Pew Center Summary of H.R. 2454: American Clean Energy and Security Act of 2009 (Waxman-Markey)

This is a summary of H.R. 2454, also known as ACESA or Waxman-Markey, as passed by the U.S. House of Representatives by a vote of 219-212 on June 26, 2009.

A few notes on how ACESA is organized

Titles II, III, and IV of this Act add titles VII and VIII to the Clean Air Act (CAA), as well as a section in CAA Title VI. Whereas ACESA's titles are 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 ACESA. Here is an outline of how ACESA amends the CAA, to try to minimize that confusion. ACESA 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.

- ACESA Title 2
  - ACESA Subtitle 2C
    - CAA Part 8B
    - CAA Part 8D
- ACESA Title 3
  - ACESA Subtitle 3A
    - CAA Part 7A
    - CAA Part 7B
    - CAA Part 7C
    - CAA Part 7D
    - CAA Part 7E
  - ACESA Subtitle 3B
    - CAA Part 7H
  - ACESA Subtitle 3C
    - CAA Part 8A
    - CAA Part 8C
    - CAA Section 619
    - CAA Part 8E
    - CAA Part 8F
  - ACESA Subtitle 3D
  - ACESA Subtitle 3E
- ACESA Title 4
  - ACESA Subtitle 4A
    - CAA Part 7F
  - ACESA Subtitle 4B
  - ACESA Subtitle 4C
  - ACESA Subtitle 4D
  - ACESA Subtitle 4E

Also, it may be useful to note up-front the role that section 782 plays in ACESA. Section 782 outlines how emission allowances are to be allocated to a number of purposes. Sections throughout ACESA make reference to specific allocations in section 782, and provide further detail on those allocations. When you see references to section 782, then, know that you are looking at instructions for allowance allocations.

Before the first title, ACESA begins with these three short sections.

Sec. 1. Short Title; Table of Contents

This section states this Act can be referred to as the "American Clean Energy and Security Act of 2009," and includes a section-by-section table of contents.

Sec. 2. Definitions

This section defines "Administrator" – referring to the EPA Administrator – and "State."

Sec. 3. International Participation

The Administrator is instructed to report annually to Congress regarding whether China and India have adopted greenhouse gas standards at least as strict as those required under this Act.

TITLE I—CLEAN ENERGY

SUBTITLE A—COMBINED EFFICIENCY AND RENEWABLE ELECTRICITY STANDARD

Sec. 101. Combined Efficiency and Renewable Electricity Standard

This section amends Title VI of the Public Utility Regulatory Policies Act (PURPA) of 1978 (16 U.S.C. 2601 and following) by adding the following new section:

Sec. 610. Combined Efficiency and Renewable Electricity Standard

Under this section, the Federal Energy Regulatory Commission is required to establish, by regulation, a program to implement and enforce a federal combined efficiency and renewable energy standard. The section defines renewable energy as electricity generated from a renewable energy resource, including:

- Wind energy;
- Solar energy;
- Geothermal energy;
- Renewable biomass, biogas, or biofuels;
- Qualified hydropower;
- Marine and hydrokinetic renewable energy;
- Landfill gas, wastewater treatment gas, coal-mine methane, and qualified waste-to-energy.

Retail electric suppliers – those electric utilities that sold at least 4 million megawatt hours of electric energy to electric consumers for purposes other than resale during the preceding calendar year – are required to meet the compliance targets below via a combination of quantified electricity savings and generated or purchased renewable energy credits. From 2012 through 2039, these retail electric suppliers must submit federal renewable electricity credits or document electricity savings that, in total, are equal to the following percentages of their electricity sales (excluding electricity from current hydropower, new nuclear power, and generation coupled with carbon capture and storage):

Calendar Year	Required Annual Percentage
2012	6.0
2013	6.0
2014	9.5
2015	9.5
2016	13.0
2017	13.0
2018	16.5
2019	16.5
2020	20.0
2021 through 2039	20.0

Renewable energy must constitute at least three-fourths of the above compliance obligation; however, the governor of a given state can petition the Commission to allow suppliers in the state to use documented electricity savings for up to two-fifths of their compliance obligation.

In states that had, as of January 1, 2009, established state authorized central procurement entities that used funds collected from electricity ratepayers to purchase renewable electricity credits (rather than requiring retail electric suppliers to acquire such credits), the states' governors can petition the Commission to allow the central procurement entities to demonstrate compliance with this section's renewable electricity and energy efficiency savings requirements.

The section establishes in detail the structure and function of the Federal Combined Efficiency and Renewable Electricity Standard program. Some of the most important components include:

- A 3x credit multiplier for distributed renewable generation;
- Banking of RECs for up to 3-years is allowed;
- There is a $25 alternative compliance payment, indexed for inflation;
- States are allowed to enact more stringent standards;
- The section sunsets in 2040.

Sec. 102. Clarifying State Authority to Adopt Renewable Energy Incentives

This section amends section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA) to clarify that a state legislature or regulatory authority may set the rates for a sale of electricity by a facility generating electricity from renewable energy sources pursuant to a state-approved production incentive program under which the facility voluntarily sells electricity, and that an electric utility can be required to purchase such renewable energy at a specified rate. In other words, a state legislature or regulatory authority can enact a feed-in tariff.

Sec. 103. Federal Renewable Energy Purchases

This section requires that the President shall ensure that specified percentages of all electricity consumed by federal agencies in the U.S. come from renewable sources with the required percentage starting at 6 percent in 2012 and increasing to 20 percent by 2020 and thereafter through 2039. The President may reduce the percentage requirements if they are determined not to be feasible.

SUBTITLE B—CARBON CAPTURE AND SEQUESTRATION

Sec. 111. National Strategy

This section requires the Administrator – not later than 1 year after enactment, and in consultation with the Secretary of Energy – 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. 112. Regulations for Geologic Sequestration Sites

This section amends Title VIII of the CAA (as added by this Title of ACESA) to add after section 812 the language in this section as section 813.

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 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 this bill.

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. 113. 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.

Sec. 114. 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 for 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 commonly 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 opposes 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 or state agency, or a municipality; rural electric cooperatives; fossil fuel producers; non-profit environmental organizations; independent generators or wholesale power providers; and consumer groups.

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 carbon dioxide (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 have, at the time of enactment of this section, 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.

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.

Sec. 115. Commercial Deployment of Carbon Capture and Sequestration Technologies

Part H of Title VII of the CAA (as added by section 321 of ACESA) is amended by adding the following new section after section 785:

Sec. 786. Commercial Deployment of Carbon Capture and 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 to support the commercial deployment of 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, 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_2e annually and must reduce CO_2e 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 6 gigawatts 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. Bonus allowances are distributed on a sliding scale with the equivalent of $90 per ton of CO_2 avoided for generators that deploy 85% 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). Early projects can receive higher payments than noted above, and later projects receive less than the full amount.

Phase II of the CCS bonus allowance distribution applies to projects subsequent to the first 6 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. 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.

In a "first-come, first-served" Phase II program, the Administrator is directed to establish the payment schedule to cover the incremental capital and operating costs of a project that are attributable to the implementation of CCS.

Bonus allowances for CCS deployment at industrial sources are limited to no more than 15% of the number of allowances allocated to promote CCS. The Administrator may distribute industrial CCS bonus allowances via a reverse auction or according to an incentive schedule.

Bonus allowances under this section are limited to supporting the deployment of no greater than 72 gigawatts of electric generating capacity with CCS technology, and that total will be reduced, according to an equivalent metric that the Administrator may designate, by the quantity of industrial source projects deployed under this section. Bonus allowances will be distributed only for the first 10 years of operation of an eligible project and only for CO_2 already captured and sequestered.

Sec. 116. Performance Standards for Coal-Fueled Power Plants

This section amends Title VIII of the CAA (added by ACESA) 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% 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 earliest of the following:

- 4 years after the date that EPA determines that: there is at least 4 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, 2025.

At 5-year intervals starting no later than 2025, the Administrator is directed to review the performance standards to determine if the maximum emissions rate for new plants should be reduced.

SUBTITLE C—CLEAN TRANSPORTATION

Sec. 121. Electric Vehicle Infrastructure

This section amends section 111(d) of PURPA by requiring electric utilities to develop plans to support the use of plug-in electric vehicles (PEVs) by providing the infrastructure to support such vehicles.

The section also requires state regulatory authorities or each (unregulated) utility to adopt minimum requirements for infrastructure deployment, allow for cost recovery from implementation of plans, and support smart grid integration.

Sec. 122. Large-Scale Vehicle Electrification Program

This section directs the Secretary of Energy to establish a program to assist with the deployment of PEVs by providing financial assistance to:

- State or local governments, electric utilities, automobile manufacturers, technology providers, car-sharing companies or organizations, or other persons or entities;
- Individual persons by offsetting the incremental cost of these vehicles above the cost of comparable conventional vehicles; and
- Projects for the deployment of: electrical charging stations for PEVs; Smart Grid equipment and infrastructure to facilitate the charging and grid integration of PEVs; and other projects to support the large-scale deployment of PEVs.

Sec. 123. Plug-in Electric Drive Vehicle Manufacturing

This section directs the Secretary of Energy to establish a program to provide financial assistance to plug-in electric drive vehicles (PEVs) manufacturers for the reconstruction or retooling of facilities to manufacturer PEVs and batteries in the United States.

Sec. 124. Investment in Clean Vehicles

This section directs the Administrator, at the direction of the Secretary of Energy, to provide 25 percent of the emission allowances allocated under section 782(i) of the CAA to carry out the objectives of sections 122 and 123, where 1/8 of the allowances shall be available for section 122 and 1/8 of the allowances shall be available for section 123. Any remaining allowances shall be distributed to advanced technology vehicle manufacturers and component suppliers to cover not more than 30 percent of the cost to reequip, expand, or establish a manufacturing facility in the United States. Under section 782(i), 3% of total emission allowances for years 2012-2017 and 1% of allowances for years 2018-2025 would be allocated for investments in clean vehicle technology.

Sec. 125. Advanced Technology Vehicle Manufacturing Incentive Loans

This section increases the total amount authorized for the Advanced Technology Vehicle Manufacturing Loan Program from $25 billion to $50 billion.

Sec. 126. Definition of Renewable Biomass

This section amends the definition of renewable biomass for the Renewable Fuels Standard under section 211(o)(1)(I) of the CAA. It expands the definition to allow for the use of some plant materials on federal and public lands. Renewable biomass is defined to include any organic matter available on a renewable or recurring basis from non-federal lands, including renewable plant material, waste materials, and residues or byproducts from wood, pulp and paper facilities.

Sec. 127. Open Fuel Standard

This section amends Chapter 329, Title 49 of the U.S. Code by adding an "open fuel standard for transportation." The Secretary of Transportation may promulgate regulations to require automakers to manufacture vehicles capable of running on E85 or M85 for model years 2016 and beyond, if the Secretary, in coordination with the EPA Administrator and the Secretary of Energy, determines that these fuels will be available in sufficient quantities and will be a cost-effective way of achieving energy independence and environmental objectives.

Sec. 128. Diesel Emissions Reduction

This section amends the diesel emission reduction program in subtitle G of Title VII of the Energy Policy Act of 2005 to also cover U.S. territories.

Sec. 129. Loan Guarantees for Projects to Construct Renewable Fuel Pipelines

This section would amend the definitions for loan guarantees in sections 1701 and sections 1703 of the Energy Policy Act of 2005 to include renewable fuel pipelines as eligible for funding.

Sec. 130. Fleet Vehicles

This section amends section 508 of the Energy Policy Act of 1992 to allow fleets to receive credits for vehicles that have been repowered or converted to run on an alternative fuel.

Sec. 130A. Report on Natural Gas Vehicle Emissions Reductions

This section directs the EPA administrator, in consultation with the Secretaries of Energy and Transportation and the Administrator of the GSA, to examine available scientific analysis and submit a report to Congress on natural gas vehicles, and specifically on: reductions in GHGs, criteria pollutants, and petroleum consumption due to the use of natural gas vehicles in the last decade; the contribution to emission

reductions that these vehicles are expected to make from 2010 to 2020; and any additional federal measures that could maximize the potential for natural gas use to contribute to emission reductions.

