Pew Center Summary of Clean Energy Jobs and American Power Act (Kerry-Boxer)

This is a summary of the Clean Energy Jobs and American Power Act (CEJAPA), S. 1733, sponsored by Senators Kerry and Boxer, as passed out of the Senate Environment and Public Works Committee on November 5, 2009.

A few notes on how CEJAPA is organized

Divisions A and B of this Act add titles VII and VIII to the Clean Air Act (CAA). Whereas CEJAPA's divisions are divided into "Titles" and further divided into "Subtitles," the CAA titles are divided into "Parts." It is easy to get confused, especially in light of the fact that the new CAA Titles and Parts do not appear in order in CEJAPA. Here is an outline of how CEJAPA amends the CAA, to try to minimize that confusion. CEJAPA also makes small amendments to other sections of the U.S. code, but those are not as confusing, and are not included in this outline.

- CEJAPA Division A
  - CEJAPA Title A1
    - CEJAPA Subtitle A1A
      - CAA Part 8B
      - CAA Part 8C
    - CEJAPA Subtitle A1B
      - CAA Part 8A
  - CEJAPA Title A3
    - CEJAPA Subtitle B
      - CAA Part 7E
- CEJAPA Division B
  - CEJAPA Title B1
    - CEJAPA Subtitle B1A
      - CAA Part 7A
      - CAA Part 7B
      - CAA Part 7C
      - CAA Part 7D
    - CEJAPA Subtitle B1B
      - CAA Part 7H
    - CEJAPA Subtitle B1C
      - CAA Part 8A
      - CAA Part 8E
      - CAA Part 8F
    - CEJAPA Subtitle B1E
      - CAA Part 7F

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Sec. 1. Short title; table of contents.

This section states this Act can be referred to as the “Clean Energy Jobs and American Power Act,” and includes a section-by-section table of contents.

Sec. 2. Findings.

This section includes the findings of the Congress.

Sec. 3. Economywide Reduction Goals.

This section establishes the goals of this Act to be the reduction of greenhouse gas (GHG) emissions to:

- 97% of 2005 emissions in 2012
- 80% of 2005 emissions in 2020
- 58% of 2005 emissions in 2030
- 17% of 2005 emissions in 2050

Sec. 4. Definitions.

This section defines “Administrator” – referring to the EPA Administrator –“State,” and “Indian Tribe.”

DIVISION A—AUTHORIZATIONS FOR POLLUTION REDUCTION, TRANSITION, AND ADAPTATION

Sec. 101. Structure of Act.

This section lists programs authorized under this Division that are eligible to receive an allocation under Title VII of the Clean Air Act as created in this bill.

Sec. 102. Requirements relating to Federal advisory committees.

This section lists the qualifications and designations for individuals appointed to advisory committees created under this Act. It also sets a process to reduce conflicts of interests by individuals on panels and to allow for public disclosure about individuals on and selection processes for advisory committees.

Sec. 103. Voluntary Renewable Energy Markets.

This section includes findings related to voluntary renewable energy markets and states that it is U.S. policy to support the continued growth of the voluntary renewable energy market and that nothing in the Act is intended to prevent or interfere with such growth. Not late than 2 years after enactment, the Comptroller General shall issue a report to Congress on the status of the voluntary renewable energy market and strategies to ensure its continued growth and contribution to emission reductions.

TITLE I—GREENHOUSE GAS REDUCTION PROGRAMS

Subtitle A—Clean Transportation

<u>Sec. 111. Emission standards.</u>

The section amends Title VIII of the CAA (as added by CEJAPA), by inserting after Part A the following new Part:

> **<u>''PART B—MOBILE SOURCES</u>**
>
> **<u>''Sec. 821. Greenhouse gas emission standards for mobile sources.</u>**

Among other provisions, this section directs the Administrator to develop GHG standards under the CAA for the following modes of transportation:

- New heavy-duty vehicles and engines, excluding vehicles covered by the CAA's Tier II emissions standards
- Classes and categories of new non-road vehicles and engines that contribute significantly to total GHG emissions from non-road engines and vehicles.

The Administrator is authorized to establish provisions for averaging, banking, and trading of credits within or across classes or categories.

<u>Sec. 112. Greenhouse gas emission reductions through transportation efficiency.</u>

Title VIII of the Clean Air Act is amended by adding at the end the following:

> **''PART C—TRANSPORTATION EMISSIONS**
>
> **<u>''Sec. 831. Greenhouse gas emission reductions through transportation efficiency.</u>**

This section requires the Administrator, in consultation with the Secretary of Transportation, to develop regulations to establish national transportation-related GHG emission reduction goals, which should correspond with the emission reduction goals established under CEJAPA. The Administrator, with the DOT Secretary, is required to promulgate final regulations no later than 18 months after passage of the Act and assess progress in reducing transportation-related GHG emissions at least every six years.

The section also amends sections 134 and 135 of Title 23 and sections 5303 and 5304 of titles 49 of the U.S. Code. It requires States and Metropolitan Planning Organizations (MPOs) to develop surface transportation-related GHG reduction targets and strategies to meet such targets as part of the transportation planning process. The Secretary of Transportation and Administrator shall review each plan and the Secretary will approve the transportation plan if he determines that it will achieve the state's GHG reduction goals.

<u>Sec. 113. Transportation grant program.</u>

Part C of Title VIII of the Clean Air Act (as amended by section 112) is amended by adding at the end the following:

''Sec. 832. Transportation greenhouse gas emission reduction program grants.

This section directs the Secretary of Transportation to provide grants to states and MPOs to support the development of transportation GHG reduction targets and strategies and to provide funding for sections 134(k)(6) and 135(f)(9) of Title 23 and sections 5305(k)(6) and 5304(f)(9) of Title 49 of the U.S. Code.

No later than one year after enactment of the section, the Administrator is also directed to submit a report to the Senate EPW Committee on the commercial passenger carrier industry (which includes tour, charter, intercity, commuter, and other passenger operations) and identify options for these carriers to promote energy-efficient, low-GHG emission transportation. The Administrator may also recommend a program to partner with and recognize passenger carrier companies that achieve superior levels of GHG emissions performance.

Sec. 114. SmartWay transportation efficiency program.

The section amends Part B of Title VIII of the CAA (as added by CEJAPA), by adding the text of this section after section 822.

''Sec. 822. SmartWay Transportation Efficiency Program.

This section directs the Administrator to develop protocols to measure energy consumption and GHG impacts of technologies and strategies used in passenger transport and goods movement. The Administrator is also directed to develop programs to encourage the adoption of these technologies and strategies to reduce energy consumption and GHG emissions.

The Administrator is directed to establish a SmartWay partnership with shippers and carriers of goods, and to establish a SmartWay financing program to competitively award grants. It also includes funds for the electrification of freight transportation. In addition, the Secretary of the Treasury is required to collect data on energy and emissions for the U.S. truck fleet at least every 5 years as part of the economic census.

No later than one year after enactment of the section, the Administrator is also directed to submit a report to the Senate EPW Committee on the commercial passenger carrier industry (which includes tour, charter, intercity, commuter, and other passenger operations) and identify options for these carriers to promote energy-efficient, low-GHG emission transportation. The Administrator may also recommend a program to partner with and recognize passenger carrier companies that achieve superior levels of GHG emissions performance.

Subtitle B—Carbon Capture and Sequestration

Sec. 121. National strategy.

This section requires the Administrator – not later than 1 year after enactment, and in consultation with the Secretaries of Energy and Interior and other relevant federal agency heads as designated by the President – to submit to Congress a report setting forth a unified and comprehensive strategy to address the key legal, regulatory, and other barriers to the commercial-scale deployment of carbon capture and sequestration (CCS).

Sec. 122. Regulations for geological sequestration sites.

This section amends Title VIII of the CAA to add the language in this section as section 813 after section 812.

> **''Sec. 813. Geological storage sites.**
>
> This section requires the Administrator to establish a coordinated approach to certifying and permitting geologic sequestration sites, taking into consideration all relevant statutory authorities.
>
> The Administrator is directed—not later than 2 years after enactment—to promulgate regulations to protect human health and the environment by minimizing the risk of escape to the atmosphere of carbon dioxide (CO_2) injected for the purposes of geologic sequestration.
>
> The section sets out further requirements for such regulations and amends the Safe Water Drinking Act to require that regulations for CO_2 geologic sequestration wells be promulgated within 1 year of enactment of CEJAPA.
>
> The Administrator is directed to deliver reports to Congress at 3-year intervals that describe geologic sequestration activity, performance of sequestration sites, adequacy of regulations, and recommendations for further regulation.

Sec. 123. Studies and reports.

This section requires the Administrator—not later than 6 months after enactment—to establish a task force to study the legal framework for geologic sequestration sites. The section further specifies the makeup of the task force and requirements for the study, which must be submitted to Congress within 18 months of enactment. This section further instructs the Administrator to conduct a study and deliver a report to Congress within 1 year of enactment regarding the extent to which existing environmental statutes administered by EPA apply to geological CO_2 storage.

Sec. 124. Performance standards for coal-fueled power plants.

This section amends Title VIII of the CAA (added by CEJAPA) by adding the language in this section as section 812:

> **''Sec. 812. Performance standards for new coal-fired power plants.**

This section sets a CO_2 emissions standard for coal-fueled power plants. The standard applies to plants initially permitted after Jan 1, 2009, that derive at least 30 percent of annual heat input from coal or pet-coke or some combination thereof. The performance standard is:

- 65% reduction in annual CO_2 emissions for plants initially permitted after Jan 1, 2020;
- 50% reduction in annual CO_2 emissions for plants initially permitted between 2009 and 2019.

The section further directs that plants initially permitted between 2009 and 2019 must comply with the performance standard by the earlier of the following:

- 4 years after the date that EPA determines that: there is at least 10 gigawatts of capacity operating with CCS in the United States (where up to 3 million tons CO_2 per year from industrial CCS can count as up to 1 gigawatt); at least two 250+ megawatt electric generating units are operating with CCS and not using oil and gas fields for sequestration; and at least 12 million tons CO_2 per year are captured and sequestered nationally; and
- Jan 1, 2020. In this case, the Administrator can extend the deadline on a case-by-case basis by up to 18 months if entities can show that it is technically infeasible to comply. In addition, the Administrator and the Secretary of Energy shall issue a report by June 30, 2017, on the status of CCS deployment and issue a finding regarding whether this 2020 deadline should be extended for two years subject to action by Congress to approve such an extension.

At 5-year intervals starting no later than the compliance data determined above, the Administrator is directed to review the performance standards for new units to determine if the maximum emission rate for new plants should be reduced. The Administrator is also instructed to provide semiannual reports to Congress concerning the deployment of CCS.

Sec. 125. Carbon capture and sequestration demonstration and early deployment program.

This section authorizes an association representing the fossil fuel electricity-generating industry to conduct a referendum on the creation of a Carbon Storage Research Corporation (CSRC) with the purpose of supporting at least 5 commercial-scale demonstrations of carbon capture and storage or conversion. While carbon conversion is not defined in the bill it is understood to mean transforming, such as via chemical reaction, captured CO_2 into a valuable commodity. The CSRC would be established upon the approval of those entities representing two-thirds of the total quantity of fossil fuel-based electricity delivered to retail consumers, unless opposed by state regulatory authorities. If 40% or more of state regulatory authorities oppose the creation of the CSRC, then it would not be created.

The CSRC would operate as a division or affiliate of the Electric Power Research Institute, and would be managed by a Board whose membership would have to include at least one representative of each of the following: investor-owned utilities; utilities owned by a Federal and state agency, a municipality, and an Indian tribe; rural electric cooperatives; fossil fuel producers; non-profit environmental organizations; independent generators or wholesale power providers; consumer groups, the National Energy Technology Laboratory, and the EPA.

The section directs the CSRC, in all calendar years following its establishment, to collect an assessment on distribution utilities for all fossil fuel-based electricity delivered directly to retail customers. The assessments would reflect the relative CO_2 emission rates of different fossil fuel-based electricity, and initially would not be less than:

Fuel Type	Rate of Assessment per kWh
Coal	$0.00043
Natural Gas	$0.00022
Oil	$0.00032

The CSRC would be authorized to adjust these rates, but would only be authorized to generate total annual assessments of no less than $1 billion and no more than $1.1 billion. The CSRC may use these funds to issue grants and contracts to private, academic, and governmental entities with the purpose of accelerating the commercial demonstration or availability of carbon capture and sequestration (CCS) technologies and methods. The section instructs the CSRC to support large-scale, and not pilot-scale, CCS demonstrations capable of advancing the technologies to commercial readiness.

At least half of the funds collected by the CSRC must be awarded as grants to electric utilities that had, prior to the award of any grant from CSRC, already committed resources to deploying large-scale electricity generation units with integrated carbon capture and sequestration or conversion applied to a significant portion of the units' emissions. At least 5 such units shall be supported.

Entities that receive funds from the CSRC will have to be in compliance with the Davis-Bacon Act.

