	7.00%
2015	0.00%	1.00%	4.00%	4.00%	4.00%	1.50%	7.00%
2016	0.00%	0.00%	3.07%	3.07%	3.07%	1.50%	6.74%
2017	0.00%	0.00%	2.73%	2.73%	2.73%	1.50%	6.96%
2018	0.00%	0.00%	2.73%	2.73%	2.73%	1.50%	6.96%
2019	0.75%	0.00%	2.53%	2.53%	2.53%	1.50%	7.06%
2020	0.75%	0.00%	2.00%	2.00%	2.00%	1.50%	6.65%
2021	1.10%	0.00%	2.00%	2.00%	2.00%	1.50%	6.95%
2022	1.60%	0.00%	1.93%	1.93%	1.93%	2.50%	6.26%
2023	1.60%	0.00%	1.93%	1.93%	1.93%	2.50%	6.26%
2024	1.60%	0.00%	1.93%	1.93%	1.93%	2.50%	6.26%
2025	1.60%	0.00%	1.93%	1.93%	1.93%	2.50%	6.26%
2026	1.75%	0.00%	1.93%	1.93%	1.93%	2.50%	6.11%
2027	2.00%	0.00%	1.93%	1.93%	1.93%	2.50%	6.06%
2028	2.50%	0.00%	1.93%	1.93%	1.93%	2.50%	6.21%
2029	2.75%	0.00%	1.93%	1.93%	1.93%	2.50%	6.16%
2030	3.00%	0.00%	2.23%	2.23%	2.23%	5.00%	6.31%
2031	3.00%	0.00%	2.23%	2.23%	2.23%	5.00%	6.31%
2032	3.00%	0.00%	2.23%	2.23%	2.23%	5.00%	6.31%
2033	3.00%	0.00%	2.23%	2.23%	2.23%	5.00%	6.31%
2034	3.00%	0.00%	2.23%	2.23%	2.23%	5.00%	6.31%
2035	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2036	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2037	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2038	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2039	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2040	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2041	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2042	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2043	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2044	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2045	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2046	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2047	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2048	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2049	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%
2050	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.70%

* These percentages reflect the number of allowances remaining after distribution pursuant to section 781.