SUBTITLE D—STATE ENERGY AND ENVIRONMENT DEVELOPMENT FUNDS

Sec. 131. Establishment of SEED Accounts

This section requires the Administrator to establish a program under which a state may create a State Energy and Environment Development (SEED) Account. The purpose of the SEED Accounts is to serve as a common state-level repository for managing and accounting for emission allowances received by states for purposes such as investment in energy efficiency and renewables. The Administrator is required to establish an account for each state, and deposit allowances into these accounts in accordance with the distribution methodology laid out in the Act. States can create financial accounts associated with their SEED Accounts through which they can manage revenues from the sale of allowances. These revenues cannot be mixed with other funds provided to the state. All allowances (or proceeds from their sale) must be used to support renewable energy and energy efficiency programs; support for these programs can be delivered in the form of grants, loans, or other means of support. Not more than 5 percent of a SEED Account may be used for administrative costs. States will be required to prepare a plan that details the intended uses of the allowances or their revenues in their SEED Accounts.

In addition, states are permitted to create sub-funds to support SEED Account efforts at the local level.

Sec. 132. Support of State Renewable Energy and Energy Efficiency Programs

This section describes the methodology through which the Administrator will distribute emission allowances to states (the total number of allowances available is detailed in section 782(g)), to be deposited in their SEED Accounts and used for renewable energy and energy efficiency purposes (including 0.5 percent of such allowances for the purposes outlined in section 133, below). One third of the allowances available for these purposes will be divided equally among the states; one third will be distributed ratably based on state population; and one third will be distributed ratably based on state energy consumption.

Of the allowances distributed to each state, not less than 12.5 percent shall be distributed by states to local governments to support energy efficiency and renewable programs at the local level. Not less than 20 percent shall be used for implementation and enforcement of energy efficiency purposes laid out in the Act, including building codes, energy efficient homes programs, and building energy performance labeling programs. Within that 20 percent, not less than 5.5 percentage points (i.e., 27.5 percent of the 20 percent, to be clear) shall be used for the Retrofit for Energy and

Environmental Performance program laid out in the Act, and not less than 1 percentage point for support of the low-income community energy efficiency programs included in the Act. Not less than 20 percent shall be put towards financial support for renewable energy development and deployment. The remaining allowances can be put towards energy efficiency and renewable energy purposes, other cost-effective energy efficiency programs for end-use consumers, Smart Grid development for public buildings, and funding of some surface transportation projects.

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

Sec. 133. Support of Indian Renewable Energy and Energy Efficiency Programs

This section provides for the establishment of a program to grant allowances to Indian tribes on a competitive basis (from within the state allowance budgets outlined above in section 132) for use in supporting energy efficiency and renewable energy measures.

SUBTITLE E—SMART GRID ADVANCEMENT

Sec. 141. Definitions

This section defines the terms used in this subtitle.

Sec. 142. Assessment of Smart Grid Cost-Effectiveness in Products

This section requires the Secretary of Energy and the Administrator —within one year of enactment—to assess the potential for cost-effective integration of Smart Grid technologies and capabilities with products that are reviewed for potential designation as Energy Star products. The Secretary and the Administrator are required—within two years after enactment—to report on the potential energy, cost, and greenhouse gas savings from such integration.

Sec. 143. Inclusions of Smart Grid Capability on Appliance Energy Guide Labels

This section directs the Federal Trade Commission to initiate and complete a rulemaking, no later than 1 year after enactment of this section, to consider making a special, prominent note on appliance Energy Guide labels to indicate appliances that include Smart Grid capability.

Sec. 144. Smart Grid Peak Demand Reduction Goals

This section requires load-serving entities (LSEs) or states—not later than one year after enactment—to determine and publish peak demand reduction goals. Each LSE or state is required to prepare a peak load reduction plan that includes energy efficiency,

demand response programs, Smart Grid technology, energy storage, and distributed generation. The Federal Energy Regulatory Commission (FERC) is permitted, "for good cause," to grant relief to LSEs from these requirements. FERC is directed to publish data and reports for the public and for Congress that demonstrate compliance with this section and that describe success in achieving the peak demand reduction goals. Costs incurred by states in complying with this section can be covered via states' SEED funds.

Sec. 145. Reauthorization of Energy Efficiency Public Information Program to Include Smart Grid Information

This section amends section 134 of the Energy Policy Act of 2005 (42 U.S.C. 15832). Among other provisions, it reauthorizes the energy efficiency public information program to include Smart Grid Information.

Sec. 146. Inclusion of Smart-Grid Features in Appliance Rebate Program

This section amends section 124 of the Energy Policy Act of 2005 to make Energy Star products that integrate Smart Grid technology eligible for the appliance rebate program.

SUBTITLE F—TRANSMISSION PLANNING

Sec. 151. Transmission Planning and Siting

This section makes a few conforming amendments to part II of the Federal Power Act (16 U.S.C. 824 et seq.), and then adds after section 216 the following new sections:

Sec. 216A. Transmission Planning
Sec. 216B. Siting and Construction in the Western Interconnection

These sections establish as federal policy that regional transmission planning facilitate the deployment of renewable and other zero-carbon energy sources and that transmission planning take into account all options, including renewables, energy efficiency, distributed generation, Smart Grid, and electricity storage, among others.

FERC is required—within 1 year of enactment—to adopt national electricity grid planning principles based on the above. FERC is directed to encourage regional and other entities to cooperate in transmission planning in pursuit of the national principles.

In addition, FERC is directed to require regional planning entities to submit initial regional electric grid plans not later than 18 months after the promulgation of national electric grid planning principles with updates to such plans to be submitted not less than every 3 years. FERC is permitted to return such plans for reconsideration with recommendations.

FERC is directed to report to Congress on the efforts above within 3 years of enactment and every 3 years thereafter.

Sec. 152. Net Metering for Federal Agencies

This section amends the PURPA by adding to section 113 the text of this section regarding net metering. This section creates a requirement for electric retail suppliers to offer net metering to federal agencies and facilities. State regulatory authorities are directed to provide public notice, conduct a hearing, and adopt standards for net metering that meet this section's requirements within 1 year of enactment. State regulatory authorities can apply to FERC for a determination that their net metering standards or requirements comply with this section. FERC can issue an order against any electric retail supplier or local distribution company to require compliance with this section's net metering requirement.

Sec. 153. Support for Qualified Advanced Transmission Manufacturing Plants, Qualified High Efficiency Transmission Property, and Qualified Advanced Electric Transmission Property

This section amends section 1705(a) of the Energy Policy Act of 2005, as added by the American Reinvestment and Recovery Act of 2009, to make eligible for loan guarantees the development, construction, acquisition, retrofitting, or engineering integration of a qualified advanced electric transmission manufacturing plant or the construction of a qualified high efficiency transmission property or a qualified advanced electric transmission property (whether by construction of new facilities or the modification of existing facilities). In addition to loan guarantees, the Secretary of Energy is authorized to make grants to the first projects of each qualified type for up to 50% of the cost. This section authorizes $100 million for such grants for fiscal year 2010.

SUBTITLE G—TECHNICAL CORRECTIONS TO ENERGY LAWS

Sec. 161. Technical Corrections to Energy Independence and Security Act of 2007

This section contains various provisions which make technical corrections to the Energy Independence and Security Act of 2007, including equipment energy efficiency standards (e.g. for electric motors and lighting).

Sec. 162. Technical Corrections to Energy Policy Act of 2005

This section makes a single technical correction to the Energy Policy Act of 2005.

SUBTITLE H—ENERGY AND EFFICIENCY CENTERS

Sec. 171. Clean Energy Innovation Centers

This section directs the Secretary of Energy to create Energy Innovation Hubs for the purpose of promoting commercial deployment of clean, indigenous energy alternatives to oil and other fossil fuels, reducing greenhouse gas emissions, and ensuring that the United States maintains a technological lead in these areas. These centers are intended to leverage the expertise and resources of the university and private research communities, industry, venture capital, national laboratories, and other participants in energy innovation to support cross-disciplinary research and development in areas not being served by the private sector. The purpose is to develop and transfer innovative clean energy technologies into the marketplace and to promote regional economic development by cultivating clean energy clusters of businesses and research entities.

The Secretary is directed to distribute GHG allowances under Title III to create eight centers. Section 782(h) directs 0.45% of the total emission allowances for years 2012-2050 to Clean Energy Innovation Centers. Each center is to be run by a consortium that must include at least two research universities and at least one other qualifying entity. The Secretary is directed to select consortia to run the centers via a competitive process.

Each center will focus much of its work on a unique area of clean energy technology, where such technologies include renewable energy, energy efficiency, energy storage, smart grid, improved water use, and improved transportation efficiency. Centers are to issue awards to projects intended to further commercial deployment of clean energy technologies.

Sec. 172. Advanced Energy Research

This section directs the Director of the Advanced Research Projects Agency-Energy to distribute allowances 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. 173. Building Assessment Centers

This section requires the Secretary of Energy to provide funding to institutions of higher education for Building Assessment Centers. The Centers will identify opportunities for efficiency in existing buildings, provide training opportunities for members of the building industry and for colleges and trade schools, and promote emerging concepts and technologies in commercial and institutional buildings.

$50 million is authorized for this program for FY 2010 and each fiscal year thereafter.

Sec. 174. Centers for Energy and Environmental Knowledge and Outreach

This section requires the Secretary of Energy to establish not more than 10 regional Centers for Energy and Environmental Knowledge and Outreach at institutions of higher education to coordinate with and advise industrial research and assessment centers, Building Assessment Centers, and Clean Energy Application Centers located in its region. Centers will be selected through a competitive process, based on performance, credibility in the private sector, leadership and training opportunities, and the presence of other research and assessment, Clean Energy Application, or Building Assessment centers.

The Centers will be distributed evenly on a geographic basis and will develop goals, create resources, and provide outreach and education on a regional basis. They are also directed to coordinate with various government agencies, national labs, local governments and development agencies, utilities, and other stakeholders to leverage existing programs, identify new opportunities for greenhouse gas emission reductions, and promote sustainable practices.

The section authorizes $5 million for an internship program at each center for FY 2010 and each year thereafter. It authorizes $10 million for FY 2010 and each year thereafter to carry out this section, with each center to receive at least $500,000 for FY 2010 and each year thereafter. The section also amends EISA 2007 to adjust funding for Clean Energy Application Centers, starting in 2010.

Sec. 175. High Efficiency Gas Turbine Research, Development, and Demonstration

This section directs the Secretary of Energy to carry out a research program to develop efficient gas turbines for combined cycle power generation systems. The goal of the first phase will be to develop an advanced high efficiency gas turbine that can achieve at least 62 percent efficiency, and the goal of the second phase will be to reach 65 percent efficiency. The Secretary is directed to evaluate proposals with special consideration for job creation and contributions toward U.S. technology leadership.

$65 million is authorized to be appropriated to the Secretary of Energy for this program.

SUBTITLE I—NUCLEAR AND ADVANCED TECHNOLOGIES

Sec. 181. Revisions to Loan Guarantee Program Authority

This section amends section 1701 of the Energy Policy Act of 2005, which is the section that allows for U.S. Department of Energy loan guarantees for such technologies as

carbon capture and storage and advanced nuclear power. It clarifies section 1701 by adding a new section defining a "conditional commitment" to a loan wherein a final term sheet laying out the terms of a loan guarantee issued by the Secretary is binding and shall become a final loan guarantee if the conditions in it are met, including having all necessary permits and licenses. The amendment also allows the Department of Energy to use funds from fees collected to cover the administration of the program without appropriation. The amendment adds Davis-Bacon prevailing wage compliance as a "Term and Condition" for all projects funded under this loan guarantee program. Finally, this section amends the loan guarantee statutory authority to provide the Secretary of Energy with more flexibility in setting the financial terms of the loan guarantees.

Sec. 182. Purpose

This section lays out the purpose of the Clean Energy Deployment Administration (CEDA), created by subsequent sections, which is to promote domestic development and deployment of clean energy technologies by making available affordable financing for such technologies.