The section authorizes the CSRC to collect assessments and conduct operations for a 10-year period, beginning 6 months after enactment. After 10 years, the CSRC would no longer be able to collect assessments, and would be dissolved 5 years later, unless extended by an Act of Congress.

Subtitle C—Nuclear and Advanced Technologies

Sec. 131. Findings and policy.

This section expresses several findings by Congress related to nuclear power such as that it is a major source of low-carbon electricity in the United States. This section also states that it is the policy of the United States to facilitate the continued development and growth of a safe and clean nuclear energy industry via reductions in financial and technical barriers to construction and operation and incentives for nuclear workforce development and domestic nuclear industry growth.

Sec. 132. Nuclear worker training.

This section directs the Secretary of Energy to increase the number and amount of nuclear science talent expansion grants and nuclear science competitiveness grants provided under section 5004 of the America COMPETES Act. In addition, the Secretary of Labor will carry out programs expanding workforce training related to nuclear power plant construction and operation.

Sec. 133. Nuclear safety and waste management programs.

This section instructs the Secretary of Energy to establish a nuclear facility long-term operations research and development program as well as a spent nuclear waste disposal research and development program.

Subtitle D—Water Efficiency

Sec. 141. WaterSense.

This section establishes a WaterSense program within the EPA to reduce water use, reduce strain on water infrastructure, conserve energy used in the water system, and preserve water resources. This program will identify and promote water-efficient products, buildings and landscapes, and services, through voluntary labeling or other forms of communications about those products or services that meet the highest water efficiency and performance standards.

The section authorizes $7.5 million for FY 2010, $10 million for FY 2011, $20 million for FY 2012, and $50 million for FY 2013 and each year thereafter, adjusted for inflation, to carry out this program.

Sec. 142. Federal procurement of water-efficient products.

This section requires a federal agency that procures a water-consuming product or service to procure a WaterSense product or service, or a product designated by the Federal Energy Management Program (FEMP) of the DOE as being among the highest 25% of equivalent products for efficiency. The head of an agency is not required to follow these procurement rules if he or she finds in writing that a WaterSense or FEMP-designated product or service is not cost-effective, or no WaterSense or FEMP-designated product or service is reasonably available that meets the functional requirement of the agency. Each agency is also required to develop and implement a water efficiency retrofit plan.

<u>Sec. 143. State residential water efficiency and conservation incentives program.</u>

This section provides a mechanism for administering financial incentives for consumer purchase and installation of water-efficient products, buildings, landscapes, processes and services. State, county, local, and tribal governments, wastewater or sewagewater utilities, municipal water authorities, energy utilities, water utilities, and non-profits are eligible to establish incentive programs for residential users, for which funds from this section can be used for establishment and implementation, subject to a 50% match. The Administrator will distribute funds to entities with approved programs according to the size and demographics of the served and targeted population, proven effectiveness of the program, the existence of unused program funds from prior years, and per capita water demand of the population served.

Authorizations of appropriations are made for this section of $100 million for 2010, $150 million for 2011, $200 million for 2012, $150 million for 2013, $100 million for 2014, and the previous year's authorization adjusted for inflation for all years thereafter.

Subtitle E—Miscellaneous

<u>Sec. 151. Office of Consumer Advocacy.</u>

This section establishes an Office of Consumer Advocacy within FERC. The Office's duties include representing and appealing on behalf of energy customers on matters related to rates or service monitoring; reviewing energy customer complaints and grievances; investigating services, rates, and valuation of the properties of public utilities and natural gas companies; and collecting rate data. The Consumer Advocacy Advisory Committee is established to review rates, services, and disputes and to make recommendations to the Director of the Office.

<u>Sec. 152. Clean technology business competition grant program.</u>

This section authorizes the Secretary of Energy to establish a "Clean Technology Business Competition Grant Program," and authorizes $20 million for the purposes of carrying out the program. Grants will be provided to organizations that conduct business competitions that advance entrepreneurship and early-stage startup companies in areas including energy efficiency, renewable energy, air quality, water quality and conservation, transportation, smart grid, green building, and waste management. The competitions will have the general purpose of accelerating the development of the U.S. clean technology industry and green jobs. Only non-profit 501(c)(3) organizations are eligible to receive funds under the program. Priority will be given to organizations that demonstrate broad funding support from private and other non-federal sources to best leverage federal investment.

<u>Sec. 153. Product carbon disclosure program.</u>

This section requires that EPA – within 18 months of enactment – report to Congress on the feasibility of establishing a national program measuring, reporting, disclosing and labeling the carbon content of products and materials sold in the United States. The study should examine the potential methodologies and likely costs and effectiveness of such a program at reducing GHG emissions.

Within 36 months of enactment, EPA shall establish a voluntary national product carbon disclosure program with broad applicability to both wholesale and retail markets. Not later than 5 years after the program is established, EPA shall report to Congress on the participation in the program and on its effectiveness and impact. $5 million is authorized for the feasibility study and $25 million is authorized for implementation.

Sec. 154. State recycling programs.

This section directs the Administrator to establish a program to support recycling and reuse administered by states. Not less than 25% of funds are to be distributed directly to county and municipal recycling agencies for use to support recycling and reuse technology, energy efficiency for recycling collection and sorting, recycling and reuse program-related expenses, and to ensure that recyclable material is not sent for disposal or incineration. Not less than 25% of funds shall be distributed to recycling and reuse facilities to support recycling- and reuse-related technology deployment, to fund and incentivize facilities that can recycle new materials, and to provide funds for recycling research and management, and overcoming impediments to recycling. Not less than 25% of funds shall be distributed to manufacturing facilities to support manufacturing-related technology that increases recycling and reuse and reduces GHG emissions, to provide incentives for deployment of radiation detection equipment used during recycling of radiated materials, to support technologies that detect and separate contaminants, to incentivize the removal of impediments to recovering recyclable material, and to incentivize strategies to improve the energy efficiency of technology used to manufacture recyclable material. Not more than 25% shall be distributed to reuse facilities to incentivize demonstrations of technology, reuse at facilities, research, and other incentives.

Sec. 155. Supplemental agriculture greenhouse gas reduction and renewable energy program.

This section directs the Secretary of Agriculture, in coordination with the Secretary of the Interior, to establish a program to provide financial assistance to owners and operators of agricultural, private or public abandoned mine land and forest land for projects to increase carbon sequestration or decrease GHG emissions. Assistance and incentives will take the form of or be a part of conservation easements, carbon sequestration and mitigation contracts, timber harvest contracts, grazing contracts, grants, and other forms of assistance. Priority is given to projects that achieve other benefits – such as increased air or water quality – and reduce GHG emissions or sequester carbon in operations where there are limited recognized opportunities. Financial incentives and support shall be directly proportional to the quantity and duration of GHG emission reductions and carbon sequestered and complement and leverage existing program expenditures to provide measurable emission reduction and sequestration benefits. The Secretary, in consultation with the Administrator will establish and implement monitoring and verification protocols associated with the assistance provided, will report annually on the total amount of carbon sequestered or emissions avoided through this section, and make a report to Congress not later than 2 years and every 18 months thereafter on the annual and cumulative reductions generated through this section and any measuring, monitoring, and verification changes to the program.

Sec. 156. Economic Development Climate Change Fund.

Title II of the Public Works and Economics Development Act of 1965 is amended by adding to the end:

> **''Sec. 219. Economic Development Climate Change Fund.**
>
> The Secretary may provide technical assistance, make grants, enter into contracts, or otherwise provide assistance for projects to promote energy efficiency and enhance economic competitiveness, increase the use of renewable energy, support the development of conventional energy resources to produce alternative transportation fuels, electricity, and heat, develop energy efficient or environmentally sustainable infrastructure, promote sustainable economic development practices and models, support development of energy efficiency and alternative energy development plans, studies or analysis, or as a supplement to other federal grants, loans, or loan guarantees. A 20% match is required except for in the case of supplementing grants, loans, or loan guarantees, when no match is required. $50 million is authorized for each year 2009 to 2013.

Sec. 157. Study of risk-based programs addressing vulnerable areas.

This section directs the Administrator to conduct a study within 2 years and submit to Congress a report on risk-based policies and program addressing areas vulnerable to the impacts of climate change.

Sec. 158. Efficient Buildings Program.

This section requires the EPA Administrator to establish the "Efficient Buildings Program," which would reward building owners who either construct highly efficient new buildings or increase the efficiency of existing buildings. To qualify for the reward, new buildings would have to achieve a minimum score of 75 on EPA's Energy Star benchmarking tool, or an equivalent score from some other EPA-selected benchmarking method. Existing buildings could qualify by showing a 30 point improvement on EPA's benchmarking tool, or an equivalent score on some other EPA-selected benchmarking method.

Subtitle F—Energy Efficiency and Renewable Energy

Sec. 161. Renewable energy.

This section would direct the EPA Administrator, in consultation with the Secretaries of Energy, Interior, and Agriculture, to establish a program to provide grants to states for renewable energy projects that facilitate compliance with a state Renewable Portfolio Standard (RPS). Qualifying sources of energy include solar, wind, biomass, landfill gas, ocean (including tidal, wave, current, and thermal), geothermal, municipal solid waste, or new hydroelectric generation capacity achieved from increased efficiency or additions of new capacity at an existing hydroelectric project.

In states with non-binding RPSs, state and local governments, Indian tribes, public utilities, and regional energy cooperatives may apply for a grant; in states with binding standards, individual energy producers may also apply. During the application process, the state's governor must certify that the project will assist the state in achieving its RPS and that there are sufficient non-federal funds, in combination with the grant, to complete the project. Grants provided under this section may not contribute more than 50 percent of the total cost of the project.

This section authorizes such sums as are necessary to be appropriated for this program.

Sec. 162. Advanced biofuels.

This section allows the EPA Administrator, in consultation with the Secretary of Agriculture and the Secretary of Energy to provide grants to support research and development of advanced biofuels.

Sec. 163. Energy efficiency in building codes.

This section requires the EPA Administrator (or another agency head as designated by the President) to set national targets for improving energy efficiency in residential and commercial buildings, and write regulations establishing building codes to meet those targets. Buildings would have to meet the energy efficiency targets beginning Jan. 1, 2014 and every year thereafter through Dec. 31, 2030. The Administrator or other agency head is required to report to Congress annually on the status and implementation of the codes and regulations.

Sec. 164. Retrofit for energy and environmental performance.

This section requires the EPA Administrator to develop and implement standards for a national building retrofit policy for residential and nonresidential buildings. The Administrator (in consultation with the Secretary of Energy and the Secretary of Housing and Urban Development) is required to implement a Retrofit for Energy and Environmental Performance (REEP) program to retrofit existing buildings to achieve maximum cost-effective energy efficiency and water use improvements. States (or local governments in nonparticipating states) will administer the REEP program and will receive federal funds for the following purposes: implementing the retrofit program, providing incentives and initial capital for retrofits, funding utility-operated retrofit programs, providing training to building staff on energy-efficient operations and maintenance; and funding local governments providing REEP services. Qualifying states or local governments must adopt standards developed by the Administrator and establish procedures to implement the program. REEP funds may not account for more than 50 percent of the total cost of the retrofit.

Sec. 165 Certified stoves program.

This section requires the EPA Administrator to establish and carry out a program to assist in the replacement of wood stoves or pellet stoves that do not meet specified performance standards. The Administrator is directed to create a program that requires all new stoves sold in the United States on and after the date of enactment to meet the performance standard and all stoves replaced under the program to be destroyed and recycled. This section also requires the Administrator to provide funds to a state, tribe, Alaskan Native village or regional or village corporations, or eligible non-profit organizations or institutions to replace stoves that do not meet the performance standard with certified stoves. The section authorizes $20 million from FY 2010-2014 for this program; of this, 25 percent is designated for programs in lands held in trust for the benefit of a federally recognized Indian tribe, 3 percent for Alaskan Native villages or regional or village corporations, and the remaining 72 percent for nationwide programs. The section also authorizes the EPA Administrator to accept eligible wood stove or pellet stove replacement supplemental environmental projects as part of a settlement for an alleged violation of environmental law.

Sec. 166. Renewable fuel standard.

This section amends the federal Renewable Fuel Standard (Section 211(o) of the Clean Air Act) by changing the cellulosic biofuel requirement to "advanced green" biofuels, which are any biofuel derived from renewable biomass that achieves a 60 percent reduction in lifecycle GHG emissions compared to gasoline.

Sec. 167. Tree planting programs.

This section requires the Administrator to make a rule within two years that establishes a competitive grant program to assist retail power providers in creating tree planting programs for residential and small office buildings of less than 20,000 square feet. The intentions of this program are to reduce peak load demand for electricity in summer and energy demand in winter as well as the associated producer and consumer costs, improving local air and water quality, reducing ambient air temperature and reducing atmospheric CO_2. Non-profit tree planting organizations are eligible to receive funding with a 50% match under this section provided they meet listed program and contract requirements, and retail power providers must establish and consult with a local technical advisory committee to participate.

Subtitle G—Emission Reductions From Public Transportation Vehicles

Sec. 171. Short title.

This subtitle may be cited as the ‘‘Green Taxis Act of 2009’’

Sec. 172. State fuel economy regulation for taxicabs.