Sec. 183. Definitions

This section defines the terms used in this subtitle.

Sec. 184. Clean Energy Investment Fund

This section creates a revolving Clean Energy Investment Fund in the Treasury and authorizes such funds as are necessary. It also instructs the Secretary of the Treasury to issues $7.5 billion in "green bonds" to initially capitalize CEDA (see section 186, establishing the Clean Energy Deployment Administration) in exchange for ownership of CEDA by the United States.

Sec. 185. Energy Technology Deployment Goals

This section directs the Secretary of Energy to develop and publish – no later than 1 year after the enactment of this subtitle – near- , medium-, and long-term goals for clean energy technology deployment via the credit support programs established by this subtitle consistent with promoting, among other goals, reduced reliance on foreign energy sources, domestic manufacturing of clean energy technologies, and a modernized electricity grid.

Sec. 186. Clean Energy Deployment Administration

This section establishes a Clean Energy Deployment Administration (CEDA) as an independent corporation, chartered for 20 years, wholly owned by the United States and specifies aspects of its organization and operation including its board of directors and an Energy Technology Advisory Council.

Sec. 187. Direct Support

CEDA is authorized to issue direct loans, loan guarantees, letters of credit, and other financial support mechanisms to clean energy technology projects. CEDA is directed to take a portfolio investment approach with no single technology allowed to receive more than 30% of total CEDA financial support and no single project to receive loans or loan guarantees amounting to more than 80% of its estimated total project cost. In addition, CEDA is directed to focus on "breakthrough technologies" and on technologies that deliver the maximum greenhouse gas reductions per dollar in the shortest period of time. CEDA may not provide support to projects that are already receiving loan guarantees under the existing DOE loan guarantee program.

Sec. 188. Indirect Support

To facilitate private financing of clean energy deployment, CEDA may provide credit support to portfolios of debt obligations issues to finance building or industrial energy efficiency projects, distributed renewable energy generation, or energy storage. CEDA may also provide credit support in the tax equity market and to state and local government and non-profit long-term renewable power purchase agreements.

Sec. 189. Federal Credit Authority

The full faith and credit of the United States is pledged to the payment of all obligations entered into by CEDA.

Sec. 190. General Provisions

This section has several provisions, including requiring periodic reports to Congress from CEDA.

Sec. 191. Conforming Amendments

Amends existing statutes concerning tax-exempt and wholly owned government corporations to include CEDA.

SUBTITLE J—MISCELLANEOUS

Sec. 195. Increased Hydroelectric Generation at Existing Federal Facilities

The Secretaries of Interior, Energy, and the Army will jointly update the study, required by the Energy Policy Act of 2005, of the potential for increasing hydroelectric electric power production capability at federal facilities.

Sec. 196. Clean Technology Business Competition Grant Program

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.

Sec. 197. National Bioenergy Partnership

This section requires the Secretary of Energy to establish a National Bioenergy Partnership to coordinate state, federal, and private sector programs that promote the deployment of sustainable biomass fuels and bioenergy technologies for the United States. The Partnership will consist of five regions, and $7.5 million will be appropriated for each fiscal year from 2010-2014.

Sec. 198. Office of Consumer Advocacy

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.

Sec. 199. Development Corporation for Renewable Power Borrowing Authority

No later than 6 months following enactment, the Secretary of Energy, in coordination with the Secretary of Commerce, shall determine which geographic areas of the contiguous United States lack a Federal power marketing agency, develop a plan for these areas for investment in renewable energy and associated infrastructure, and identify any federal agencies that could facilitate such investment. Based on this study, the Secretary of Energy will recommend to Congress any new federal lending authority necessary, not to exceed $3.5 billion per geographic region.

Sec. 199A. Study

Not later than February 1, 2011, the Secretary of Energy shall provide Congress a report on the use of thorium-fueled nuclear reactors.

TITLE II—ENERGY EFFICIENCY

SUBTITLE A—BUILDING ENERGY EFFICIENCY PROGRAMS

Sec. 201. Greater Energy Efficiency in Building Codes

This section amends section 304 of the Energy Conservation and Production Act (42 U.S.C. 6833).

This provision sets building code energy efficiency targets for residential and commercial buildings. After enactment, buildings built to a code meeting the national building code energy efficiency target will have a 30 percent reduction in energy use relative to the baseline code. By 2014 (residential) and 2015 (commercial), buildings built to a code meeting the national target will have a 50 percent reduction; an additional 5 percent reduction will be required every three years thereafter, until 2029 and 2030 for residential and commercial buildings, respectively. The baseline codes are the 2006 IECC (residential) and ASHRAE Standard 90.1-2004 (commercial) codes. National targets may be modified to reflect the Secretary of Energy's determination of the maximum reduction of energy use that is cost-effective on a life-cycle basis or if successor building codes provide greater reductions.

The Secretary of Energy will establish national energy efficiency building codes sufficient to meet the targets; these will either be adopted by reference to established building codes or developed by the Secretary. Within one year of the establishment of a national building code, each state is required to certify that it has either adopted the national code or updated its own building codes to meet or exceed the national target, or certify that local governments representing at least 80 percent of the State's urban population have either adopted the national code or modified their own codes to meet the target. In states and local governments that do not provide certification, the national building code will apply.

States and/or local governments will be required to demonstrate compliance within two years of adoption of a new code; compliance is achieved if at least 90 percent of new and substantially renovated building space in the preceding year meets the code. For the first seven years after enactment, states may instead demonstrate that they have been making "significant progress" toward compliance by developing a plan for enforcement, taking steps to implement that plan, maintaining funding for enforcement, and demonstrating at least 50 percent of new and renovated buildings meet the code. Complying states and local governments are eligible for federal support through allowance allocations to state SEED accounts and other DOE funds. Allowances will be distributed to each state in the following manner: 1/5 in an equal amount to each state, 2/5 based on that state's relative energy use in buildings, and 2/5 based on that state's building activity in the previous year. Non-complying states are ineligible for these funds as well as a portion of all funding under the bill, with increasing penalties for each year of non-compliance. The Secretary of Energy will also develop an enforcement capability within 2 years of enactment.

Sec. 202. Building Retrofit Program

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; they will receive allowances through the state SEED accounts for the following purposes: implementing the retrofit program, providing incentives and initial capital for retrofits, funding utility-operated retrofit programs, 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. 203. Energy Efficient Manufactured Homes

This section establishes the Manufactured Home Replacement Program, through which states will provide rebates for the purchase of new, Energy-Star manufactured homes that replace manufactured homes constructed before 1976. Rebates shall not exceed $7,500 and will be made available to qualifying low-income households. Federal support for the program will occur through allowances allocated to state SEED accounts.

Sec. 204. Building Energy Performance Labeling Program

This section directs the Secretary of Energy to establish a building energy performance labeling program for the residential and commercial sector. The Secretary is required to provide a report on available building data, and on building types for which data does not exist. Protocols shall then be developed to measure performance of the above building types.

The Administrator shall then propose a model building energy label that displays achieved performance and designed performance data and which can be tailored to several listed building types. State Energy Offices will implement the labeling program by ensuring that the labeled information is made accessible to owners, lenders, tenants, occupants, and other relevant parties. Disclosure of the information may occur during building audits, retrofits, inspections, sales, liens, changes in ownership, or other appropriate means. States will be eligible for allowances to implement the program by adopting statutes or regulations for required labeling or by adopting a plan to implement the model labeling program within one year of enactment.

DOE and EPA facilities shall use the labeling program to the extent practicable and support its implementation in other agencies.

Sec. 205. Tree Planting Programs

This section authorizes the Secretary of Energy to provide financial, technical and other assistance to utilities for targeted tree-planting programs in residential and small office buildings. Through the program, sun- or wind- reducing trees will be provided for eligible consumers such that the trees provide maximum amounts of shade to the residences or small offices in the summer or maximum wind protection during the fall and winter. Only retail power providers that have entered into legal agreements with nonprofit tree-planting organizations will be eligible for funding. Power providers must also consult with a local technical advisory committee about siting, design, planting, maintenance, and other aspects of the program; the committee shall be comprised of individuals representing the power provider, the local tree-planting organization, local conservation or environmental organizations, local affordable housing agencies, local government, the nursing and landscaping industry, and other members of the community or from academia. No more than 50 percent of funding for the program may come from the federal government.

Sec. 206. Energy Efficiency for Data Center Buildings

This section amends section 453(c)(1) of the Energy Independence and Security Act of 2007 to include a deadline of not later than 2 years after enactment of the EISA 2007 for designating a data center efficiency organization to coordinate a voluntary national information program for energy efficiency in data centers.

Sec 207. Community Building Code Administration Grants

This section directs the Secretary of Housing and Urban Development to provide grants to local building code enforcement departments. Grants are to be awarded based on the financial need of the department, the benefit to the jurisdiction of having additional funding for enforcement, and the ability of the building code enforcement department to collaborate with other local code enforcement offices. Grants may not exceed $1 million, and the building code enforcement departments must also provide a portion of funding, with lower-population areas providing a higher proportion of funds than higher-population areas except in the case of areas considered to be under economic distress.

Sec. 208. Solar Energy Systems Building Permit Requirements for Receipt of Community Development Block Grant Funds

This section amends section 104 of the Housing and Community Development Act of 1974, limiting the costs of licenses for solar energy systems to $500 for residential systems, and one percent of the cost of installation for nonresidential systems (up to $10,000). The section applies to solar energy systems used to generate electricity or provide heating, cooling, or hot water.

Sec. 209. Prohibition of Restrictions on Residential Installation of Solar Energy System

This section directs the Secretary of Housing and Urban Development to issue regulations prohibiting restrictions on solar energy systems for single-family residential structures and requiring that applications for such systems are processed in the same manner as other architectural improvements. Prohibited restrictions include unreasonable delays, costs, or bans on the system. The provision applies to solar energy systems used to generate electricity or provide heating, cooling, or hot water.

SUBTITLE B—LIGHTING AND APPLIANCE ENERGY EFFICIENCY PROGRAMS

Sec. 211. Lighting Efficiency Standards

This section amends section 340(1) of the Energy Policy and Conservation Act to create new efficiency standards for outdoor lighting. These standards are set starting in 2016 and will increase in 2018 and 2022. The section also mandates standards for Portable Light Fixtures: by 2012, a portable light fixture must be a fluorescent light that meets Energy STAR requirements, an LED fixture, equipped with line-voltage sockets that preclude the use of incandescent bulbs, or be prepackaged with a CFL or LED lamp. The Secretary may publish amended standards in 2014, to be effective in 2016. The section also requires that the Secretary of Energy set standards for incandescent reflector lamps.

Sec. 212. Other Appliance Efficiency Standards

This section amends section 321 of the Energy Policy and Conservation Act to include testing procedures for water dispensers, hot food holding cabinets, and portable electric spas, and sets energy consumption standards for these appliances to become effective in 2012. It also sets efficiency standards for commercial furnaces, to become effective in 2011.

Sec. 213. Appliance Efficiency Determinations and Procedures

This section amends section 321(6) of the Energy Policy and Conservation Act to clarify that certain appliance efficiency standards should require minimum levels for energy efficiency or water efficiency, depending on the product.

It also directs the Secretary of Energy to consider new testing procedures for inclusion in a final rule.

For covered products, manufacturers are required to submit a report to DOE on compliance, economic impact of conservation standards, energy efficiency, energy use, and water use.

Sec. 214. Best-in-Class Appliances Deployment Program

This section requires the Secretary of Energy, in consultation with the Administrator, to establish and administer a program to reward retailers for increasing their sales of efficient products. The Secretary is required to determine the top 10% of products within a given commercial class and award bonus payments for sales of those products. Bonus payments are based on the difference in energy consumption between the product and the average product in that class and include consideration of efficiency gains through connection with a smart grid.

In addition, manufacturers that develop and produce Superefficient Best-In-Class products will also be rewarded with bonus payments. The Secretary may create standards for Superefficient Best-in-Class products based on existing products or non-existing products if the Secretary has reasonable grounds to conclude that a mass-producible product could be made to meet the standard. These standards should also consider potential efficiency gains based on connection to a smart grid.

Bounty payments will be given to retailers of Best-in-Class products and the manufacturers of Superefficient Best-in-Class products if the sale of these products is accompanied by the replacement, retirement, or recycling of inefficient products. The payment level is based on the difference in energy use between that product and the average new product in that class, discounted for the lifetime of product.

$600,000,000 will be appropriated to the Secretary of Energy each year from 2011-2013 for the purposes of this section.

Sec. 215. WaterSense

This section establishes a WaterSense program within the EPA. 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. 216. 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.

Sec. 217. Early Adopter Water Efficient Product Incentive Programs

This section grants funds to state, local, county, or tribal governments; utilities; or NGOs that administer incentive programs for water efficient products. Funds may be used to cover up to 50 percent of the cost of establishing and carrying out the program, and the Administrator will allocate the funds based on the population served by the entity carrying out the program, the targeted population for the program, the existence and effectiveness of existing programs, and unused funds from the prior year.

For the purposes of carrying out this section, $50 million is allocated for FY 2010, $100 million for FY 2011, $150 million for FY 2012, $100 million for FY 2013, and $50 million for FY 2014.

Sec. 218. Certified Stoves Program

This section requires the 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. All new stoves sold in the United States on and after the date of enactment must meet the performance standard; all stoves replaced under this program must be destroyed and recycled. In addition, the Administrator is required to provide funds to a state, tribe, Alaskan Native village or regional or village corporations, or 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.

Sec. 219. Energy Star Standards

This section amends the Energy Policy and Conservation Act to require the Administrator, not later than 18 months after enactment, to establish and implement a rating system for Energy Star products with the most helpful information on the relative energy efficiency of those products. It also requires further reviews and updating of Energy Star criteria. The section authorizes $5 million for FY 2010 and each fiscal year thereafter for this program.

SUBTITLE C—TRANSPORTATION EFFICIENCY

Sec. 221. Emissions Standards

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

PART B—MOBILE SOURCES

Sec. 821. Greenhouse Gas Emission Standards for Mobile Sources

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 (which regulate traditional air pollutants such as carbon monoxide, nitrogen oxides, and particulate matter);
- 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.

Sec. 222. Greenhouse Gas Emissions Reductions through Transportation Efficiency

The section amends Title VIII of the CAA (as added by ACESA), by inserting after part C the following new part:

PART D—TRANSPORTATION EMISSIONS

Sec. 841. Greenhouse Gas Emissions Reductions through Transportation Efficiency

This section requires the EPA 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 reductions goals established under ACESA. The Administrator should also consult with States and metropolitan planning organizations (MPOs) in establishing such goals 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 of the U.S. Code and requires States and 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 shall establish appropriate requirements to ensure that transportation plans developed under sections 134 and 135 of Title 23 contribute to national transportation-related GHG reduction goals.

Sec. 223. SmartWay Transportation Efficiency Program

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

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. 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.

Sec. 224. State Vehicle Fleets

This section amends section 507(o) of the Energy Policy Act of 1992 by directing the Secretary of Energy to revise that Act with respect to the types of alternative fuel vehicles that meet the federal fleet requirements to ensure consistency with the minimum fleet requirements laid out in section 303 of EPAct 1992.

SUBTITLE D—INDUSTRIAL ENERGY EFFICIENCY PROGRAMS

Sec. 241. Industrial Plant Energy Efficiency Standards

The Secretary of Energy is required to support the development of voluntary industrial plant energy efficiency certification standards, including those of the American National Standards Institute (ANSI) and the International Standards Organization (ISO). Through DOE's existing Industry Technologies Program, DOE will support the voluntary implementation of such standards.

Sec. 242. Electric and Thermal Waste Energy Recovery Award Program

This section requires the Secretary of Energy to establish a program to financially reward electric generating facilities and thermal energy producers for innovative recovery of thermal energy that can be sold in other forms—such as steam or hot water—or can generate additional electricity. In order to qualify for these awards, facilities are required to use innovative means that increase net energy efficiency. The awards may be up to 25% of the value of recoverable energy during the first 5 years of using innovative methods, or a lesser amount that the Secretary determines is sufficient for a cost-effective incentive for innovation. Facilities are ineligible if they receive grants under the Energy Policy and Conservation Act.

The Secretary is directed to assist state public utility commissions in making changes to state regulatory programs, to encourage sales of recovered thermal energy by utilities.

Sec. 243. Clarifying Election of Waste Heat Recovery of Financial Incentives

This section amends section 373(e) of the Energy Policy and Conservation Act to clarify the election to claim financial incentives for waste heat recovery projects.

Sec. 244. Motor Market Assessment and Commercial Awareness Program

This section requires the Secretary of Energy to conduct an assessment of electric motors and the electric motor market in the United States. The assessment should, among other things, characterize and estimate the opportunities for improvement in energy efficiency of the motor systems by market segment. Based on the assessment and resulting recommendations, the Secretary should establish a national program targeted at motor end-users to, among other things, increase awareness of the energy and cost-saving opportunities of using higher efficiency electric motors.

Sec. 245. Motor Efficiency Rebate Program

This section amends part C of Title III of the Energy Policy and Conservation Act by adding a motor efficiency rebate program as the following new section:

Sec. 346. Motor Efficiency Rebate Program

The program would provide rebates for the purchase of a new electric motor meeting specified efficiency requirements and replacing an installed motor. The section specifies the eligibility requirements and the amount of the rebates, and authorizes appropriations to carry out this program for years 2011-2015.

Sec. 246. Clean Energy Manufacturing Revolving Load Fund Program

The National Institute of Standards and Technology Act (15 U.S.C. 271 et seq.) is amended by inserting after section 26 the following new section:

Sec. 27. Clean Energy Manufacturing Revolving Loan Fund Program

This section outlines a program to award grants to States to establish revolving loan funds to provide loans to small and medium sized manufacturers to finance energy efficiency upgrades.

Sec. 247. Clean Energy and Efficiency Manufacturing Partnerships

This section amends the Hollings Manufacturing Partnership Program of the National Institute of Standards and Technology Act to add the establishment of a clean energy manufacturing supply chain initiative.

SUBTITLE E—IMPROVEMENTS IN ENERGY SAVINGS PERFORMANCE CONTRACTING

Sec. 251. Energy Savings Performance Contracts

This section contains various provisions that modify federal contracting practices to include energy savings and energy conservation considerations. It requires competition before task orders are awarded by federal agencies under energy savings performance contracts.

SUBTITLE F—PUBLIC INSTITUTIONS

Sec. 261. Public Institutions

This section amends the Energy Independence and Security Act of 2007 to include nonprofit hospitals and public health facilities among public institutions eligible for grants and loans for energy efficiency.

Sec. 262. Community Energy Efficiency Flexibility

This section amends section 545(b)(3) of the Energy Independence and Security Act of 2007 to remove some of the limitations on funding used by local governments and Indian tribes in establishing revolving loan funds and subgrants to nongovernmental organizations for the purpose of carrying out energy efficiency activities.

Sec. 263. Small Community Joint Participation

This section amends section 541(3)(A) of the Energy Independence and Security Act of 2007 to expand the definition of the eligible units of local government.

Sec. 264. Low Income Community Energy Efficiency Program

This section authorizes the Secretary of Energy to make grants on a competitive basis to private, non-profit, and other organizations for the purpose of increasing the flow of capital and benefits to low-income communities, minority- and women-owned businesses and other projects located in low-income communities in order to reduce environmental degradation, foster energy conservation and efficiency, and create job and business opportunities for local residents. The section authorizes $50,000,000 for this purpose for each of fiscal years 2010-2015.

Sec. 265. Consumer Behavior Research

This section authorizes the Secretary of Energy to establish a grant program to study the effects of consumer behavior on energy consumption and conservation. Grants shall be awarded on a competitive basis to public and private institutions of higher education

to: study the effects of consumer habits on energy consumption and conservation; develop strategies that communicate the importance of energy efficiency and conservation to consumers; identify best practices to improve consumer energy habits; inform consumers of the implications of consumption habits for energy use and climate change; and evaluate the effectiveness of programs designed to promote public awareness of federal climate change adaptation and mitigation activities. Funds are authorized as needed to carry out the program.

SUBTITLE G—NATIONAL ENERGY EFFICIENCY GOALS

Sec. 271. Energy Efficient Information and Communications Technologies

This section amends section 543 of the National Energy Conservation Policy Act to require each federal agency – within 1 year of enactment – to develop an implementation strategy for the purpose of purchasing and using energy efficient information and communications technologies. These strategies should utilize existing standards or benchmarks wherever possible and should take into consideration the specific needs of the agency.

Sec. 272. National Energy Efficiency Goals

This section establishes energy efficiency goals for the United States of improving the overall national energy productivity (measured in GDP per unit of energy input) by at least 2.5% per year by 2012, and maintaining that annual rate of improvement through 2030.

The section further requires the Secretary of Energy, not later than 1 year after enactment and in cooperation with the Administrator and other appropriate federal agencies, to develop a strategic plan to achieve the energy efficiency goals, and to update the strategic plan biennially.

Sec. 273. Affiliated Island Energy Independence Team

This section requires the Secretary of Energy, assisted by other agencies, to form a team of experts to work with the utilities and governments of each designated affiliated island (e.g., Puerto Rico, Guam, Micronesia, etc.) to develop an energy Action Plan. The plan should include actions related to improving energy efficiency and utilizing indigenous sources of clean energy.

Sec. 274. Product Carbon Disclosure Program

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 likely costs and effectiveness of such a program at reducing greenhouse gas 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.

Sec. 275. Industrial Energy Efficiency Education and Training Initiative

This section authorizes the Secretary of Energy to carry out a national education program to promote greater use of mechanical insulation. Mechanical insulation refers to insulating materials applied to mechanical systems, such as pipes, ducts, tanks, boilers, etc. Specific goals of the program are to encourage commercial building owners and industrial facility managers to use mechanical insulation in new and existing facilities, and preserve and create jobs while reducing energy and greenhouse gas emissions. The Secretary must submit a report to Congress by July 1, 2013, describing the program's actual and projected effectiveness, including energy efficiency improvements, greenhouse gas reductions, cost savings, and worker safety benefits. $3,500,000 is authorized for each fiscal year 2010 through 2014 to carry out the program, which is scheduled to terminate Dec. 31, 2014.

Sec. 276. Sense of Congress

This section states the sense of the Congress that the United States should continue to promote through the International Civil Aviation Organization the development of a global framework for regulating greenhouse gas emissions from civil aircraft that recognizes the international nature of the industry and treats commercial aviation industries in all countries fairly. It further states that the United States should work with foreign governments toward a global agreement that minimizes duplication and avoids unnecessary complication for the aviation industry, while still achieving the environmental goals.

SUBTITLE H – GREEN RESOURCES FOR ENERGY EFFICIENT NEIGHBORHOODS

Sec. 281. Short Title

This subtitle may be cited as the "Green Resources for Energy Efficient Neighborhoods Act of 2009" or the "GREEN Act of 2009".

Sec. 282. Definitions

This section provides definitions for a number of terms used throughout the subtitle, including "Green Buildings Standards," "HUD Assistance," and "Nonresidential Structure."

Sec. 283. Implementation of Energy Efficiency Participation Incentives for HUD Programs

This section requires the Secretary of the Department of Housing and Urban Development (HUD) to issue regulations, within 180 days after the enactment of the Act, establishing energy efficiency incentives to encourage participants in programs administered by HUD to achieve substantial improvements in energy efficiency.

Sec. 284. Basic HUD Energy Efficiency Standards and Standards for Additional Credit

This section establishes basic HUD energy efficiency standards for buildings.

Subsection (a) establishes efficiency standards, and to comply with the energy efficiency standard, residential structures would have to meet at least one of several sets of standards criteria specified in the section. In addition, newly constructed residential structures would have to incorporate electrical outlets capable of recharging a standard electric passenger vehicle, including an electric hybrid vehicle. The Secretary of HUD would also identify and adopt, as necessary, energy efficiency requirements, standards, checklists, or rating systems for nonresidential structures that rely on HUD assistance.