This section amends Section 32919 of title 49, U.S. Code, by allowing states or subdivisions of states to set fuel economy requirements for taxicabs that are at least as stringent as the applicable federal requirements.

Sec. 173. State regulation of motor vehicle emissions for taxicabs.

This section amends Section 32919 of title 49, United States Code, by allowing states or subdivisions of states to set emission requirements for new taxicabs that are at least as stringent as the applicable Federal requirements.

Subtitle H—Clean Energy and Natural Gas

Sec. 181. Clean energy and accelerated emission reduction program.

This section directs the EPA Administrator to establish a program to promote via incentive payments dispatchable power generation projects that can accelerate GHG reductions from the electric power sector. The Administrator is instructed to promulgate regulations providing for such incentives within 90 days of enactment. The Administrator is directed, within 3 years of enactment, to provide incentives for projects that generate 300,000 gigawatt-hours of electricity per year. Projects that receive existing production and investment tax credits are not eligible for such incentives. The Administrator is instructed to give priority to: projects designed to integrate intermittent renewable energy, energy storage, and carbon capture and storage projects that are not otherwise subsidized. Moreover, the program would prioritize projects that achieve the most GHG emission reductions per dollar of incentive payment. Eligible projects must have GHG emission rates per unit of electricity output that meet the following requirements:

Calendar years	Percentage below 2007 average GHG emissions per megawatt-hour of U.S. electric power sector
2010 through 2020	25 percent
2021 through 2025	40 percent
2026 through 2030	65 percent

This section also authorizes such sums as are necessary to be appropriated for the program.

Sec. 182. Advanced natural gas technologies.

This section establishes two grant programs. Under the natural gas electricity generation grants provision, the EPA Administrator, in consultation with the Secretary of Energy, is instructed to provide research and development grants to support the deployment of low GHG-emitting end-use technologies, such as carbon capture and storage, for natural gas electricity generation. Under the natural gas residential and commercial technology grants provision, the Administrator is instructed to provide grants to advance the commercial demonstration or early deployment of low GHG-emitting natural gas end-uses. Every 180 days following enactment, the Secretary of Energy shall provide a report to Congress describing the status and results of these grant programs. This section authorizes such sums as are necessary to be appropriated.

TITLE II—RESEARCH

Subtitle A—Energy Research

Sec. 201. Advanced energy research.

This section directs the Administrator to establish a competitive grant program for advanced energy research. Higher education institutions, companies, research foundations, trade and industry research collaborations, consortia of these entities, and other appropriate entities will eligible to receive grants that will supplement – not supplant – other federal resources. There will be a priority for applications that enhance U.S. economic and energy security and ensure that the United States maintains a technological lead in developing and deploying advanced technologies.

Subtitle B—Drinking Water Adaptation, Technology, Education, and Research

Sec. 211. Effects of climate change on drinking water utilities.

The section directs the Administrator, in cooperation with the Secretary of Commerce, the Secretary of Energy, and the Secretary of the Interior, to establish a program of directed and applied research to assist water utilities in adapting to climate change. The research shall take place through a nonprofit drinking water research foundation and sponsored by water utilities. $25 million is authorized annually for 2010 to 2020.

TITLE III—TRANSITION AND ADAPTATION

Subtitle A—Green Jobs and Worker Transition

PART 1—GREEN JOBS

Sec. 301. 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 renewable energy, energy efficiency, and climate change mitigation and 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. 302. 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. 303. Green 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 2—CLIMATE CHANGE WORKER ADJUSTMENT ASSISTANCE

Sec. 311. Petitions, eligibility requirements, and determinations.

This section sets out provisions for a climate change worker adjustment program. Under this program, groups of workers, unions, or employers may petition the Secretary of Labor and the Governor of the state in which the employment site is located. The petition shall seek certification that the employment of the group has been adversely impacted due to provisions of this Act. If certified, the group would be eligible for adjustment assistance, training and other related benefits.

Sec. 312. Program benefits.

This section describes the adjustment assistance that would be available to certified groups under this program. Qualified adversely affected workers shall be eligible for up to 70 percent of the average weekly wage of such workers, but the amount shall not exceed the average weekly rate for all workers in the state. Training and employment services shall also be made available.

Sec. 313. General provisions.

This section describes the requirements for states to implement the worker adjustment assistance program and the actions that the Secretary shall take in the absence of a state authorized program.

Subtitle B—International Climate Change Programs

Sec. 321. Strategic Interagency Board on International Climate Investment.

This section requires the President to establish a Strategic Interagency Board on International Climate Investment within 90 days of enactment of the Act. The Board would include the Secretary of State, the Administrator of the U.S. Agency for International Development, the Secretary of Energy, the Secretary of the Treasury, the Secretary of Commerce, the Secretary of Agriculture, the Administrator of EPA, and other officials. The Board will monitor and assess the efforts of federal agencies in supporting financing of international climate change activities

Sec. 322. Emission reductions from reduced deforestation.

This section amends Title VII of the Clean Air Act by adding the following Part after Sec. 101 of Division B.

‘‘PART V—SUPPLEMENTAL EMISSION REDUCTIONS

‘‘Sec. 751. Definitions.

This section provides the definitions for this Part.

‘‘Sec. 752. Purposes.

This section presents the purposes of this Part.

‘‘Sec. 753. Emission reductions from reduced deforestation.

This section requires the Administrator of the U.S. Agency for International Development, in consultation with the Administrator of the EPA and Secretary of Agriculture, within 2 years of enactment, to establish a program to provide assistance to reduce GHG emissions from deforestation in developing countries. The objectives of the program are to achieve supplemental reductions of at least 720,000,000 tons of carbon dioxide equivalent (CO_2e) in 2020, a cumulative amount of at least 6,000,000,000 tons of CO_2e by 2025, and additional reductions thereafter. An additional objective is to build capacity to reduce deforestation in developing countries, preparing them to participate in international offset markets while preserving existing forest carbon stocks in countries where they may be vulnerable to international leakage. However, activities that receive support under this part shall not be issued offset credits for GHG reductions, avoidance, or sequestration produced by these activities. Section 771(c) allocates allowances for this purpose as follows: 5% of allowances will be allocated from 2012 through 2025 to prevent tropical deforestation and build capacity to generate international deforestation offsets. By 2020, this program will achieve additional emission reductions equivalent to 10% of U.S. emissions in 2005. From 2026 through 2030, 3% of allowances will be allocated to this program. In 2031 and thereafter, 2% will be allocated to this program.

Sec. 323. International Clean Energy Deployment Program.

Establishes an International Clean Energy Deployment Program, to be led by the Secretary of State in consultation with an interagency group designated by the President, for the purpose of (1) assisting developing countries in activities that reduce, sequester, or avoid GHG emissions; (2) encouraging those countries to shift towards low-carbon development and promote a global agreement under the UNFCCC; and (3) promoting compliance with and enforcement of existing intellectual property laws. The program will distribute funding in the form of bilateral assistance and/or through multilateral funds or institutions pursuant to the Convention for these purposes.

Sec. 324. International climate change adaptation and global security program.

Establishes an International Climate Change Adaptation and Global Security Program, led by the Secretary of State, in consultation with the USAID, Treasury, and EPA for the purpose of providing assistance to the most vulnerable developing countries and to support the development and implementation of climate change adaptation programs in a way that protects and promotes the interests of the United States. The program will distribute funding in the form of bilateral assistance and/or multilateral funds or through international institutions pursuant to the Convention for these purposes.

<u>Sec. 325. Evaluation and reports.</u>

The Strategic Interagency Board on International Climate Investment will establish and implement a system to monitor and evaluate the effectiveness and efficiency of assistance provided under Subtitle B, International Climate Change Programs, and annually submit a report to Congress describing the steps federal agencies have taken and progress made toward accomplishing the objectives of this section and the ramifications of any potentially destabilizing impacts climate change may have on the interests of the United States.

<u>Sec. 326. Report on climate actions of major economies.</u>

This section requires the Secretary of State to prepare an interagency report on climate change and energy policy in the five non-OECD countries that emit the greatest annual quantity of greenhouse gases.

Subtitle C—Adapting to Climate Change

PART 1—DOMESTIC ADAPTATION

SUBPART A—NATIONAL CLIMATE CHANGE ADAPTATION PROGRAM

<u>Sec. 341. National Climate Change Adaptation Program.</u>

This section establishes a National Climate Change Adaptation Program within the U.S. Global Change Research Program to increase the overall effectiveness of Federal climate change adaptation efforts.

<u>Sec. 342. Climate services.</u>

This section establishes a National Climate Service within NOAA to develop climate information, forecasts, etc., and distribute information related to climate impacts to State, local, and tribal governments and the public to facilitate the development and implementation of strategies to reduce society’s vulnerability to climate variability and change.

SUBPART B—PUBLIC HEALTH AND CLIMATE CHANGE

<u>Sec. 351. Sense of Congress on public health and climate change.</u>

This section states the sense of Congress on the need to utilize the public health community to prepare health systems to respond to the impacts of climate change.

Sec. 352. Relationship to other laws.

The section clarifies that nothing in this subpart limits or in any way authorizes any violations of provisions that are contained in existing legislation.

Sec. 353. National strategic action plan.

This section requires the Secretary of Health and Human Services to create a national strategy within two years after the date of enactment of this Act, with updates every four years, for mitigating the impacts of climate change on public health in the United States. The Secretary shall assist health professionals in preparing for and responding to the health effects of climate change through developing surveillance and monitoring systems, predictive tools, communication strategies, identifying at-risk populations, and developing regional and academic centers of excellence.

Sec. 354. Advisory board.

This section establishes a permanent advisory board to advise the Secretary on the best science and make recommendations to address the impact on public health of climate change

Sec. 355. Reports.

This section requires the Secretary to enter into an agreement with the National Research Council and the Institute of Medicine for a report assessing the needs for the public health community to respond to climate change and recommendations for addressing these needs.

Sec. 356. Definitions.

This section defines key terms specific to this Subpart.

SUBPART C—CLIMATE CHANGE SAFEGUARDS FOR NATURAL RESOURCES CONSERVATION

Sec. 361. Purposes.

This section sets out the purpose of this subpart, which is to establish an integrated federal program, as well as financial support and incentives, to protect, restore, and conserve natural resources in response to threats of climate change and ocean acidification.

Sec. 362. Natural resources climate change adaptation policy.

This section establishes the policy of the federal government to use all practicable means to protect and conserve natural resources and facilitate resilience and adaptation to impacts of climate change, including ocean acidification, drought, flooding, and wildfire.

Sec. 363. Definitions.

This section defines terms used in the Subpart.

Sec. 364. 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 and federal natural resource agency adaptation plans required under section 368 (below), to serve as the Chair of the Natural Resources Climate Change Adaptation Panel established under section 365 (below), and coordinate federal agency strategies, plans, and, and activities related to natural resources adaptation.

Sec. 365. 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:

- 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;
- the Bureau of Reclamation;
- the Bureau of Indian Affairs;
- The Environmental Protection Agency;
- the Army Corps of Engineers;
- Chair of the Council on Environmental Quality;
- Federal Emergency Management Agency; and
- Other federal agencies or departments as appropriate.

Sec. 366. Natural Resources Climate Change Adaptation Strategy.

This section requires the President—not later than 1 year after enactment—and acting through the Panel, to develop a Natural Resources Climate Change Adaptation Strategy for helping natural resources to become more resilient and to adapt to the impacts of climate change and ocean acidification. The section also contains provisions further detailing the process for developing the strategy, as well as required components of the strategy.

Sec. 367. Natural resources adaptation science and information.

This section requires the Secretary of Commerce, acting through the Administrator of NOAA, and the Secretary of the Interior, acting through the Director of the U.S. Geological Survey—not later than 90 days after enactment—to establish a Natural Resources Climate Change Adaptation Science and Information Program. The program shall be implemented through the National Global Warming and Wildlife Science Center within the United States Geological Survey and through counterpart programs established by the Secretary of Commerce within NOAA. The section describes the functions of the Wildlife Center and establishes a Science Advisory Board to advise the Secretaries on the state-of-the-science and impacts.

Sec. 368. Federal natural resource agency adaptation plans.

This section requires each federal agency with representation on the Panel—not later than 1 year after enactment—to complete an agency adaptation plan detailing the agency's current and projected efforts to address the potential impacts of climate change, including ocean acidification, drought, flooding and wildfire, on natural resources within the agency's jurisdiction, as well as necessary additional actions, including a timeline for implementation of those actions. Each respective 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.

Sec. 369. State natural resources adaptation plans.

In order to be eligible for funds under section 370 (below), this section requires each state—not later than 1 year after the development of a Natural Resources Climate Change Adaptation Strategy required by section 366—to prepare a natural resources adaptation plan detailing the state's current and projected efforts to address the potential impacts of climate change on natural resources and coastal areas within the state's jurisdiction. The State plans should take into consideration other existing plans (e.g., coastal zone management, Endangered Species Act recovery plans, etc.), be done in coordination with other states that share jurisdiction and Indian tribes within the state, and should be updated every 5 years. The Secretary of Interior, and if applicable, the Secretary of Commerce shall review and approve each State plan. The section also contains provisions further detailing the process for developing the strategy, as well as required components of the strategy.

Sec. 370. Natural Resources Climate Change Adaptation Account.

States This section specifies that the amounts made available under section 771(a)(16) of the Clean Air Act and section 216 of Division B shall be provided to States to carry out the natural resource adaptation activities in accordance with the plans developed under section 369 and will be distributed as follows:

- 84% to State wildlife agencies using the formula established under the second subsection c relate to the Pitman-Robertson Wildlife Restoration Act
- 16% to State coastal agencies using the formula established by the Secretary of Commerce under the Coastal Management Act

Natural Resource Adaptation. Of the amounts made available pursuant to section 771(b)(7) of the Clean Air Act and section 212 of Division B:

- 28% to DOI for agency adaptation activities;
- 8% to DOI for cooperative grant programs;

- 5% to DOI for financial assistance to Indian tribes for adaptation efforts;
- 20% to the existing Land and Water Conservation Fund (with a portion of this to be made available on a competitive basis to States and Indian tribes)
- 8% to the Forest Service for national forest and grassland adaptation activities;
- 11% for adaptation activities on coastal, estuarine, and marine habitats;
- 12% to EPA for large-scale freshwater and aquatic ecosystems; and
- 8% to the Corps of Engineers for restoration activities.

Finally, the section requires that any state that receives a grant under this subsection use funds from non-federal sources to pay 10% of the costs of each activity carried out using amounts under the grant.

<u>Sec. 371. National Fish and Wildlife Habitat and Corridors Information Program.</u>

This section requires, within 6 months of enactment, the Secretary of Interior to establish a National Fish and Wildlife Habitat and Corridors Information Program to inform planning and development decisions by federal, state, local, and tribal decision-makers. This section provides additional information on the development and content of the information system.

<u>Sec. 372. Additional provisions regarding Indian tribes.</u>

This section provides an exemption of Indian cultural items and resources from FOIA if disclosure would cause harm or significant invasion of privacy. It also requires communication and coordination across all levels of government to ensure protection of treaty-reserved rights of Indian tribes to gather first foods.

SUBPART D—ADDITIONAL CLIMATE CHANGE ADAPTATION PROGRAMS

<u>Sec. 381. Water system mitigation and adaptation partnerships.</u>

This section establishes a water system mitigation and adaptation partnership program to provide funds to states and tribes for water system adaptation projects. The states are to provide grants through a competitive process to owners and operators of water systems to address climate-related impacts on water quality, water supply or reliability of a region. The federal share of the cost of any program, strategy or infrastructure improvement shall not exceed 50% of its cost.

<u>Sec. 382. Flood control, protection, prevention, and response.</u>

This section establishes a Flood Control, Protection, Prevention, and Response Program to provide funds to states and Indian tribes for projects that seek to mitigate or adapt to the destructive impacts of climate related increases in the duration, frequency, or magnitude of rainfall or runoff, including snowmelt runoff, as well as hurricanes.

<u>Sec. 383. Wildfire.</u>

As soon as is practicable following enactment, the Secretaries of Agriculture and the Interior shall develop regional maps of communities most at risk of wildfire and in need of hazardous fuel treatment and maintenance. The section also authorizes the Secretaries to provide cost-share grants to fire-ready communities and Indian tribes to assist them in carrying out activities such as increasing wildland fire awareness, training programs for local firefighters, purchasing equipment, and forest restoration. Communities that are not fire-ready may get grants to assist them in becoming fire-ready.

Sec. 384. Coastal and Great Lakes State adaptation program.

The Administrator shall distribute in accordance with this section, funding for coastal state adaptation based on a specified formula. The funds shall be used by states and tribal communities for projects and activities to plan for and address the impacts of climate change in the coastal watershed.

DIVISION B—POLLUTION REDUCTION AND INVESTMENT

TITLE I—REDUCING GLOBAL WARMING POLLUTION

Subtitle A—Reducing Global Warming Pollution

Sec. 101. Reducing global warming pollution.

This section amends the Clean Air Act to add the following title after Title VI.

> **‘‘TITLE VII—GLOBAL WARMING POLLUTION REDUCTION AND INVESTMENT PROGRAM**
>
> **‘‘PART A—GLOBAL WARMING POLLUTION REDUCTION GOALS AND TARGETS**
>
> **‘‘Sec. 701. Findings.**
>
> This section states that global warming poses a significant threat, that national and international scientific assessments link GHG emissions to increased risks, and lists the types of health, environmental and economic impacts that could result.
>
> **‘‘Sec. 702. Economywide reduction goals.**
>
> This section establishes the overall (economy-wide) GHG emission reduction goals for the bill:
>
> - 3% below 2005 levels in 2012;
> - 20% below 2005 levels in 2020;
> - 42% below 2005 levels in 2030;
> - 83% below 2005 levels in 2050.
>
> **‘‘Sec. 703. Reduction targets for specified sources.**

This section directs the Administrator, not later than 2 years after enactment, to promulgate regulations to cap and reduce annually the aggregate GHG emissions of capped sources each calendar year beginning in 2012 such that the level of GHG emissions from capped sources is:

- 3% below 2005 levels in 2012;
- 20% below 2005 levels in 2020;
- 42% below 2005 levels in 2030;
- 83% below 2005 levels in 2050.

''Sec. 704. Supplemental pollution reductions.

This section requires the Administrator to set aside (referring to section 771(d), which refers to Sec. 751) the emission allowances to achieve supplemental GHG emissions reductions from reduced deforestation in developing countries. The objective is to reduce deforestation emissions by 720 million tons CO_2e by 2020 and 6 billion tons CO_2e by December 31, 2025 and to assist developing countries in preparing to participate in international carbon offset markets.

In 2020, these set-asides must achieve additional U.S. GHG emission reductions equal to an additional 10% below 2005 levels. To that end, the Administrator is instructed to modify the set-aside percentages above if necessary to achieve that goal (per section 781).

''Sec. 705. Review and program recommendations.

This section requires the Administrator, in consultation with appropriate federal agencies, to report to Congress not later than July 1, 2013 and every 4 years thereafter, on issues including:

- The latest scientific information relevant to climate change and its impacts;
- An analysis of the effectiveness of national and international efforts to achieve additional reductions in GHG emissions;
- An analysis of whether such efforts are likely to avoid reaching 450 parts per million of CO_2ein the atmosphere or a temperature increase of 2 degrees Celsius above preindustrial levels; and
- An analysis by the Secretary of Energy on the technical feasibility of achieving required reductions.

The Administrator is directed to use a risk management framework to address projected impacts of climate change, both monetizable and non-monetizable impacts, and low-probability, high-impact events. Based on this review, the Administrator shall make recommendations to improve scientific understanding, to enhance monitoring, reporting and verification, and to identify additional reductions required to meet environmental objectives.

''Sec. 706. National Academy review.

This section requires EPA to offer to contract with the National Academy of Sciences (NAS) for a review of EPA's analysis conducted under section 705. The NAS report should also examine technological developments and any barriers to further advancements. The first report must be issued by July 1, 2014 and every four years thereafter and should include recommendations based on its review.

‘‘Sec. 707. Presidential response and recommendations.

This section requires the President—not later than July 1, 2015, and every four years thereafter—to direct relevant federal agencies to use existing statutory authority to take appropriate actions identified in the reports required by sections 705 and 706. If the NAS concludes in a report that the United States will not achieve the necessary domestic GHG reductions, the President must submit a plan to Congress identifying domestic and international actions which will achieve the necessary additional GHG reductions.

“Sec. 708. Consultation with States.

This section requires the Administrator to consult with states in the Regional Greenhouse Gas Initiative, Western Climate Initiative, and the Mid-West Governors Accord in the development of any regulations to implement this Title and the pollution reduction and investment program.

‘‘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. They are:

- 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);
- 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.

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

This section sets the CO_2 equivalents (CO_2e) of GHGs for the purposes of the bill as follows:

GHG (1 metric ton)	CO_2e(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 5 years thereafter—to review and, if appropriate, revise the 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 manufactured in 2008 or any subsequent year more than 10,000 tons of CO_2e. If the Administrator determines that it would help achieve the purposes of the Act to include any other entity that emits a GHG at any level, then those entities may be designated as reporting entities as well, and required to report their emissions.

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

‘‘Sec. 714. Perfluorocarbon and other nonhydrofluorocarbon fluorinated substance product regulation.

This section requires the Administrator to determine within a year after enactment whether fluorinated gases emitted during the production of non-HFC fluorinated substances should be regulated by a best achievable performance standard or the program established in Sec. 722. This determination shall be made based on which regulation allows for the greatest reduction in emissions and other factors determined by the Administrator. Within two years, the Administrator will publish a list of non-HFC fluorinated substances, which are defined as substances not listed as a class I or class II substance and not SF6 or NF3. If the determination is made to enact a best achievable performance standard, it is to be established within 2 years and subsequently reviewed and updated every 2 years to require the maximum reductions practicable. Also within 2 years and to be updated every 10 years, the Administrator will establish a 10-year schedule under which each covered entity shall incrementally implement a more stringent best achievable performance standard. **‘‘PART C—PROGRAM RULES**

‘‘Sec. 721. Emission allowances.

This section establishes the quantity of allowances for years 2012-2050, each with a unique identification number.

Calendar Year	Emission allowances (in millions)
2012	4627
2013	4544
2014	5099
2015	5003
2016	5482
2017	5261
2018	5132
2019	5002
2020	4873
2021	4739
2022	4605
2023	4471
2024	4337
2025	4203
2026	4069
2027	3935
2028	3801
2029	3667
2030	3533
2031	3408
2032	3283
2033	3158

2034	3033
2035	2908
2036	2784
2037	2659
2038	2534
2039	2409
2040	2284
2041	2159
2042	2034
2043	1910
2044	1785
2045	1660
2046	1535
2047	1410
2048	1285
2049	1160
2050	1035

In addition, the section authorizes the Administrator to adjust the allowance schedule—and details the formula to be used—if he or she makes one or more of the following determinations:

- U.S. GHG emissions in 2005 were other than 7,206 CO_2e;
- The types of entities covered by the cap-and-trade system in 2012 were responsible for other than 66.2% of U.S. GHG emissions in 2005;
- The types of entities covered by the cap-and-trade system in 2014 were responsible for other than 75.7% of U.S .GHG emissions in 2005; or
- The types of entities covered by the cap-and-trade system in 2016 were responsible for other 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 2012 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 2012 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 conversionary use, in 2012 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 Administrator may also conduct a study to determine the extent to which petroleum- or coal-based liquid or gaseous fuels, pet-coke, NGL, or natural gas are used as feedstock in manufacturing processes to produce products and the GHG emissions resulting from such uses. If, as a result of the study, the Administrator determines that the use of such products by noncovered sources results in substantial GHG emissions and that these emissions have not been adequately covered by other requirements of this Act, the Administrator may then promulgate regulations reducing compensatory allowances commensurately. 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 re-define "covered entity" to include downstream sources of non-HFC fluorinated gases if the assessment determines it to be necessary for the purposes of this Title.

‘‘Sec. 722. Prohibition of excess emissions.

This section sets out the compliance obligations for covered entities under the cap-and-trade system. The following entities are required to hold emission allowances as of April 1, 2013, for their previous year's GHG emissions:

- Electricity sources (as defined in section 700), must hold 1 emission allowance for each ton of CO_2e emitted in the previous calendar year, excluding emissions resulting from the use of:
    - Petroleum-based or coal-based liquid gaseous fuel;
    - Natural gas liquid;
    - Renewable biomass;
    - Pet-coke;
- Fuel producers and importers (as defined in section 700) must hold 1 emission allowance for each ton of CO_2e that is emitted from the combustion of any petroleum-based or coal based liquid fuel, petroleum coke, or natural gas liquid, produced or imported by such covered entity during the previous calendar year for sale or distribution in interstate commerce, assuming no capture and sequestration of any greenhouse gas emissions.
- Industrial gas producers and importers (as defined in section 700) 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 or released as fugitive emissions in the production of fluorinated gas.

- Nitrogen trifluoride sources: (as defined in section 700) must hold 1 emission allowance for each ton of CO_2e of nitrogen trifluoride that such entity emitted in the previous calendar year.
- Geological sequestration sites (as defined in section 700) must hold 1 emission allowance for each ton of CO_2e emitted in the previous calendar year.
- Industrial stationary sources (sources (F), (G), or (H) as defined in section 700) must hold 1 emission allowance for each ton of CO_2e emitted in the previous calendar year, beginning in calendar year 2014 (except for small business refiners which must hold allowances starting in 2015), excluding emissions resulting from the combustion or use of:
    - Petroleum-based or coal-based liquid gaseous fuel;
    - Natural gas liquid;
    - Renewable biomass;
    - Pet-coke;
    - 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 section 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:
    - Petroleum-based or coal-based liquid gaseous fuel;
    - Natural gas liquid;
    - Renewable biomass;
    - Pet-coke.
- Natural Gas Local Distribution Companies (LDCs) (source (J) as defined in section 700) must hold 1 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, beginning in calendar year 2016, to customers that are not covered entities, assuming no capture and sequestration of that GHG.
- Algae-based fuel producers must hold allowances for CO_2 used to grow the algae or for the CO_2 emitted from combustion of fuel produced from such algae, but not for both.