Subsection (b) provides for the establishment of energy efficiency and conservation standards and green building standards that provide for greater efficiency and conservation in structures than is required by the standards in subsection (a). Those higher standards can be used in connection with Federal housing, housing finance, and development programs to provide incentives for greater energy efficiency and conservation measures.

The Secretary of HUD may apply the energy efficiency standards under subsection (a), or the enhanced energy efficiency and conservation standards and green building standards under subsection (b), or both, with respect to any covered federally assisted housing or buildings receiving HUD assistance. The Secretary of Agriculture may apply these standards or codes to covered rural housing receiving assistance through the Rural Housing Service of the Department of Agriculture.

Sec. 285. Energy Efficiency and Conservation Demonstration Program for Multifamily Housing Projects Assisted with Project-Based Rental Assistance

Section 285 provides for a HUD energy efficiency demonstration program. For multifamily housing projects for which project-based rental assistance is provided, HUD will demonstrate the effectiveness of funding a portion of the costs of meeting the enhanced energy efficiency standards under section 284(b).

The HUD Secretary may seek advice from DOE, EPA, and the Army Corps of Engineers. The Secretary would also develop a competitive process for the award of additional assistance for multi-family housing projects seeking to implement energy efficiency, renewable energy sources, or conservation measures.

These demonstration programs would be carried out on 50,000 multifamily buildings within five years of enactment. The programs would be carried out with respect to a range of dwelling units nationwide. Projects would also use a variety of funding techniques to reflect differences in climate, types of dwelling units and other factors.

No amounts made available under the American Recovery and Reinvestment Act of 2009 may be used to carry out the demonstration program. Starting two years following enactment of the act, the Secretary shall submit annual reports to Congress that assess the demonstration program under this section. At the end of the demonstration program's four years, a detailed final report will include an assessment of the demonstration program's success.

Sec. 286. Additional Credit for Fannie Mae and Freddie Mac Housing Goals for Energy-Efficient and Location-Efficient Mortgages

This section amends the Housing and Community Development Act of 1992 to provide additional credit for particular Fannie Mae and Freddie Mac mortgages that meet certain energy efficiency and location efficiency criteria (including the standards included in this subtitle of ACESA).

Sec. 287. Duty to Serve Underserved Markets for Energy-Efficient and Location-Efficient Mortgages

This section amends the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 to provide for the development of loan products and flexible underwriting guidelines to facilitate a secondary market for energy-efficient and location-efficient mortgages on housing for low- and moderate-income families, and for second and junior mortgages made for purposes of energy efficiency and/or renewable energy improvements, or both.

Sec. 288. Consideration of Energy Efficiency Under FHA Mortgage Insurance Programs and Native American and Native Hawaiian Loan Guarantee Programs

Subsection (a) amends Title V of the National Housing Act to require HUD to establish a method to consider the impact that savings on utility costs have on the income of a mortgagor – that is, the borrower of a mortgage. This section aims to insure mortgages on single-family housing meeting the energy efficiency standards in section 284(a) of ACESA, and to provide that at least 50,000 such mortgages are insured by December 31, 2012.

Sec. 289. Energy-Efficient Mortgages and Location-Efficient Mortgages Education and Outreach Campaign

This section amends the Energy Policy Act of 1992 to require HUD to establish a commission to develop and recommend model mortgage products and underwriting guidelines that provide market-based incentives to prospective home buyers, lenders, and sellers to incorporate energy efficiency upgrades and location efficiencies in new mortgage loan transactions. HUD would report to Congress on the results of the commission's work within two years.

In consultation and coordination with the Secretary of Energy, the Secretary of Education, and the Administrator of the Environmental Protection Agency, HUD would use the commission's findings to carry out a public education outreach campaign to raise awareness of the availability, benefits, advantages, and terms of energy-efficient mortgages and location-efficient mortgages.

Sec. 290. Collection of Information on Energy-Efficient and Location-Efficient Mortgages through Home Mortgage Disclosure Act.

This section amends portions of the Home Mortgage Disclosure Act of 1975 to provide for collection of information on the number and dollar amount of energy- and location-efficient mortgages.

Sec. 291. Ensuring Availability of Homeowners Insurance for Homes not Connected to Electricity Grid

This section notes that it is Congress' intent that consumers shall not be denied homeowners insurance for a dwelling based solely on the fact that it is not connected to electricity service from any wholesale or retail electric power provider. States would be encouraged to support insurers that develop voluntary incentives to provide such insurance, and would not be permitted to prohibit insurers from offering such insurance.

Sec. 292. Mortgage Incentives for Energy-Efficient Multifamily Housing

This section directs the Secretary of HUD to establish incentives for increasing the energy efficiency of multifamily housing subject to a mortgage insured under the National Housing Act so that the housing meets the energy efficiency standards under section 284 of this subtitle. The section suggests mechanisms for such incentives.

Sec. 293. Energy-Efficient Certifications for Manufactured Housing with Mortgages

This section amends the National Housing Act to require that for any single- or multi-family residential housing subject to a mortgage insured under this Act, approval or certification of the housing for meeting any energy efficiency or conservation criteria, standards, or requirements shall be conducted only by representatives from certified

home energy rating system providers who have been accredited to conduct such ratings by the Home Energy Ratings System Council, the Residential Energy Services Network, or other appropriate national organization or licensed professional.

Sec. 294. Assisted Housing Energy Loan Pilot Program

This section directs the HUD Secretary to develop and implement, within one year of enactment of the act, a pilot program to finance cost-effective energy efficiency and conservation improvements for covered assisted housing projects. The Secretary would establish underwriting requirements for loans made under the pilot program, including a requirement that the cost savings realized from the capital improvements exceed the costs of repaying the loan.

Sec. 295. Making it Green

This section requires the Secretary of HUD to provide incentives for housing developers receiving HUD financial assistance to enter into agreements and partnerships with tree-planting organizations, nurseries, and landscapers. In the case of any new or substantially rehabilitated housing for which HUD financial assistance is provided, the Secretary would also require a plan to site new construction and improvements in a manner that provides for energy efficiency and conservation to the extent feasible, and minimizes the effects on existing trees and plants.

Sec. 296. Residential Energy Efficiency Block Grant Program

Title I of the Housing and Community Development Act of 1974 (42 U.S.C 5301 et seq.) is amended by adding at the end the following new section:

Sec. 123. Residential Energy Efficiency Block Grant Program

This section creates a residential energy efficiency block grant program. The Secretary would make grants under this section to states and localities (including Indian tribes) to carry out energy efficiency improvements in new and existing single- and multi-family housing. Grants could only be used to carry out activities for single-family or multifamily housing to bring them into compliance with the energy efficiency standards under section 284(a) of this act. Appropriations for this grant program would total $2,500,000,000 for 2010 and such sums as may be necessary for each year thereafter.

Sec. 297. Including Sustainable Development and Transportation Strategies in Comprehensive Housing Affordability Strategies

This section amends the Cranston-Gonzalez National Affordable Housing Act to require consideration of the extent to which jurisdictional strategies aimed at encouraging sustainable development for affordable housing include analysis of greater energy efficiency and conservation, use of renewable energy sources, transportation planning, and other criteria.

Sec. 298. Grant Program to Increase Sustainable Low-Income Community Development Capacity

This section allows the Secretary to make grants to nonprofit organizations, including community development organizations or qualified youth service and conservation corps, for the purposes of energy efficiency, resource conservation and reuse, sustainable infrastructure and design practices, or other purposes to be determined.

Sec. 299. HOPE VI Green Development Requirement

This section amends the United States Housing Act to add a green developments requirement. In order to receive grants under the Housing Act, residential construction under proposed revitalization plans would have to comply with a national Green Communities criteria checklist for residential construction. All nonresidential construction under the proposed plan would comply with all minimum required levels of the green building rating systems and levels identified in this section. The Secretary would also identify appropriate rating systems for green buildings.

Sec. 299A. Consideration of Energy Efficiency Improvements in Appraisals

This section amends the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 to require that appraisal standards for appraisals conducted in connection with federally related transactions must require, in determining the value of a property, consideration of any of its renewable energy, energy efficiency, or energy-conserving features.

Sec. 299B. Housing Assistance Council

This section requires the Housing Assistance Council to encourage organizations that receive assistance from the Council to ensure that any structures and buildings funded with this assistance comply with the energy efficiency standards under section 284(a) of this subtitle, and to establish incentives to ensure that these organizations comply with the building standards in 284(b).

Sec. 299C. Rural Housing and Economic Development Assistance

Under this section, the Secretary of HUD must require each tribe, agency, organization, corporation, or other entity receiving any assistance from the Office of Rural Housing and Economic Development of the Department of Housing and Urban Development to provide that any structures and buildings funded through this assistance comply with the energy efficiency standards under section 284(a) of this subtitle. The Secretary must also establish incentives to encourage these groups to ensure that these structures also meet the building codes under section 284(b).

Sec. 299D. Loans to States and Indian Tribes to Carry Out Renewable Energy Sources Activities

This section establishes an Alternative Energy Sources State Loan Fund in the Treasury. The Secretary shall use the fund to provide loans to states and Indian tribes to provide incentives to owners of single-family and multifamily housing, commercial properties, and public buildings to provide renewable energy sources, efficiency improvements, conservation measures, or utilities infrastructure improvements.

Sec. 299E. Green Banking Centers

This section amends the Federal Deposit Insurance Act to add a new subsection requiring Federal banking agencies to prescribe guidelines encouraging the creation of "green banking" centers. These centers would provide consumers seeking loans or mortgages with additional information on obtaining a home energy rating or audit, obtaining financing for cost-effective energy-saving improvements, and obtaining beneficial terms for any mortgage or loan secured by a residence meeting energy efficiency standards. This section also amends the Federal Credit Union Act to add a language requiring similar guidelines for insured credit unions to provide similar information to their customers.

Sec. 299F. GAO Reports on Availability of Affordable Mortgages

This section requires the Comptroller General of the United States to periodically examine and report on the impact of this subtitle on the availability of affordable mortgages throughout the United States, and shall include findings and potential remedies if the availability or affordability of mortgages has been affected.

Sec. 299G. Public Housing Energy Cost Report

The Secretary of HUD would obtain, from each public housing agency, information regarding the energy costs for public housing administered or operated by the agency, in order to determine which public housing buildings and developments are most in need of repairs and improvements related to energy efficiency.

Sec. 299H. Secondary Market for Residential Renewable Energy Lease Instruments

This section would require the Secretary of HUD to establish a means of determining the residual value of a renewable energy asset such that a secondary market for residential renewable energy lease instruments may be instituted.

Sec. 299I. Green Guarantees

This section allows the Secretary of HUD to guarantee the repayment of portions of eligible mortgages used to finance sustainable building elements. Mortgage eligibility is determined based on several criteria listed in this section.

TITLE III—REDUCING GLOBAL WARMING POLLUTION

Sec. 301. Short Title

This Title may be cited as the ‘‘Safe Climate Act’’.

SUBTITLE A—REDUCING GLOBAL WARMING POLLUTION

Sec. 311. Reducing Global Warming Pollution

The CAA (42 U.S.C. and following) is amended by adding at the end the following new Title:

TITLE VII—GLOBAL WARMING POLLUTION REDUCTION PROGRAM

[NOTE: The following section—section 700—is contained in “Part E—Supplemental Emissions Reductions from Reduced Deforestation.” It is moved here in this summary for ease of reference and continuity.]

Sec. 700. Definitions

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

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

“Covered entity” is:

(A) Any electricity source.

(B) Any stationary source that produces, and any entity that (or any group of two or more affiliated entities that, in the aggregate) imports, for sale or distribution in interstate commerce in 2008 or any subsequent year, petroleum-based or coal-based liquid fuel, pet-coke, or natural gas liquid, the combustion of which will emit more than 25,000 tons of carbon dioxide equivalent (CO_2e).

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

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

(ii) Nitrous oxide (N_2O);

(iii) Perfluorocarbons (PFCs);

(iv) Sulfur hexafluoride (SF_6);
(v) Any other fluorinated gas, except for nitrogen trifluoride, that is a greenhouse gas, as designated by the Administrator under section 711(b) or (c); or
(vi) Any combination of greenhouse gases described in clauses (i) through (v).

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

(E) Any geologic sequestration site.

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

(G) Any stationary source in the chemical or petrochemical sector that, in 2008 or any subsequent year:
(i) Produces acrylonitrile, carbon black, ethylene, ethylene dichloride, ethylene oxide, or methanol; or
(ii) Produces a chemical or petrochemical product if producing that product results in annual combustion plus process emissions of 25,000 or more tons ofCO_2e.

(H) Any stationary source that:
(i) Is in one of the following industrial sectors: ethanol production; ferroalloy production; fluorinated gas production; food processing; glass production; hydrogen production; iron and steel production; lead production; pulp and paper manufacturing; and zinc production; and
(ii) Has emitted 25,000 or more tons of CO_2e in 2008 or any subsequent year.

(I) Any fossil fuel-fired combustion device (such as a boiler) or grouping of such devices that:
(i) Is all or part of an industrial source not specified in subparagraph (D), (F), (G) or (H); and
(ii) Has emitted 25,000 or more tons of CO_2e in 2008 or any subsequent year.

(J) Any natural gas local distribution company that (or any group of 2 or more affiliated natural gas local distribution companies that, in the aggregate) in

2008 or any subsequent year delivers 460,000,000 cubic feet or more of natural gas to customers that are not covered entities.

PART A—GLOBAL WARMING POLLUTION REDUCTION GOALS AND TARGETS

Sec. 701. Findings and Purpose

This section sets out Congressional findings and the purpose of the Title.

The findings section states that global warming poses a significant threat, that national and international scientific assessments link emissions of greenhouse gases to increased risks, and lists the types of health, environmental and economic impacts that could result.

The purpose section states that the Act is intended to help prevent, reduce the pace of, mitigate, and remedy global warming and its impacts.

Sec. 702. Economy-Wide Reduction Goals

This section establishes the overall greenhouse gas (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;
- The level of GHG emissions from capped sources is 17% below 2005 levels in 2020;
- The level of GHG emissions from capped sources is 42% below 2005 levels in 2030;
- The level of GHG emissions from capped sources is 83% below 2005 levels in 2050.

Sec. 704. Supplemental Pollution Reductions

This section requires the Administrator to set aside (referring to section 781 below) the following percentages of emission allowances to achieve supplemental GHG emissions reductions from reduced deforestation in developing countries:

- 5% of allowances each year from the vintage years 2012-2025;
- 3% of allowances each year from the vintage years 2026-2030;
- 2% of allowances each year from the vintage years 2031-2050.

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; and
- An analysis of whether such efforts are likely to avoid reaching 450 part per million of carbon dioxide equivalent in the atmosphere or a temperature increase of 2 degrees Celsius above preindustrial levels.

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 necessary additional GHG reductions.

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. Gases regulated under Title VI (HFCs) would be exempt from this provision.

Sec. 712. Carbon Dioxide Equivalent Value of GHGs

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

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

The section also requires the Administrator —not later than February 1, 2017, and not less than every 5 years thereafter—to review and, if appropriate, revise the CO_2 equivalent (CO_2e) values established under this section.

Sec. 713. GHG 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 in the registry any vehicle fleet with emissions of more than 25,000 tons of CO_2e annually, or any other entity that emits a GHG at any level, then those entities may be designated "reporting entities" as well, and required to report their emissions.

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.

PART C—PROGRAM RULES

Sec. 721. Emission Allowances

This section establishes the quantity of allowances for years 2012-2050.

Calendar Year	Emission allowances (in millions)
2012	4627
2013	4544
2014	5099
2015	5003
2016	5482
2017	5375
2018	5269
2019	5162
2020	5056
2021	4903
2022	4751
2023	4599
2024	4446
2025	4294
2026	4142
2027	3990
2028	3837
2029	3685
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 and each year thereafter	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 more or less than 7,206 CO_2e;
- The types of entities covered by the cap-and-trade system in 2012 were responsible for more or less than 66.2% of U.S. GHG emissions in 2005;
- The types of entities covered by the cap-and-trade system in 2014 were responsible for more or less 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 more or less than 84.5% of U.S. GHG emissions in 2005.

The section also directs the Administrator to promulgate—not later than 24 months after enactment—regulations for the establishment and distribution of compensatory allowances for the following activities:

- The destruction, in 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 consumptive 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 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;
  - Any fluorinated gas that is a GHG purchased for use at that covered entity, except for nitrogen trifluoride.
- 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.
- 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.

The following sources are required to hold emission allowances as of April 1, 2015, for their previous year's GHG emissions:

- 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, 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.

As of April 1, 2017, local distribution companies (LDCs) – sources (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 to customers that are not covered entities, assuming no capture and sequestration of that GHG.

This section does not apply to fuels that are exported for sale or use. And it 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 one billion each from domestic and 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.

This section also outlines the use of "term offset credits," which are included in Title V, "Agricultural and Forestry-Related Offsets" and which expire after 5 years. Before expiration they can be used for temporary compliance, but upon expiration they must be replaced either with an allowance, a domestic offset credit, or another temporary offset credit. Term offset credits count toward an entity's domestic offset compliance percentage. However, if an entity chooses to replace a term offset credit with a domestic offset credit at expiration, this "replacement" credit does not count toward the domestic limit. Also, before using term offset credits, entities must assure the Administrator they will be able to afford new credits at the end of the term period, and based on this information, the Administrator may limit the number of term offset credits used.

Covered entities are also permitted to use international emissions allowances (see section 728) and compensatory allowances (see section 721 above) 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 you emit a ton of CO_2e and don't surrender an allowance, you pay a 2x penalty, and you still have to surrender an allowance for the following year.

Sec. 724. Trading

This section says that anyone can sell, exchange, transfer, or hold for compliance 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.[1] 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.

It also allows entities to satisfy up to 15% of their compliance obligation with allowances 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. Strategic Reserve

This section directs the Administrator to conduct quarterly "Strategic Reserve Auctions," (SRAs) in which only covered entities subject to compliance obligations may participate. (See section 791 for provisions related to regular auctions.) Not later than 2 years after enactment, the Administrator is required to establish a strategic reserve account for 2012-2050. To fill the account, the Administrator shall transfer 1% of allowances established for each year from 2012-2019, 2% of allowances established for each year from 2020-2029, and 3% of allowances established for each year from 2030-2050. All references throughout the Title that refer to the total number of allowances for a vintage year mean the total number of allowances created minus the ones that are put in the strategic reserve as described above. The Administrator is required to transfer to the strategic reserve any allowances that were offered for sale at the regular auction (under section 791) but not purchased and any allowances purchased through the use of auction revenue from the sale of reserve allowances.

The Administrator must use the proceeds from each SRA to purchase international offset credits issued for reduced deforestation (REDD) activities pursuant to section 743. The Administrator retires these credits, and creates a number of emission allowances equal to 80% of the number of international offset credits so retired. The Administrator then uses these allowances to supplement the strategic reserve (i.e. for every 100 REDD tons purchased, the Administrator replenishes the strategic reserve with 80 emissions allowances).

The Administrator is required to set a minimum price per emission allowance at each SRA. In 2012, the minimum price is set at $28 per ton. For the SRAs held in 2013 and 2014, 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).

[1] As passed by the house, the bill says 1-5 years, but we believe this to be an error that will be corrected.

For the SRAs held in 2015 and each year thereafter, the minimum auction price will be 60% above a rolling 36-month average of the daily closing price for that year's allowance vintage as reported on registered carbon trading facilities.

There are limits to the quantity of allowances which the Administrator may sell at each SRA. From 2012-2016, no more than a quantity equal to 5% of annual allowances issued for that year may be sold in that year's SRAs. From 2017 through the end of the program, no more than a quantity equal to 10% of annual allowance issued for that year may be sold in that year's SRAs.

Each quarterly SRA will auction one-quarter of the allowances reserved for that year. Any unsold allowances from a quarterly SRA are rolled over to the next quarter's SRA, and so on through the end of the year, but unsold SRA allowances from one year may not be rolled over to the next. Instead, they are returned to the reserve.

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 will also issue regulations that allow entities in possession of international offset credits from reduced deforestation issued under section 753 to include such offset credits in a SRA. Such offset credits may only be used to fill orders after the supply of strategic reserve allowances has been depleted, and they may only be sold at an SRA if the Administrator determines that it is highly likely that covered entities will meet their compliance obligations in that year with offsets equal to 80% or more of 2 billion tons CO_2e (1.6 billion tons CO_2e). The Administrator is directed to retire the international REDD offset credits, and establish and provide to purchasers a number of emission allowances equal to 80% of the number of international offset credits so retired.

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 Administrator—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

Among other provisions, this section requires the Administrator – 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 Administrator to establish an Offset Registry and to assess fees payable by offset project developers to cover the administrative costs of the program.

Sec. 733. Eligible Project Types

Among other provisions, this section requires the Administrator – within 1 year of enactment – to establish an initial list of project types eligible for offset credits, and an additional list within 2 years.

The Administrator is directed to take into consideration the recommendations of the OIAB, and is required to provide justification if the list is different that 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 Administrator to add or remove a project type; the Administrator must grant or deny the petition within 12 months.

Sec. 734. Requirements for Offset Projects

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

- Additionality: the standardized methodology must ensure, at a minimum, emissions 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; 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.
- Measurement of the extent to which reduction, avoidance, or sequestration exceeds the activity baseline, including protocols for monitoring.
- Accounting for and mitigating leakage.
- Determining and discounting for uncertainty.

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

The section also requires the Administrator to establish policies to account for and address reversals (impermanence) of sequestration projects, as well as policies for the assigning of liability and responsibility for mitigating and fully compensating for reversals. Mechanisms to ensure permanence must include at least one of the following:

- 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.
- Insurance that would provide for full compensation for the amount of emissions released.
- Another mechanism.

In addition, the Administrator 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. 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 Administrator 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 no later than the time at which an offset project's first verification report is submitted. The Administrator is directed to approve or reject the petition within 90 days. If denied, it may be resubmitted.

The Administrator 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 Administrator 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 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 Administrator—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 Administrator to conduct random audits of offset projects, credits, and practices of third-party verifiers. The Administrator may delegate this responsibility to a state or tribal government.

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 Administrator 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 offsets 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 Administrator 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 Administrator 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 Administrator 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

If forestry projects are an eligible offset project type under section 733, the Administrator 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, and are in accordance with widely accepted, environmentally sustainable forestry practices.

Sec. 742. Trading

This section specifies that Sec. 724 on allowance trading will also apply to offset credit trading. Initial ownership of an offset credit lies with the offset project representative unless otherwise specified in a legally binding contract or agreement. An offset credit can be sold, traded, or transferred unless it has expired, been retired, or used for compliance.

Sec. 743. 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. All the requirements of the U.S. domestic offset program apply to the issuance of international offset credits.

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 at levels of GHG emissions consistent with the thresholds identified in section 705 [450 ppm/2 degrees C]."

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 U.S. 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;

- 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 US 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 and 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 country has the technical capacity to monitor and measure forest carbon fluxes with an acceptable level of uncertainty;
- The reduction is consistent with UNFCCC agreements; and
- The country has the institutional capacity to reduce emissions from deforestation.

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; establish a trajectory that will result in zero gross deforestation not later

than 20 years after the baseline is established; 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.

PART E—SUPPLEMENTAL EMISSIONS REDUCTIONS FROM REDUCED DEFORESTATION

Sec. 751. Definitions

This section defines the terms in this part.

Sec. 752. Findings

This section makes Congressional findings, including that:

- Land use change and deforestation accounts for roughly 20% of overall global emissions, and it will be difficult to limit global temperature increases to less than 2 degrees Celsius above preindustrial levels without reducing and ultimately halting net emissions from deforestation; and
- Reducing emissions from deforestation is highly cost-effective and it is in the U.S. national interest to assist developing countries to reduce deforestation, which will have significant environmental and social co-benefits.