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 producer in 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.

This section also sets out the bill's alternative compliance provisions: offset credits, term offset credits, international emission allowances, and compensatory allowances.

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 1.5 billion from domestic and 0.5 billion from international sources. The Administrator may permit an increase in the number of international offsets to up to 1.5 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 1 domestic or international offset credit in lieu of an emission allowance. Beginning in 2018, 1.25 international offset credits must be submitted for each equivalent allowance.

Covered entities are also permitted to use international emissions allowances, compensatory allowances, and term offsets in lieu of an emission allowance.

Among other provisions, this section also directs the Administrator—in 2020 and once every 8 years thereafter—to review the CO_2e emissions coverage thresholds for covered entities in categories B, C, D, G, H, and I of section 700(13). The Administrator has the authority, by rule, to lower the threshold to not less than 10,000 tons of CO_2e.

''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 2x penalty, and still has to surrender an allowance for the following 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.

‘‘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 are slightly more complex. The rules distinguish between borrowing for one year and borrowing for 2-5 years. Borrowing from more than 5 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 5 years in the future. Entities must prepay interest on borrowed allowances at a rate obtained by multiplying .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. Market stability reserve.

This section directs the Administrator to conduct quarterly market stability reserve auctions, in which only covered entities subject to compliance obligations may participate. Not later than 2 years after enactment, the Administrator is required to establish a market reserve account for 2012-2050. To fill the account, the Administrator shall allocate the amount of allowances specified in Section 771(d)(9). The Administrator is required to transfer to the strategic reserve any allowances that were offered for sale at the regular auction (under section 778) but not purchased and any allowances purchased through the use of auction revenue from the sale of reserve allowances.

The Administrator is required to set a minimum price per emission allowance at each market stability reserve auction. In 2012, the minimum price is set at $28 per ton. For the SRAs held in 2013 through 2017, the minimum price is the reserve auction price for the previous year increased by 5% plus the rate of inflation (as measured by the Consumer Price Index). For the market stability reserve auctions held in 2018 and each year thereafter, the minimum auction price will be the reserve auction price for the previous year increased by 7%, plus the rate of inflation.

There are limits to the quantity of allowances which the Administrator may sell at each market stability reserve auction. From 2012-2016, no more than a quantity equal to 15% of annual allowances issued for that year may be sold. From 2017 through the end of the program, no more than a quantity equal to 25% of annual allowance issued for that year may be sold in that year’s market stability reserve auction.

Each quarterly market stability reserve auction will auction one-quarter of the allowances reserved for that year. Any unsold allowances from a quarterly reserve auction are rolled over to the next quarter’s reserve auction, and so on through the end of the year, but unsold allowances from one year may not be rolled over to the next. Instead, they are returned to the market reserve account for use in future years.

An individual entity may only purchase allowances up to a quantity equal to 20% of its compliance obligation annually. In 2012, the purchase limit is equal to 20% of a covered entity's emissions reported to the registry for 2011. The Administrator must establish a separate purchase limit for new entrant entities, allowing them to purchase at least 20% of their expected compliance obligation for their first year of operation.

The Administrator must use the proceeds from each market stability reserve auction to purchase domestic offset credits and international offset credits issued for reduced deforestation (REDD) activities pursuant to section 753. The Administrator retires these credits, and creates a number of emission allowances equal to the number of international offset credits so retired. The Administrator then uses these allowances to supplement the market stability reserve. The Administrator will also issue regulations that allow entities in possession of offset credits in the market stability reserve auction.

''Sec. 727. Permits.

This section mandates that for any stationary sources covered by Title V of the 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 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.

''PART D—OFFSETS

‘‘Sec. 731. Offsets Integrity Advisory Board.

This section requires the President—within 30 days of enactment—to establish a 9-member Offsets Integrity Advisory Board (OIAB) to make recommendations to the Administrator for use in promulgating and revising regulations and for ensuring the overall environmental integrity of the offset programs to be established. The OIAB shall provide a list of recommended offset project types to the Administrator within 90 days.

In 2017, and every 5 years thereafter, the OIAB shall submit a public scientific review of offset and deforestation reduction programs. The report shall review approved and potential offset methodologies; scientific studies; offset project monitoring, verification, and audits; and evaluate the net emissions effects of implemented offset projects. OIAB shall recommend changes to the offset program to ensure that offset credits do not compromise the integrity of the emissions cap and to avoid or minimize any adverse effects to human health or the environment.

‘‘Sec. 732. Establishment of offsets program.

This section, among other provisions requires the President—within 2 years of enactment—to promulgate regulations establishing an offset program that ensures offset credits represent verifiable, additional and permanent GHG emission reductions, avoidance or sequestration that also avoid or minimize adverse effects on human health and the environment. The section also requires the President to establish an offset registry and to assess fees payable by offset project developers to cover the administrative costs of EPA and the Department of Justice for carrying out the activities of this part. This section designates the Secretary of Agriculture as the lead agency for implementation of offset programs pertaining to agriculture and forestry.

‘‘Sec. 733. Eligible project types.

This section, among other provisions, requires the President—within 1 year of enactment—to establish an initial list of project types eligible for offset credits including consideration of project types listed in the bill, and an additional list within 2 years.

The President is directed to take into consideration the recommendations of the OIAB and is required to provide justification if the list is different from the OIAB’s list. The Administrator may add or remove project types at any time by rule. The section also allows any person to petition the President to add or remove a project type; the President must grant or deny the petition within 12 months.

The initial list of project types the President shall consider include:

- Methane collection and combustion projects at active underground coal mines;
- Methane collection and combustion projects at landfills;
- Capture of venting, flaring, and fugitive emissions from oil and natural gas systems;
- Non-landfill methane collection, combustion and avoidance projects involving organic waste streams, including manure management and biogas capture and combustion;
- Afforestation and reforestation of acreage not forested as of January 1, 2009;
- Forest management, including harvested wood products;
- Agricultural, grassland, and rangeland sequestration and management practices including:
    - Altered tillage, winter cropping, continuous cropping, and other means to increase biomass returned to soil in lieu of planting;
    - Reduction of nitrogen fertilizer use;
    - Reduction in the frequency and duration of rice paddy flooding;
    - Reduction in carbon emissions from organic soils;
    - Reduction in GHGs from manure and effluent;
    - Reduction in GHG emissions due to changes in animal management practices, including dietary modifications;
    - Planting and cultivation of permanent tree crops;
    - GHG emission reductions from improvements and upgrades to mobile or stationary equipment (including engines);
    - Practices to reduce and eliminate soil tillage;
    - Reductions in GHG emissions through restoration of wetlands, forestland, and grassland; and
    - Sequestration of GHGs through management of tree crops; and.
- Changes in carbon stocks attributed to land use change and forestry activities, including:
    - Management of peatland or wetland;
    - Conservation of grassland and forested land;
    - Improved forest management, including accounting for carbon stored in wood products;
    - Reduced deforestation or avoided forest conversion;
    - Urban tree-planting and maintenance;
    - Agroforestry; and
    - Adaptation of plant traits or new technologies that increase sequestration by forests.

‘‘Sec. 734. Requirements for offset projects.

This section first directs the President to establish for each project type the following standardized methodologies:

- Additionality: ensure, at a minimum, emission reductions were from activities that:
    - Are not required by or undertaken to comply with any law or regulation;
    - Were not commenced prior to January 1, 2009;
    - Are not receiving support under Sec. 323 Division A or Sec. 207 Division B of this act; and
    - Exceed the activity baseline.
- Activity Baselines: baselines are required to reflect a conservative estimate of business-as-usual performance or practice for the relevant activity such that the baseline provides an adequate margin of safety to ensure the environmental integrity of offsets calculated using the baseline.
- Quantification: measurement of the extent to which reduction, avoidance, or sequestration exceeds the activity baseline, including protocols for monitoring.
- Leakage: accounting for and mitigating leakage.
- Reversals: accounting for and addressing reversals, (impermanence) of sequestration projects, as well as policies for assigning f liability and responsibility for mitigating and fully compensating for reversals. Mechanisms to ensure permanence must include at least one of the following:
    - Insurance that would provide for full compensation for the amount of emissions released.
    - An offsets reserve, in which:
        - A portion of the offset credits will be subtracted and reserved from the quantity of offset credits based on the risk of reversal;
        - If a reversal occurs, credits shall be removed from the reserve in the amount of the reversal and cancelled;
        - If the reversal was intentional, the offset project representative must replace all the cancelled credits with offsets credits (and allowances if necessary);
        - If the reversal was unintentional, the offset project representative must replace only one-half the number of offset credits that were originally reserved for that project. Reserve credits may not be used for compliance obligation.
        - An open petition process for a determination that an offset reserve has occurred in which the President must make a determination within 90 days.
    - Term offset credits: in the case of a project with a crediting period of not more than 5 years, the President may choose to issue a term offset credit.
    - Another mechanism.

The President has the discretion to approve a variance for the use of a different methodology.

In addition, the President is directed to specify a crediting period for each offset type. These crediting periods must be no less than 5 years and no greater than 10 years for any project type other than sequestration or 20 years for forestry projects. Offset projects may only generate credits during the crediting period. Offset project representatives may petition for a new crediting period, subject to the project type eligibility list and methodologies in effect at the time, within 18 months of the end of the crediting period.

The President is required to apply conservative assumptions or methods to maximize environmental integrity, and to give due consideration to existing offset project methodologies.

‘‘Sec. 735. Approval of offset projects.

This section requires offset project representatives to submit an approval petition signed by an official who certifies submitted information for accuracy no later than the time at which an offset project’s first verification report is submitted. The President is directed to approve or reject the petition within 90 days. If denied, it may be resubmitted.

The President is directed to establish procedures for appeal, as well as a voluntary preapproval review procedure to allow for an offset project applicant to request a preliminary eligibility review. The President is required to provide a non-binding response within 6 weeks.

‘‘Sec. 736. Verification of offset projects.

This section requires offset project representatives to submit a report determining the quantity of GHG reductions, avoidance, or sequestration, prepared by an accredited third-party verifier (the accreditation may be revoked if regulated standards are not maintained). The section includes specifications for what such a report must include, and standards for verifier accreditation.

‘‘Sec. 737. Issuance of offset credits.

This section requires the President —within 90 days after receiving a verification report—to make a determination of the quantity of GHG emissions reduced, avoided or sequestered by an offset project. Within two weeks of the above determination, one offset credit will be issued for each ton of CO_2e reduced, avoided, or sequestered from approved projects. Credits may only be issued for reductions that have already occurred—during the project’s crediting period and after January 1, 2009.

‘‘Sec. 738. Audits.

This section requires the President to conduct random audits of offset projects, credits, and practices of third-party verifiers. The President may delegate this responsibility to a state or tribal government.

Specific requirements of the regulations for the auditing program are to include the components of projects to be compared to the offset approval petition and verification report, the minimum experience or training of the auditors, the form in which the reports shall be completed, requirements for delegating auditing functions to State and tribal governments, and other necessary information.

‘‘Sec. 739. Program review and revision.

This section requires the Administrator—at least once every 5 years, and taking into consideration the recommendations of the Advisory Board—to review, update and revise the methodologies, reversal policies and mechanisms, and measures to improve the accountability of the offsets program.

‘‘Sec. 740. Early offset supply.

This section requires the President to issue an offset credit for each ton of CO_2e emissions reduced, avoided or sequestered if:

- The offset project was started after January 1, 2001; and
- The reduction, avoidance or sequestration occurred after January 1, 2009, and before the date 3 years after the bill’s enactment, or the offset program is established and the regulations take effect, whichever is sooner; and
- The offset credit was issued under any State, tribal, or voluntary GHG emission offset program that the President determines:
    - Was established by State or tribal law or regulation prior to January 1, 2009;
    - Has developed offset project type standards, methodologies, and protocols through a public consultation process;
    - Has publicly published standards, methodologies, and protocols that require credited emission reductions to be permanent, additional, verifiable and enforceable;
    - Requires emission reductions be verified by a State regulatory or accredited third-party verifier;
    - Requires that all credits issued are registered with individual serial numbers; and
    - Ensures that no credits are issued for activities for which the entity administering the program has funded or solicited the offset project or activity.

The President shall also approve as eligible other programs not established under State or tribal law or regulation that are determined to have criteria and methodologies of at least equal stringency as those above. The President has the discretion to approve only certain types of offset projects under such programs. Offset credits will not be permitted if they have expired, or have already been retired, cancelled or used for compliance. Once used, these offset credits are retired.

''Sec. 741. Environmental considerations.