Sec. 753. Supplemental Emissions Reductions Through Reduced Deforestation

This section requires the Administrator, in consultation with the Secretary of State and the Administrator of USAID, within 2 years of enactment, to establish a program to use the allowance set-aside under section 781 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 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.

Sec. 754. Requirements for International Deforestation Reduction Program

This section directs the Administrator, in consultation with the Administrator of USAID, to only support activities in countries that are experiencing deforestation or have standing forest carbon stocks that may be at risk of deforestation or degradation, and that also have entered into a bilateral or multilateral agreement or arrangement with the U.S. establishing the conditions of its participation in the program.

The activities in the program shall be selected by the Administrator of USAID in consultation with the Administrator, and shall include:

- National and subnational deforestation reduction activities, including pilot projects that reduce GHG emissions but are subject to significant uncertainty;
- Leakage prevention;
- Development of measurement, monitoring, and verification capacities;
- Development of governance structures to reduce deforestation and illegal logging, enforcement of requirements for reduced deforestation or forest conservation, and providing policy incentives to achieve the objectives in section 753.

The Secretary of State must concur with the distribution of allowances.

The section also describes the general mechanisms the Administrator (now referring to the EPA Administrator again) may use to support these activities. The Administrator is required to promulgate standards to ensure that these reductions in deforestation are additional, measurable, verifiable, permanent, and monitored, and that they account for leakage and uncertainty.

These standards require the establishment of a deforestation baseline that is national in scope, takes into consideration the average annual historical deforestation rates of the country during a period of at least 5 years and other factors to ensure additionality, establishes a trajectory that will result in zero gross deforestation no later than 20 years after the baseline is established, is designed to account for all significant sources of GHGs from deforestation in the country, and can be adjusted over time. The baseline is required to be consistent with the national deforestation baseline, if any, established for the country under section 754.

The standards include several additional requirements:

- Activities must have achieved emission reductions before receiving emission allowances. A conservative discount factor must be applied to subnational deforestation activities that lack standardized or precise measurement or are subject to other sources of uncertainty.
- Activities must be managed in accordance with widely accepted, environmentally sustainable forestry practices, must promote native species and conservation or

restoration of native forests, if practicable, and avoidance of the introduction of invasive nonnative species.

- Countries in which projects occur must give due regard to the rights and interests of local communities, indigenous peoples and vulnerable social groups, promote consultations with local communities during the project, and encourage sharing of profits with local communities and indigenous peoples.

The Administrator must include forest degradation and has the discretion to include soil carbon losses associated with forested wetlands or peat lands within the meaning of deforestation.

The section also requires the establishment of a public registry of the supplemental reductions.

In addition, subnational deforestation activities will only be compensated for 5 years, extendable to 10 years if the Administrator determines that the country is making substantial progress toward adopting and implementing a program with a national baseline, that there is not significant leakage, and that reductions are being discounted to account for any leakage that is occurring.

Sec. 755. Reports and Reviews

Among other provisions, this section requires the Administrator to report annually to Congress on the International Deforestation Reduction Program; the first report must be submitted no later than January 1, 2014.

The Administrator is required, in consultation with the Secretary of State and taking into consideration any evaluation by or recommendations from the Advisory Board, to review the activities under part E, not later than 4 years after the date of enactment and every 5 years thereafter, and to make appropriate changes based on the review.

Sec. 756. Legal Effect of Part

This section specifies that nothing in this part supersedes, limits, or otherwise affects any restriction imposed by federal law (including regulations) on any interaction between an entity located in the U.S. and an entity located in a foreign country.

SUBTITLE B—DISPOSITION OF ALLOWANCES

Sec. 321. Disposition of Allowances for Global Warming Pollution Reduction Program

Title VII of the CAA, as added by this Act, is amended by adding at the end the following part:

PART H—DISPOSITION OF ALLOWANCES

Sec. 781. Allocation of Allowances for Supplemental Reductions

This section requires the Administrator to set aside the following percentages of emissions to achieve supplemental GHG emissions reductions:

- 5% of allowances each year from the vintage years 2012-2025;
- 3% of allowances each year from the vintage years 2026-2030;
- 2% of allowances each year from the vintage years 2031-2050.

The section also directs the Administrator to adjust the above percentages as necessary to achieve additional U.S. GHG emissions reductions equal to an additional 10% below 2005 levels and the cumulative reduction target through 2025 of at least 6 billion tons of CO_2e by 2025 set forth in section 753(b).

In addition, the section directs the Administrator, if all of the allowances allocated for a given vintage year have not been distributed by the end of that year, to increase the allocation for the following vintage year by the same amount.

Sec. 782. Allocation of Emission Allowances

This section details for what purposes emission allowances are to be allocated. It directs the Administrator to allocate emission allowances in the amounts specified in "Appendix A: Allocation of Emissions Allowances," as percentages of the total number of allowances identified in section 721(a).

Sec. 783. Electricity Consumers

This section specifies that the allowances in section 782(a)(1) shall be distributed to electricity local distribution companies (LDCs). However, the Administrator will hold back emission allowances equal to the lesser of 14.3% of the allowances available under section 782(a)(1) 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 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 carbon dioxide 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 782(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.

Generators with long-term power agreements are to receive allowances under this section based on emissions associated with such agreements and shall not receive more than 4.3% of the total quantity of allowances available under section 782(a)(1).

Small LDCs shall receive allowances pursuant to section 782(a)(2) based on historic emissions and shall use the allowances for efficiency, deployment of renewable energy resources, and to assist low-income consumers.

Certain co-generation facilities shall receive allowances pursuant to section 782(a)(3) based on emissions, but not to exceed the facility's cost of compliance in that year.

Sec. 784. Natural Gas Consumers

This section requires that allowances to natural gas local distribution companies in accordance with section 782(b) 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.

Sec. 785. Home Heating Oil and Propane Consumers

This section requires the Administrator to provide allowances in accordance with section 782(c) 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.

Sec. 787. Allocation to Refineries

The purpose of this section is to provide emission allowance rebates in accordance with section 782(j)(1) and (2) in a manner that promotes energy efficiency and a reduction in GHG emissions. Not later than three years after enactment, the EPA, in consultation with EIA, will establish a formula consistent with the purpose of this section. The Administrator shall consider the relative complexity of the refinery processes and whether or not the refinery's electricity provider received emission allowances that were used for the benefit of the refinery.

Sec. 788. Supplemental Agriculture and Renewable Energy Incentives Programs

Not less than 50% of the emission allowances allocated pursuant to section 782(u) shall be used for an agriculture incentives program, to be established by the Secretary of Agriculture. These allowances should be used to provide incentives for projects and activities that: reduce, avoid, or sequester GHGs (but do not meet offset criteria); support actions to adapt to climate change, and prevent conversion of land that would increase GHG emissions. The Secretary of Energy shall establish a program to provide some of the remaining 782(u) allowances to state and local governments to support the deployment of renewable energy infrastructure.

Sec. 789. Climate Change Consumer Refunds

This section requires the Secretary of the Treasury in each year after deposits are made to the Climate Change Consumer Refund Account, to provide tax refunds on a per capita basis to each eligible household.

Sec. 790. Exchange for State-Issued Allowances

This section requires the Administrator, not later than one year after enactment, to issue regulations allowing any person in the United States to exchange emission allowances issued before 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 782(d) for low income consumers.

Sec. 791. Auction Procedures

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

This section sets out the requirements for allowance auctions. The auctions are to be held four times per year at regular intervals, with the first auction to be held no later than March 31, 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 requires the Administrator to issue regulations setting aside a portion of allowances for purchase by small refiners at the average auction price.

Sec. 792. 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 791. 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. 793. Establishment of Funds

This section establishes the following separate accounts within the Treasury: the Strategic Reserve Fund; the Climate Change Consumer Refund Account; and the Climate Change Worker Adjustment Assistance Fund.

Sec. 794. 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. 795. Exchange for Early Action Offset Credits

Within 1 year of enactment, the Administrator shall issue regulations for distributing allowances pursuant to section 782(t) allowing for the exchange of offset credits issued before January 2009 by a state or voluntary offset program (0.75% of allowances) and the compensation in the form of emission allowances to entities for documented early reductions or avoidance of GHG emissions before January 2009 (0.25% of allowances).

SUBTITLE C—ADDITIONAL GREENHOUSE GAS STANDARDS

Sec. 331. Greenhouse Gas Standards

This section amends the CAA by adding the Title below.

TITLE VIII—ADDITIONAL GREENHOUSE GAS STANDARDS

Sec. 801. Definitions

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

Sec. 811. Standards of Performance

This section requires the Administrator—within 12 months after enactment—to publish under section 111(b)(1)(A) of the CAA a list of categories of industrial sources that individually have GHG emissions greater than 10,000 tons of CO_2e and that, in the aggregate were responsible for emitting at least 20% of the emissions not covered under the cap. The Administrator is directed to include on this list each source category that is responsible for at least 10% of the uncapped methane emissions in 2005, excluding sources of enteric fermentation. This list must also include industrial sources

whose emissions, when added to those from the industrial sector covered under the cap, constitute at least 95% of the total GHG emissions from this sector.

Within three years of enactment, the Administrator shall promulgate performance standards under section 111 (new sources) and section 111(d) (existing sources) that cover source categories with at least 80% of the emissions from the categories contained on the list of sources that meet the criteria described above and shall include standards for natural gas extraction. An additional 25 percent of the remaining identified categories shall have standards issued for them within five years after enactment, with an additional 25 percent covered within 7 years after enactment and with all source categories covered within 10 years.

Within 18 months of the issuance of the initial set of performance standards, EPA must submit to Congress a report examining the costs of achieving the economy-wide goals specified in section 702 and the available supply of offset credits.

Sources covered under the emissions trading cap are not subject to new source performance standards under section 111 of the CAA.

PART C—EXEMPTIONS FROM OTHER PROGRAMS

Sec. 831. Criteria Pollutants

This section prohibits any GHG from being listed as a criteria air pollutant under section 108(a) of the CAA on the basis of its effect on climate change.

Sec. 832. International Air Pollution

This section prohibits the application of section 115 under the CAA from applying on the basis of its effect on climate change.

Sec. 833. Hazardous Air Pollutants

This section prohibits any GHG from being listed as hazardous air pollutants under section 112 of the CAA on the basis of its effect on climate change.

Sec. 834. New Source Review

This section prohibits the application of significant deterioration provisions (PSD) under the CAA (part C, Title I) to greenhouse gas emissions.

Sec. 835. Title V Permits

This section prohibits a source from being required to apply for or operate under a Title V permit solely because of regulation of greenhouse emissions.

Sec. 332. HFC Regulation

This section adds HFCs to the lists of compounds (e.g., CFCs and HCFCs) regulated under the existing Title VI of the CAA by adding section 619 below.

Sec. 619. Hydrofluorocarbons (HFCs)

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 & 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 auction price and these allowances are available only to users (e.g., manufacturers and suppliers), importers of products containing HFCs, producers or importers of HFCs, and new entrants. 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 from the secondary pool and the quantities that entities may purchase. It also provides for participation of new market entrants and 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. 333. Black Carbon

The section further amends the CAA by adding part E below after part D to Title VIII (which is added by ACESA):

PART E—BLACK CARBON

Sec. 851. Black Carbon

This section requires the Administrator—not later than 2 years after enactment—to issue final domestic regulations to reduce emissions of black carbon or state why existing regulations are adequate.

The section further requires the Administrator—not later than 1 year after enactment—to issue a report on opportunities and resources required to mitigate black carbon internationally. This report shall include the identification of demonstration projects and implementation strategies.

Sec. 334. 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. 335. State Programs

The section further amends the CAA by adding part F below after part E to Title VIII:

PART F—MISCELLANEOUS

Sec. 861. State Programs

This section prohibits states from implementing or enforcing caps on GHG 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 greenhouse gas 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 State 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 Title III of ACESA.

Sec. 336. 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. 337. Conforming Amendments

This section adds Title VI, Title VII and Title VIII to various provisions throughout the CAA.

Sec. 338. 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.