This section establishes that if forestry projects are an eligible offset project type under section 733, the President is required to promulgate regulations for the selection and use of tree species that shall ensure that native species are given primary consideration, enhance biological diversity, prohibit the use of federally or state-designated noxious weeds, prohibit the use of a species listed as invasive, are in accordance with widely accepted, environmentally sustainable forestry practices, ensure that the project was not converted from native ecosystems to generate offsets, and ensure that the use of offset credits would be eligible to satisfy emission reductions commitments made in multilateral agreements.

''Sec. 742. Trading.

This section applies the same conditions as Sec. 724, which 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.

''Sec. 743. Office of Offsets Integrity.

This section establishes a Carbon Offsets Integrity Unit headed by a Special Counsel within the Office of the Assistant Attorney General of the Environment and Natural Resources Division of the Department of Justice. The Special Counsel will be a Senate-confirmed presidential appointment. The Special Counsel will supervise and coordinate investigations and civil enforcement of the carbon offsets program, ensure that civil enforcement is used to the fullest extent authorized, and ensure that adequate resources are made available for investigation and enforcement of civil violations of the carbon offsets program.

''Sec. 744. International offset credits.

This section permits the Administrator, in consultation with the Secretary of State and the Administrator of USAID, to issue international offset credits from activities that reduce, avoid or sequester emissions in a developing country, but 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 and the project is eligible to receive service of process in the United States for all civil and regulatory actions. All the requirements of the U.S. domestic offset program apply to the issuance of international offset credits.

The section allows the Administrator to establish categories outside of the three categories below if the auction price for allowances reaches the market stability reserve auction price for 2 consecutive years and the total amount of international offsets held by covered entities for each of those years does not exceed the limit on international offsets established in Sec. 722(d)(3). These supplemental categories of offsets may be created if they are in a country that has developed and implemented its own low carbon development plan that makes provision for these offsets, are not offsets of the three specified categories, and meet specific criteria relevant to methodologies and institutional and technical capacities associated with developing country contexts to ensure treatment of leakage, additionality, and permanence.

Sectoral Crediting

The section requires the Administrator, in consultation with the Secretary of State, to identify sectors of specific countries where international sector-based credits are appropriate in order to minimize the potential for leakage and to encourage countries to take nationally appropriate mitigation actions.

Sectoral international offset credits may be issued for the quantity of sector-wide reduction, avoidance, or sequestration of GHGs achieved relative to a domestically enforceable baseline level of absolute emissions established by a multilateral or bilateral agreement or arrangement. The baseline level of emissions must be lower than a business-as-usual scenario and meet several performance conditions.

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

The Administrator is required, in consultation with the Secretary of State, 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;
- 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
- Whether the country has requested that one or more of the sectors in its economy be eligible.

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 United Nations Framework Convention on Climate Change (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.

No international offset credits shall be issued for projects that destroy HFCs.

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 or other methodologies;
- Appropriate adjustments are made to account for circumstances specific to the country;
- The activity is designed and managed in accordance with widely accepted, environmentally sustainable forestry practices;
- The project promotes native species and avoids the introduction of invasive nonnative species;
- 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 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 5 years to show that only reductions that are in addition to existing commitments will generate offsets; establish a trajectory that will result in zero gross 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 include forest degradation and soil carbon losses associated with forested wetlands or peat lands within the meaning of deforestation.

This section also allows for crediting of projects at the subnational level, including states/provinces and program/project level reductions meeting similar requirements, including the creation of state/province and program/project level baselines.

Finally, the Administrator and the Secretary of State are directed to ensure that activities generating international offset credits are not used for compliance under a foreign or international regulatory system.

<u>Sec. 102. Definitions.</u>

This section adds the following section before Part A of Title VII of the Clean Air Act, as added by this bill.

<u>‘‘Sec. 700. Definitions.</u>

This section defines the terms used in this title.

<u>Sec. 103. Offset reporting requirements.</u>

This section amends Sec. 114 of the Clear Air Act to have the Administrator require any person who is an offset project developer establish and maintain records on offset project approval petitions submitted, any reversals which occur, verification reports, and other aspects that appropriate determine are important. The requirement may also be applied to third party verifiers. The requirement exists during the crediting period and five years after.

Subtitle B—Disposition of Allowances

<u>Sec. 111. Disposition of allowances for global warming pollution reduction program.</u>

‘‘PART H—DISPOSITION OF ALLOWANCES

<u>‘‘Sec. 771. Allocation of emission allowances.</u>

(A) This section details for what purposes emission allowances are to be allocated and auctioned. Of the total quantity of emission allowances established for each vintage year under section 721(a), the Administrator shall allocate emission allowances for the following purposes:

1. The program for electricity consumers pursuant to section 772:

    a. For electricity consumers under subsections (b), (c), and (d) of section 772 as follows: 43.75% from 2012-2013; 38.89% from 2014-2015; 35.00% from 2016-2025; 28.00% in 2026; 21.00% in 2025; 14.00% in 2028; and 7.00% in 2029.

    b. The program for small LDCs under section 772(e) as follows: 0.50% from 2012-2025; 0.40% in 2026; 0.30% in 2027; 0.20% in 2028; and 0.10% in 2029.

2. The program for natural gas consumers pursuant to section 773 as follows: 9.00% from 2016-2025; 7.20% in 2026; 5.40% in 2027; 3.60% in 2028; 1.80% in 2029.

3. The program for home heating oil and propane consumers pursuant to section 774 as follows: 1.88% from 2012-2013; 1.67% from 2014-2015; 1.50% from 2016-2025; 1.20% in 2026; 0.90% in 2027; 0.60% in 2028; and 0.30% in 2029.

4. The program for domestic fuel production, including petroleum refiners and small business refiners under section 775, 0.75% from 2014-2026 to domestic refiners; and an additional 1.0% from 2014-2026 for small business refiners.

5. The program to ensure real reductions in industrial emissions under part F (in addition to the allowances reserved below) as follows: 4.0% from 2012-2013; up to 15.00% in 2014 and declining each year thereafter based on a specified formula.

6. The program for commercial deployment of carbon capture and sequestration technologies under section 780 as follows: 1.75% from 2014-2017; 4.75% from 2018-2019; and 5.00% from 2020-2050.

7. The program for early action recognition pursuant to section 782 as follows: 2.0% from 2012-2013.

8. The program for investment in clean vehicle technology under section 201 of Division B as follows: 2.4% from 2012-2017 and 0.8% from 2018-2025.

9. The program state and local investment in energy efficiency and renewable energy under section 202 of Division B (in addition to the allowances reserved below) as follows: 10.35% from 2012-2013; 8.55% from 2014-2015; 5.85% in 2016; 6.12% in 2017; 5.22% in 2018-2019; 4.95% in 2020-2021; 0.90% in 2022-2025; and 4.05% in 2026-2050.In addition, for each of the vintage years 2022-2025, 3.2% percent of allowances for the vintage year 4 years after each of these

vintage years will also be distributed (in addition to the 4.05% percent for vintage years 2026-2050).

10. The program for energy efficiency in building codes under section 163 of Division A and section 203 of Division B as follows: 0.50% from 2012-2050.

11. The program for retrofit for Energy Innovation Hubs pursuant to section 204 of Division B as follows: 0.75% from 2012-2015 and 0.45% from 2016-2050.

12. The program for ARPA-E research pursuant to section 205 of Division B as follows: 3.25% from 2012-2013 and 1.25% from 2014-2050.

13. The International Clean Energy Deployment Program under section 323 of Division A and section 206 of Division B as follows: 1.0% from 2012-2021; 2.0% from 2022-2026; and 3.0% from 2027-2050.

14. The International Climate Change Adaptation and Global Security Program under section 324 of Division A and section 207 of Division B as follows: 1.0% from 2012-2021; 2.0% from 2022-2026; and 5.0% from 2027-2050.

15. The state programs for greenhouse gas reduction and climate adaptation pursuant to section 210(d) of Division B as follows: 1.34% from 2012-2013; 0.50% from 2014-2021; 1.06% from 2022-2026; and 2.18% from 2027-2050.

16. The state programs for natural resource adaptation activities under the program for climate change safeguards for natural resources conservation under section 370(a)(1) of Division A and section 216 of Division B as follows: 0.39% from 2012-2021; 0.77% from 2022-2026; and 1.54% from 2027-2050.

(B) The Administrator shall auction, pursuant to section 778, emission allowances for the following purposes:

1. The allowances reserved under subsection (d)(9) for the Market Stability Reserve Fund under section 726.

2. The program for climate change consumer refunds and low- and moderate-income consumers pursuant to section 776:

    a. Emission allowances for consumer rebates under section 776(a), pursuant to subsection (e)(2) (excess undistributed allowances)

    b. Emission allowances for energy refunds under section 776(b) as follows: 15.00 from 2012-2029; 18.50 from 2030-2050; and 15.00 from 2051 and each year thereafter.

3. The program for investment in clean vehicle technology under section 201 of Division B as follows: 0.6 from 2012-2017 and 0.2 from 2018-2025.

4. The program for energy efficiency and renewable energy worker training under section 209 of Division B as follows: 1.0 from 2012-2013 and 0.5 from 2014-2015.

5. The program for worker transition under part 2 of Subtitle A of Title III of Division A, and section 209 of Division B as follows: 0.5 from 2012-2021 and 1.0 from 2022-2050.

6. The program for public health and climate change under subpart B of part 1 of subtitle C of title III of Division A, and section 212 of Division B as follows: 0.10 from 2012-2050.

7. The Natural Resources Climate Change Adaptation Account under the program for climate change safeguards for natural resources conservation under section 370(a)(2) of Division A and section 212 of division B as follows: 0.62 from 2012-2021, 1.23 from 2022-2026; and 2.46 from 2027-2050

8. Nuclear worker training under section 132 of Division A, and section 213 of Division B as follows: 0.5 from 2012-2013 and 0.05 from 2014-2015.

9. The supplemental agriculture, abandoned mine land, renewable energy, and forestry GHG reduction and renewable energy program under section 155 of Division A, and section 214 of Division B (in addition to allowances reserved below) as follows: 1.0 from 2012-2013 and 0.28 from 2014-2016

10. The transportation GHG reduction program under sections 831 and 832 and 215 of Division B (in addition to allowances reserved under subsection (d)(4)) as follows: 2.21 from 2012-2013; 1.35 from 2014-2015; 1.05 in 2016; 1.08 in 2017; 0.98 from 2018-2019; 0.95 from 2020-2021; 0.94 from 2022-2025; 1.64 in 2026; 2.52 from 2027-2029; and 2.17 from 2030-2050.

Supplemental Reductions. The Administrator will allocate allowances for each vintage year to achieve supplemental reductions pursuant to section 753 as follows: 5.0 from 2012-2025; 3.0 from 2026-2030; and 2.0 from 2031-2050.The Administrator can modify this allocation as necessary to ensure that the annual supplemental emission reduction objective for 2020 and the cumulative reduction objective through 2025 set forth in section 753(b)(1) is achieved.

Initial Reservation of Allowances. Before allocating emission allowances as described above, the Administrator shall reserve from the allowances established for each calendar year in section 721(a) the following percentages:

- *Deficit Reduction*. For auction pursuant to section 778 to ensure that this title does not contribute to the deficit for a calendar year and with the proceeds immediately deposited in the Deficit Reduction Fund established by section 783 as follows: 10.00 from 2012-2029; 22.00 from 2030-2039; and 25.00 from 2040-2050.

- *Supplemental Agriculture, Abandoned Mine Land, Forestry and Renewable Energy*. For the program under section 155 of Division A and section 214 of Division B as follows: 1.0 from 2012-2050.
- *Transportation Greenhouse Gas Reduction*. For the program under sections 831 and 832 and section 215 of Division B as follows: 1.0 from 2012-2050.
- *Industrial Emissions*. For the program to ensure real reductions in industrial emissions under part F as follows: 0.50 from 2012-2050.
- *State and Local Investment in Energy Efficiency and Renewable Energy*. For the program under section 2020 of Division B as follows: 0.50 from 2012-2050.
- *Electricity Consumers*; *Small LDCs.* For distribution to small LDCs under the program for electricity consumers under section 772(e) as follows: 0.50 from 2012-2025; 0.40 in 2026; 0.30 in 2027; 0.20 in 2028; and 0.10 in 2029.
- *International Climate Change Adaptation and Global Security Program*. For the program under section 324 of Division A and section 207 of Division B as follows: 0.25 from 2012-2026.
- *Market Stability Reserve Fund*. For the Market Stability Reserve Fund under section 726 as follows: 2.0 from 2012-2019 and 3.0 from 2020-2050.=

This section also contains provisions related to the treatment of carryover allowances and excess undistributed allowances.

‘‘Sec. 772. Electricity consumers.

This section specifies that the allowances in section 771(a)(1)(A) shall be distributed to electricity local distribution companies (LDCs). However, the Administrator will withhold from distribution emission allowances equal to the lesser of 14.3% of the allowances available under section 771(a)(1)(A) or 105% of what the Administrator anticipates will be distributed to merchant coal generators and long-term contract generators. Any of those held-back allowances that are not distributed to merchant coal generators or long-term contract generators, as described below, shall also be distributed to LDCs.

The distribution of allowances among LDCs should be calculated as follows: 50 percent distributed based on carbon dioxide emissions in a three-year base period (not updated) and 50 percent distributed based on sales in a three-year base period (updated every three years to reflect changes in service territory—i.e. number of customers).

Allowances should be used exclusively for the benefit of the ratepayer and, in the case of individual ratepayers, should not be used for rebates based solely on the quantity of electricity used (rebates should be linked to fixed portion of bills or as a fixed credit). LDCs are required to pass on the value of emission allowances to industrial ratepayers to reduce their electricity cost impacts and can do so based on sales. EPA, FERC, and state regulatory authorities are required to develop regulations, plans, and reporting guidelines to ensure the purposes of this provision are successfully implemented. EPA shall periodically audit the implementation by LDCs.

Merchant coal generators shall receive allowances under this section based on their electricity generation and their average CO_2 emissions for electricity generated in 2006-2008. The distribution of allowances to each merchant coal generator shall be equal to 50% of the generator's qualified emissions multiplied by an annual phase-down factor. The phase-down factor will be equal to 1 in 2012, and from 2013-2029 shall correspond to the overall decline in the amount of allowances distributed to the electricity sector as a whole. No more than 10% of the total quantity of allowances available under section 771(a)(1) shall be distributed to merchant coal generators in any year. This formula shall be adjusted if, based on a study by the Administrator and FERC, it is determined to result in windfall profits.

Small LDCs shall receive additional allowances allocated pursuant to section 771(a)(1)(B) exclusively for the purpose of electricity savings programs, deployment of renewable energy technologies, assistance for low-income ratepayers, and for the cost of compliance associated with this Act.

Allowances available under section 771(d)(7) shall be distributed to rural electric cooperatives and consumer or publicly owned small LDCs for the purpose of electricity savings programs, deployment of renewable energy technologies, and assistance for low-income ratepayers.

''Sec. 773. Natural gas consumers.

This section requires that allowances to natural gas local distribution companies in accordance with section 771(a)(2) be allocated based on natural gas deliveries to customers that were non-covered entities from 2006 to 2008 unless the company selects an alternative 3 consecutive year period from 1999-2008. The distribution formula shall be updated by EPA in 2019 and at three-year intervals thereafter to reflect changes in each LDC company's service area.

Emissions allowances shall be used exclusively for the benefit of retail ratepayers other than covered entities and should not be used for a rebate based on quantity of natural gas delivered. Any such rebates should be linked to the fixed portion of bills or be a fixed amount. LDCs are required to pass on the value of emission allowances to industrial ratepayers that are not covered entities to reduce their electricity cost impacts and can do so based on sales.

At least one-third of the allowance value shall be used for cost-effective energy efficiency programs. EPA and state public utility commissions shall promulgate regulations specifying how natural gas LDCs are to meet the requirements contained in this section. Reports specifying program implementation and periodic audits are required.

<u>‘‘Sec. 774. Home heating oil and propane consumers.</u>

This section requires the Administrator to provide allowances in accordance with section 771(a)(3) to States based on the proportion of carbon emissions from home heating oil and propane delivered in the state compared to the total delivered in the country. These allowances shall be used exclusively for the benefit of consumers and at least 50 percent of allowances must be used for cost-effective energy efficiency programs to reduce consumers' overall fuel costs, with the remainder for rebates. This section also directs the Administrator to establish a program to distribute allowances to Indian tribes under this section.

<u>‘‘Sec. 775. Domestic fuel production.</u>

This section provides emission allowance rebates to petroleum refineries in a manner that promotes energy efficiency and a reduction in GHG emissions. Not later than 3 years after enactment of this title, the Administrator, in conjunction with the Administrator of EIA shall promulgate regulations that establish separate formulas for distributing emission allowances to petroleum refiners and small business refiners consistent with the purpose of this section. In establishing these formulas, the Administrator shall take into account the complexity and efficiency of the refining process, direct emission from fuel combustion, process emissions, and indirect emissions among other factors.

<u>‘‘Sec. 776. Consumer protection.</u>

This section establishes in the Treasury a Consumer Rebate Fund, with deposits to be made into the fund pursuant to section 771(b)(2)(A), and the fund to be used in accordance with Federal statutory authority to provide relief to consumers and others affected by the enactment of this Act.

This section also establishes in the Treasury a separate account, the Energy Refund Account with deposits to be made into the fund pursuant to section 771(b)(2)(B), and the fund to be used in accordance with federal statutory authority to offset energy cost impacts on low- and moderate-income households.

<u>‘‘Sec. 777. Exchange for state-issued allowances.</u>

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 Dec. 31, 2011, 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 section 771(b).

‘‘Sec. 778. Auction procedures.

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

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, 2011. Except for auctions held in 2011, each auction will include a portion of allowances from future vintage years, up to four years in advance. The auctions will follow a single-round, sealed-bid, uniform price format. No person may, directly or in concert with another participant, purchase more than 5% of the allowances offered at any quarterly auction.

The section gives the Administrator the authority, at any time, 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 minimum allowance auction price of $10 for auctions occurring in 2012. For future years, the minimum allowance price shall be the last year’s minimum price increased by 5 percent plus the rate of inflation.

This section establishes a small business refiner reserve of allowances that small refiners may purchase at the average auction price from section 721(a) as follows: 6.2 percent from 2012-2013; 5.4 percent from 2014-2015; and 4.9 percent from 2016-2024.

‘‘Sec. 779. Auctioning allowances for other entities.

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, he or she 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 section 778. The entity offering the allowance for sale by the Administrator may establish its own minimum allowance price. The United States shall, within 90 days of receipt, transfer the proceeds from the auction to the entity that held the allowances.

‘‘Sec. 780. Commercial deployment of carbon capture and permanent sequestration technologies.

This section requires the Administrator—not later than 2 years after enactment—to promulgate regulations to establish a program to distribute bonus cap-and-trade emission allowances allocated under section 771(a)(6) to support the commercial deployment of carbon capture and storage (CCS) in both electric power generation and appropriate industrial operations.

Eligible electric generation projects must have a nameplate capacity of 200 megawatts (MW) or more, derive at least 50% of annual fuel input from coal, waste coal, pet-coke, or any combination of these fuels, and achieve an annual emission reduction of 50% following CCS deployment. For retrofits, the capacity and CO_2 capture rate eligibility requirements apply to the portion of the generation unit that is subject to the retrofit rather than the entire unit. Eligible industrial sources are sources that would, without CCS technology, emit more than 50,000 tons of CO_2 annually and must reduce CO_2 emissions by at least 50% from the point of emission following CCS deployment. Coal-to-liquids transportation fuel plants are excluded from eligibility.

This section defines two phases of bonus allowance distribution to electric generators who deploy CCS. Phase I applies to the first cumulative 20 gigawatts (GW) of generating capacity that integrates CCS. In this phase, the Administrator is directed to distribute bonus allowances for each ton of CO_2 avoided by the use of CCS. This section includes a formula for determining bonus allowances. For the first tranche of 10 gigawatts of projects, bonus allowances are distributed on a sliding scale with the equivalent of $96 per ton of CO_2 avoided for generators that deploy 90% or greater CO_2 capture and $50 per ton for projects that deploy 50% capture (where targeted dollar amounts per ton of CO_2 avoided are awarded by varying the number of bonus allowances per ton of CO_2 avoided based on the average fair market value of a cap-and-trade allowance during the preceding year). For the second tranche of 10 gigawatts of projects, the maximum bonus value for 90% capture is reduced to $85 per ton of CO_2 avoided. Early projects can receive higher payments than noted above, and later projects receive less than the full amount. Bonus payments are reduced to account for projects that offset CCS costs by employing the CO_2 for enhanced hydrocarbon recovery, and the bonus values are adjusted for inflation. If the EPA and DOE jointly determine that the bonus values are too high or low to efficiency and cost-effectively deploy CCS, they can adjust the bonus values.

Phase II of the CCS bonus allowance distribution applies to projects subsequent to the first 20 gigawatts of generation capacity coupled with CCS. The Administrator is directed to promulgate regulations governing this phase not later than 2 years prior to the anticipated end of Phase I. The Administrator is directed to distribute Phase II bonus allowances via reverse auctions unless the Administrator determines that this mechanism will not lead to efficient and cost-effective commercial deployment of CCS; in which case, the Administrator may establish a “first-come, first-served” program to distribute CCS bonus allowances with a sliding scale for different CO_2 capture rates and higher bonuses for earlier CCS deployment. An annual or more frequent reverse auction is to be held for industrial projects, and annual or more frequent reverse auctions are to be held for up to 5 separate categories of CCS project (e.g., based on coal type). Phase II should support no more than an additional 52 GW of CCS projects beyond the

20 GW supported by Phase I. Bonus allowances for CCS deployment at industrial sources are limited to no more than 15% of the number of allowances allocated to promote CCS.

For both Phases I and II, new plants that eventually integrate CCS but that commence operation without integrating CCS from their start receive reduced bonus allowances according to a formula defined in this section. Plants initially permitted after 2014 must deploy at least 50% CCS upon commencement of operations to be eligible for any bonus allowances.

Bonus allowances will be distributed only for the first 10 years of operation of an eligible project. EPA can issue certification to projects not yet constructed that they will be eligible for bonus allowances. Certified projects can then--on a first-come, first-served basis—request EPA to reserve bonus allowances (i.e., to ensure that sufficient bonus allowances are set aside from among those allocated to incentivize CCS deployment) for future distribution to the projects once the projects commence CCS operation. During Phase I, certified projects can obtain advanced distribution of bonus allowances in order to cover their design, permitting, and construction costs. The advanced distributions will be subtracted from the bonus allowances the projects would otherwise have received during the first ten years of their operation.

‘‘Sec. 781. Oversight of allocations.

Beginning in January 2014 and every 2 years thereafter, the Comptroller General of the United States (GAO) shall review programs administered by the federal government that distribute emission allowances or funds from any federal auction of allowances.

‘‘Sec. 793. Early action recognition.

Not later than 1 year after enactment of this title, the Administrator shall issue regulations to: (1) allow the exchange of qualifying offsets issued before January 1, 2009 for emission allowances established under section 721(a) and (2) to provide compensation in the form of allowances to entities that have documented early reductions or avoidance of GHG emissions before that same date. This section specifies that of the 2012 emission allowances established under section 721(a), 0.75% shall be used for the first category and 0.25% for the second.

‘‘Sec. 783. Establishment of deficit reduction fund.

This section establishes the Deficit Reduction Fund within the Treasury.

Subtitle C—Additional Greenhouse Gas Standards

Sec. 121. Greenhouse gas standards.

The Clean Air Act is amended by adding the following new Title VIII.

‘‘TITLE VIII—ADDITIONAL GREENHOUSE GAS STANDARDS

<u>‘‘Sec. 801. Definitions.</u>

This section defines terms in Title VIII, except for the term “stationary source,” as having the same meaning given those terms in Title VII.

‘‘PART A—STATIONARY SOURCE STANDARDS

<u>‘‘Sec. 811. Standards of performance.</u>

This section prohibits EPA from setting new source performance standards for greenhouse gas under section 111 for any stationary sources that are not covered by the cap established by section 722 and that qualify as eligible offsets.

Sec. 122. HFC regulation.

Title VI of the CAA is amended by adding at the end the following.

<u>‘‘Sec. 619. Hydrofluorocarbons (HFCs).</u>

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 within 2 years that applies recycling requirements, bans on nonessential uses, labeling mandates and evaluations of the safety of substitutes to all listed HFCs.

It also sets out a separate HFC cap-and-trade program, including a schedule for phasing down the consumption of these compounds and imported products containing them. The schedule calls for a cap set at 90 percent of baseline emissions (defined as average consumption in 2004-2006 of all Class II compounds plus the average amount contained in imported products in those years) in 2012 (but no higher than 370 $MMTCO_2e$ and no lower than 280 $MMTCO_2e$). The cap is reduced by 2.5 percent each year through 2018 and by 4 percent per year through 2032 (2 exceptions: 5% in 2023 and 2030). The reductions are capped at 15 percent of baseline after 2032.

Allowances are divided into two pools: 80% is designated for producers/importers only and the remaining 20% put into a secondary pool. Of the producers/importers pool, 10% is to be auctioned in 2012, 20% in 2013, 30% in 2014, and so on, until 90% is auctioned in 2020 and beyond. A minimum bid price is established at $1.00 in 2012 and increases $0.20 per year, reaching $2.00 in 2017 and increasing annually by inflation (PPI) thereafter. The non-auctioned part of the producer/importer pool is offered for sale initially at a set price of $1 per allowance that increases annually, but also shifts over time to be based on the auction price. The secondary pool is offered for sale at the non-auction price and these allowances are available only to users (e.g., manufacturers and suppliers), importers of products containing HFCs, and producers or importers of HFCs. Revenues from auctions and sales are put into a newly created fund for the purposes of supporting recycling, for the purchase of best-in-class appliances, for redesign and retooling to use substitutes, and to support the Multilateral Fund under the Montreal Protocol or other international treaty obligation.

The section sets limits on who may participate in auctions and purchase allowances and the quantities that entities may purchase. It also eliminates the need for allowances for products containing HFCs once an international agreement on HFCs is reached.

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

The section 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 which replace HFCs. It also allows for modification of any provision if necessary to be consistent with any international treaty.

Sec. 123. Black carbon.

Black carbon is defined here as "any light-absorbing graphitic (or elemental) particle produced by incomplete combustion." This section directs the Administrator to conduct a study on black carbon, in consultation with other federal agencies, in four phases:

- Phase I: Establish standard definitions for the scientific community for the terms black carbon and organic carbon (to be completed within 180 days);
- Phase II: Summarize (to be completed within 180 days):
  - Major sources of black carbon domestically and internationally;
  - Current and future emissions and associated net climate effects;
  - Public health and climate-related impacts of black carbon and other associated particles;
  - Most effective control measures, domestically and internationally (gives suggestions);
  - Metrics for comparing to other sources of global warming pollution;
  - Health benefits expected from further reductions.
- Phase III: Summarize all financial and technical assistance to foreign countries to reduce black carbon emissions and/or associated impacts and to identify opportunities for further reductions in foreign countries (to be completed within 270 days);
- Phase IV: Provide recommendations for areas of focus for additional research and for Federal Government actions to reduce black carbon emissions (to be completed within 1 year).

''PART E—BLACK CARBON

''Sec. 851. Black carbon.

This section requires the Administrator—not later than 2 years after enactment—to propose domestic regulations to reduce emissions of black carbon or state why existing regulations are adequate; regulations or findings must become final within 3 years of enactment.

Sec. 124. States.

This section amends section 116 of the CAA to add language defining cap-and-trade activity as a "standard or limitation respecting emissions of air pollutants," and as "requirements respecting control or abatement of air pollution."

Sec. 125. State programs.

Title VIII is amended by adding at the end the following.

''PART F—MISCELLANEOUS

''Sec. 861. State programs.

This section prohibits states from implementing or enforcing their own comprehensive GHG emissions program that covers any capped emissions from 2012-2017. As used in this section, "cap" does not include fleet-wide motor vehicle emission requirements that allow greater emissions with increased vehicle production, or requirements that fuels, or other products, meet an average pollution emission rate or lifecycle GHG standard. This section does not restrict a state's right to implement any standards, limits, programs or regulations that are not implemented in the form of a cap and trade program.

''Sec. 862. Grants for support of air pollution control programs.

This section authorizes the Administrator to make grants to states under section 105 of the CAA to support implementation of this Act.

"Sec. 863. Reducing Acid Rain and Mercury Pollution.

This section directs the Administrator to submit a report to Congress within 18 months that analyzes the effects of different CO_2-reduction strategies and technologies, including CCS, on the emissions of mercury, sulfur dioxide, nitrogen oxide, particulate matter, ground-level ozone, mercury contamination, and other environmental problems. The report will contain an assessment of the current scientific and technical understanding of the interplay between technologies and air pollution reduction, identification of hurdles to strategies to cost-effectively reduce pollutants, and recommendations.

Sec. 126. Enforcement.

This section amends section 307 of the CAA to state that if a Court invalidates any action that it may remand such action without vacatur, if vacatur would impair or delay protection of public health or the environment.

Sec. 127. 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 greenhouse gases 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 5000 acres on which forest harvesting, deforestation, or other conversion occurs. The Administrator must use existing authority and methods to carry out this section.

Sec. 128. Conforming amendments.

This section adds Title VI, Title VII and Title VIII to various provisions throughout the CAA. Among other provisions, it prevents the listing of GHGs under the National Ambient Air Quality program or as hazardous air pollutants. It also changes the definition of "major emitting facility" to include those that emit more than 25,000 tons of CO_2e annually and prohibits the permitting of facilities for emissions of less than this amount.

Sec. 129. Davis-Bacon compliance.

This section requires that all laborers and mechanics employed on projects funded directly or through allowances under this Act will be paid wages at rates not less than those prevailing on projects of a similar character in the locality in accordance with the Davis-Bacon act. Retrofits of certain resident and nonresidential buildings below a specified size threshold are exempt from this requirement.

Subtitle D—Carbon Market Assurance

Sec. 131. Carbon Market Assurance

This section provides a sense of the Senate that there should be a single, integrated carbon market oversight program to provide for effective and comprehensive market oversight and enforcement of a well-functioning market, lower systemic risk and protect consumers, ensure market liquidity, enhance price discovery, prevent excessive speculation, support the environmental integrity of the program, provide transparency, establish trading facility and professional standards, provide for appropriate criminal and civil penalties, and prevent excessive leverage that creates risk to the economy.

Subtitle E—Ensuring Real Reductions in Industrial Emissions

Sec. 141. Ensuring real reductions in industrial emissions

Title VII of the CAA is further amended by inserting after part E the following new part:

"Part F-Ensuring Real Reductions in Industrial Emissions"

"Sec. 761. Purposes"

This section provides the purposes of this section.

<u>“Sec. 762. Definitions”</u>

This section sets out definitions for this part of the Act. “Carbon leakage” is defined as any substantial increase in GHG emissions by manufacturing 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 Title VII of the CAA (added by this bill).

<u>‘‘Sec. 763. Eligible Industrial Sectors”</u>

This section requires that EPA shall publish, not later than June 30, 2011, a list of industrial sectors eligible to receive emission allowance rebates. Eligibility to receive rebates shall be based on meeting two conditions: having an energy or greenhouse gas intensity of at least 5 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. Updated lists of eligible entities will be published in 2013 and every four years thereafter.

<u>“Sec. 764. Distribution of Emission Allowance Rebates”</u>

This section directs the Administrator to annually distribute emission allowances to the owners and operators of entities in eligible industrial sectors and subsectors. For 2012 and 2013 allowances are distributed for indirect costs only (based on entities’ indirect carbon factors, defined below). From 2014 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. Beginning in 2026, the level of allowance distribution decreases by 10 percent per year, phasing out completely in 2035. 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. An owner or operator may also receive a prorated amount of allowances of undistributed allowances for the year in which a petition its sector eligibility was granted.

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 GHG 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.

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 using an average of the 5 most recent years from up to 7 years prior, and for the purpose of determining sector averages in typical market conditions the averages shall exclude date from individual years with the highest and lowest levels of GHG emissions per unit and electricity efficiency factors. 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 electric emissions intensity factor will not be greater than it was in a previous year. The Administrator may also account for the use of combined heat and power technologies calculating rebates under this section.

"Sec. 765. International Trade"

This section is a placeholder for a border measure consistent with international agreements.

TITLE II—PROGRAM ALLOCATIONS

Sec. 201. Distribution of allowances for investment in clean vehicles.

This section establishes the Clean Vehicle Technology Fund with proceeds from Sec. 771(b)(3). The Administrator will distribute amounts pursuant to Sec. 782(a)(8) to provide facility conversion funding grants to vehicle manufacturers and component suppliers to pay the costs of reequipping facilities for production of advanced, plug-in (not less than 25% of funds) or hybrid technologies or engineering integration. Of the auction of allowances conducted pursuant to Sec. 778, not less than 75% of proceeds will be available for grants through the Energy Policy Act of 2005, Title VII, Subtitle G for black carbon reductions (see below), not less than 20% shall be to provide assistance for the deployment, integration, and use of advanced, hybrid-electric, plug-in, and fuel cell technologies, and not less than 5% shall be for the Secretary of Energy to develop a National Transportation Low-emission Energy Plan including demonstrations of plug-in electric vehicles, including one in the freight sector and one in a rural area.

This section also amends Subtitle G of title VII of the Energy Policy Act of 2005 by inserting section 795A, which establishes a voluntary program to reward early action to reduce black carbon emissions from pre-2007 heavy-duty vehicles, and it authorizes the Administrator to pay 100% of the costs of installing diesel particular filters on these vehicles.

<u>Sec. 202. State and local investment in energy efficiency and renewable energy.</u>

This section requires the EPA Administrator to distribute allowances allocated to section 771(a)(9) among Indian tribes, states, local governments, and renewable electricity programs. Not less than 1% and not more than 3% shall be distributed to Indian tribes, and the remaining allowances should then be distributed as follows:

- 60% to States, to be further subdivided based on specified factors and used for energy efficiency, renewable energy programs, improvements in electricity transmission, cost-effective energy efficiency programs for end-users, retrofits and housing investments, thermal energy efficiency, and smart grid development.
- 25% to local governments for energy conservation and efficiency grants.
- 15% to renewable energy generating companies for facilities that have capacity of 10 megawatts or greater placed in service after enactment of this Act.

<u>Sec. 203. Energy efficiency in building codes.</u>

This section directs the Administrator to distribute emission allowances pursuant to section 771(a)(10) among States in accordance with the formula described in section 202 of this Division exclusively for the purpose of section 163 of Division A.

<u>Sec. 204. Energy Innovation Hubs.</u>

This section directs the Secretary of Energy to create Energy Innovation Hubs for the purpose of enhancing the economic, environmental, and energy security of the United States by promoting the commercial application of clean, indigenous energy alternatives to oil and other fossil fuels, reducing GHG emissions and ensuring the U.S. maintains a technological lead in these areas. The Administrator shall distribute to eligible consortia the allowances allocated under section 772(a)(11).

<u>Sec. 205. ARPA-E Research.</u>

This section directs the Director of the Advanced Research Projects Agency-Energy to distribute allowances under section 772(a)(12) to institutions of higher education, companies, research foundations, trade and industry research collaborations, consortia of these entities, or other appropriate research entities on a competitive basis. Allowances are to be used to achieve the goals of the Advanced Research Projects Agency-Energy through early-stage energy research, development of techniques, processes, and technologies, development of manufacturing processes for technologies, and demonstration and coordination for commercial application of the technologies and research applications.

Sec. 206. International clean energy deployment program.

The Administrator shall distribute emission allowances pursuant to section 771(a)(13) exclusively for the purpose of section 323 of Division A.

Sec. 207. International climate change adaptation and global security.

The Administrator shall distribute emission allowances pursuant to section 771(a)(14) exclusively for the purpose of section 324 of Division A.

Sec. 208. Energy efficiency and renewable energy worker training.

This section establishes the Energy Efficiency and Renewable Energy Worker Training Fund within the Treasury. Proceeds from the auction conducted pursuant to section 771(b)(5) shall be deposited into this fund and used to carry out section 171(e)(8) of the Workforce Investment Act of 1998.

Sec. 209. Worker transition.

This section establishes the Worker Training Fund within the Treasury. Proceeds from the auction conducted pursuant to section 771(b)(5) shall be deposited into this fund and used to carry out part 2 of Subtitle A of Title III of Division A.

Sec. 210. State programs for greenhouse gas reduction and climate adaptation.

This section establishes the State Climate Change Transportation Fund within the Treasury. Proceeds from the auction conducted pursuant to section 771(b)(10) shall be deposited into this fund and distributed to states. Ten percent shall be reserved for coastal and Great Lakes states, 10% for states for wildfire programs, 1% for tribes, and the rest to states ratably based on the formula of the population of the state multiplied by an allocation factor (the state's per capita income as a percentage of the national average within the bounds of 1.2 and .8). This section includes requirements for states to develop State Climate Change Response accounts and State Climate Change Response Plans in order to receive portions of this funding.

Sec. 211. Climate Change Health Protection and Promotion Fund.

This section authorizes the creation of the Climate Change Health Protection and Promotion Fund in the Treasury. Proceeds from the auction conducted pursuant to section 771(b)(6) shall be deposited into this fund and used to carry out subpart B of subtitle C of Title III of division A. Funds can be made available to other agencies of the federal government, foreign, state, tribal, and local governments, and other entities and are intended to supplement existing sources of funds for public health.

Sec. 212. Climate change safeguards for natural resources conservation.

This section authorizes the creation of the Natural Resources Climate Change Adaptation Account in the Treasury. Proceeds from the auction conducted pursuant to section 771(b)(7) shall be deposited into this fund and used to carry out section 370(b) of division A.

Sec. 213 Nuclear worker training.

This section authorizes the creation of the Nuclear Worker Training Fund in the Treasury. Proceeds from the auction conducted pursuant to section 771(b)(8) shall be deposited into this fund and used to carry out section 132 of division A.

Sec. 214. Supplemental agriculture, renewable energy, and forestry.

This section authorizes the creation of the Supplemental Agriculture, Renewable Energy, and Forestry Fund in the Treasury. Proceeds from the auction conducted pursuant to section 771(b)(9) shall be deposited into this fund and used to carry out section 155 of division A.

Sec. 215. Investment in greenhouse gas reductions from the transportation sector.

This section directs the Administrator to distribute allowances pursuant to section 771(b)(10) for a Transportation GHG Reduction program under Sec. 832 of the Clean Air Act and for public transportation grants in the following amounts

Sec. 216. State programs for natural resource adaptation activities.

This section directs the Administrator to distribute allowances pursuant to section 771(a)(15) among states according to the formula in Sec. 370(a)(1) of Division A to carry out natural resource adaptation activities in accordance with plans approved under Sec. 369 of Division A.