Sec. 339. National Strategy for Domestic Biological Carbon Sequestration

This section requires EPA, in consultation with other agencies, within one year of enactment, to issue a report proposing a unified and comprehensive strategy addressing key legal, technical and regulatory issues related to sustainable biological sequestration of carbon within the United States.

Sec. 340. Reducing Acid Rain and Mercury Pollution.

This section requires EPA, within 18 months of enactment, to submit to Congress a report analyzing the effects of carbon dioxide reduction strategies on emissions of mercury, nitrogen oxides, sulfur dioxide and other pollutants.

SUBTITLE D—CARBON MARKET ASSURANCE

Sec. 341. Carbon Market Assurance

This section amends the Federal Power Act (16 U.S.C. 791a and following) by adding at the end the following:

PART IV—CARBON MARKET ASSURANCE

Sec. 401. Oversight and Assurance of Carbon Markets

In this section, a “regulated allowance” is defined as any emission allowance, compensatory allowance, offset credit, or federal renewable electricity credit established or issued under this Act.

This section requires the Federal Energy Regulatory Commission (FERC), in consultation and coordination with the Administrator, not later than 18 months and thereafter as appropriate, to promulgate regulations for the establishment, operation and oversight of markets for regulated allowances. These regulations are required, among other things:

- To provide for effective and comprehensive market oversight, prohibit fraud, market manipulation, and excess speculation, and provide measures to limit unreasonable fluctuation in the prices of regulated allowances;
- To facilitate compliance by covered entities;
- To ensure market transparency and recordkeeping necessary to provide for efficient price discovery, and to prevent fraud, market manipulation and excessive speculation;
- To ensure that position limitations for individual market participants as well as margin requirements are established; and
- To limit or eliminate counterparty risks, market power concentration risks, and other risks associated with trading regulated allowances outside of trading facilities.

No individual market participant is permitted, either directly or in concert with another participant, to control more than 10% of any class of regulated allowances.

The section requires the President—within 30 days of enactment—to establish an interagency working group on carbon market oversight (including the EPA Administrator and representatives from other agencies) to make recommendations to the Commodities Futures Trading Commission (CFTC) regarding proposed regulations. Within 180 days after enactment, the working group is required to submit a written report to the President and Congress that includes its recommendations to CFTC.

FERC and CFTC are required, on a continuous basis, to analyze information on the functioning of the markets including:

- The status of, and trends in, the markets, including prices, trading volumes, transaction types, and trading channels and mechanisms;
- Spikes, collapses, and volatility in prices of regulated instruments, and the causes thereof;
- The relationship between the market for regulated allowances and allowance derivatives, and the spot and futures markets for energy commodities, including electricity;

- The economic effects of the markets, including to macro- and micro-economic effects of unexpected significant increases and decreases in the price of regulated instruments;
- Any changes in the roles, activities, or strategies of various market participants.
- Regional, industrial, and consumer responses to the markets, and energy investment responses to the markets;
- Any other issue related to the markets that FERC and CFTC deem appropriate.

Each year FERC and CFTC shall submit a joint report to the President and Senate Committees on the information reported above.

No individual market participant is permitted, either directly or in concert with another participant, to control more than 10% of any class of regulated allowance derivatives.

All contracts for the purchase or sale of any regulated allowance derivative are required to be executed on or through a designated contract market provided for in section 5 of the Commodity Exchange Act.

This section also outlines prohibitions on price or market manipulation, fraud, and making false or misleading statements or reports, as well as punishments for these felonies. The section sets out enforcement provisions for rule violations by persons or trading facilities.

Sec. 342. Carbon Derivative Markets

This section amends the Commodity Exchange Act (7 U.S.C. 1a(14)) by including any emission allowance, compensatory allowance, offset credit, or federal renewable electricity credit established under this bill.

SUBTITLE E—ADDITIONAL MARKET ASSURANCE

Sec. 351. Regulation of Certain Transactions in Derivatives Involving Energy Commodities

This section amends the Commodity Exchange Act to widen the regulation of energy commodity derivatives. It defines an energy commodity to include:

- Coal;
- Crude oil, gasoline, diesel fuel, jet fuel, heating oil, and propane;
- Electricity (excluding financial transmission rights);
- Natural gas;
- Any other substance (other than an excluded commodity, a metal, or an agricultural commodity) that is used as a source of energy.

It defines an energy transaction as a contract, agreement, or transaction in an energy commodity for future delivery that provides for a delivery point in the United States, or

that is offered or transacted on or through a computer terminal located in the United States.

The section extends regulatory authority to swaps involving energy transactions and eliminates the exemption for over-the-counter swaps involving energy commodities. It also extends regulatory authority to included transactions on foreign boards of trade. The CFTC cannot exempt any included energy transaction without 60 days advance notice to Congress, the Position Limit Energy Advisory Group, and following a public comment period.

This section also establishes a Position Limit Energy Advisory Group, which would be made up of 7 predominantly commercial short hedgers, 7 predominantly commercial long hedgers, 4 non-commercial participants in the markets, and representatives from each designated contract market and electronic trading facility. Within 60 days and yearly thereafter, the Group must recommend the level of position limits.

This section also defines a "bona-fide hedging transaction" and sets out rules for the reporting and disaggregation of market data.

Sec. 352. No Effect on Authority of the Federal Energy Regulatory Commission

This section clarifies that FERC's jurisdiction under the Federal Power Act and the Natural Gas Act or other laws is unchanged.

Sec. 353. Inspector General of the Commodity Futures Trading Commission

This section elevates the office of Inspector General of the CFTC to be independent from the CFTC chair within 30 days of enactment.

Sec. 354. Settlement and Clearing Through Registered Derivatives Clearing Organizations

This section amends the Commodity Exchange Act to require over-the-counter transactions to clear on a Designated Clearing Organization (DCO). The section outlines the alternatives to DCOs, and the conditions under which the CFTC can exempt transactions from the clearing requirement. It also clarifies that the requirement is not for cash commodities. The section also outlines additional requirements for DCOs.

Sec. 355. Limitation on Eligibility to Purchase a Credit Default Swap

This section defines credit default swaps (CDS) and restricts those who can enter into a CDS to one who:

- Owns a credit instrument that is insured by the CDS;
- Would experience financial loss if an event that is the subject of the CDS occurs with respect to the credit instrument;

- Meets such minimum capital adequacy standards as may be established by the CFTC.

Sec. 356. Transaction Fees

This section amends the Commodity Exchange Act with regard to the collecting of transaction fees by the CFTC.

Sec. 357. No Effect on Antitrust Law or Authority of the Federal Trade Commission

This section clarifies that nothing in this subtitle shall be interpreted to affect or diminish the jurisdiction or authority of the Federal Trade Commission.

Sec. 358. Effect of Derivatives Regulatory Reform Legislation

This section states that upon the passage of legislation that includes derivatives regulatory reform, sections 351, 352, 354, 355, 356, and 357 shall be repealed and any related regulations shall be considered null and void.

Sec. 359. Cease-and-Desist Authority

This section provides the FERC with authority to issue cease and desist orders to entities found to be manipulating the energy markets. Prior to the entry of a cease and desist order, FERC would need to provide notice and opportunity for a hearing unless doing so would be impracticable or contrary to the public interest.

TITLE IV—TRANSITIONING TO A CLEAN ENERGY ECONOMY

SUBTITLE A—ENSURING REAL REDUCTIONS IN INDUSTRIAL EMISSIONS

Sec. 401. 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 sets out the purposes of this part. These include: 1) aiming to promote a strong global effort to reduce GHG emissions and avoid dangerous climate change; 2) avoiding leakage of GHG emissions to countries outside the United States as a result of direct and indirect compliance costs, and compensating the owners and operators of entities in eligible domestic industrial sectors for GHG emission control costs, but not for costs resulting from other market dynamics; 3) ensuring that compensation is sufficient to prevent carbon leakage while still rewarding innovation and facility-level energy efficiency improvements; and 4) eliminating or reducing assistance when it is no longer necessary. Additionally, the provisions in this portion of the Act are intended to spur foreign countries—particularly fast-growing developing countries—to reduce their GHG emissions through mechanisms that are consistent with international agreement and obligations.

Sec. 762. Definitions

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).

SUBPART 1—EMISSION ALLOWANCE REBATE PROGRAM

Sec. 763. Eligible Industrial Sectors

This section requires that EPA shall publish, not later than June 30, 2011, a list of industrial sectors eligible to receive emission allowance rebates. 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 CO2e (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.

Sec. 764. Distribution of Emission Allowance Rebates

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. Unless modified by Presidential determination under section 767, 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.

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

The electricity emissions intensity factor (in tons of CO_2e/kWh) is determined by dividing: 1) the annual sum of the hourly product of the electricity purchased by an entity, multiplied by the cost the seller of the electricity passes to the entity per ton of CO_2e per kWh, by 2) the total kWh of electricity purchased by the entity from that seller in that year. The electricity efficiency factor is the average amount of electricity (in kWh) used per unit of output for all entities in the relevant sector/subsector.

Direct and indirect carbon factors for eligible facilities are calculated using average output data for the two years preceding the year of distribution, and the most recent sectoral emissions intensity data (GHG per unit of production). Average direct GHG emissions per unit of output, for all covered entities in each eligible sector, are calculated every four years using the most recent two years of data. To help guarantee

improvements in efficiency, the average direct GHG emissions per unit of output for a sector will never be greater than it was in a previous calculation. Similarly, when recalculated, the 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

SUBPART 2—PROMOTING INTERNATIONAL REDUCTIONS IN INDUSTRIAL EMISSIONS

Sec. 765. International Negotiations

This section states that Congress finds the purposes described in section 761 can best be achieved through international agreements. As a statement of policy, it further states that the United States should work through the United Nations Framework Convention on Climate Change and other forums to achieve binding agreements, including sectoral agreements, committing all major greenhouse gas emitting nations to contribute equitably to the reduction of global greenhouse gas emissions.

This section states that the President must notify each foreign country that is subject to the International Reserve Allocation program (described below) of both the policy goals in this section, and that, beginning in January 2020**,** the international reserve requirement may apply to primary products produced in their country.

Sec. 766. United States Negotiating Objectives With Respect to Multilateral Environmental Negotiations

This section lists the negotiating objectives of the United States with respect to multilateral environmental negotiations described in this subpart. These include: 1) to reach an internationally binding agreement in which all major greenhouse gas-emitting countries contribute equitably to the reduction of global greenhouse gas emissions; 2) to include in such international agreement provisions that recognize and address the competitive imbalances that lead to carbon leakage, and not to prevent parties to such agreement from addressing the competitive imbalances that lead to carbon leakage and may be created by the agreement; and 3) to include in such international agreement agreed remedies for any party to that fails to meet its greenhouse gas reduction obligations in the agreement.

Sec. 767. Presidential Reports and Determinations

This section requires the President—not later than January 1, 2017, and every two years thereafter—to submit a report to Congress on the effectiveness of the allowance rebates granted to energy intensive, trade exposed industries in mitigating carbon leakage in eligible sectors. Unless a binding international agreement laying out the objectives in section 766 is in place, beginning in 2020 the act requires emission allowances (called international reserve allowances) for the import of products in energy-intensive, trade-exposed sectors. The reserve allowance program would be

established automatically in all eligible sectors unless the President determines that it is not in the national interest and Congress concurs. It would not apply if at least 85 percent of imports in a given sector are from countries that meet one or more of the following: they are party to an international treaty and have agreed to emissions reductions at least as stringent as those in the U.S.; they are parties to an international sectoral agreement to which the United States is a party; or they have energy or GHG intensities in that sector no higher than in the U.S.

Sec. 768. International Reserve Allowance Program

This section requires the Administrator to issue, by January 1, 2020, regulations establishing the international reserve allowance program, including regulations ensuring that the price for international reserve allowances is equivalent to the auction clearing price for emission allowances, and establishing a methodology for determining how many international reserve allowances importers must submit with covered goods. These regulations require the submission of appropriate amounts of such allowances in conjunction with the importation into the United States of a covered good produced by any eligible energy-intensive, trade-exposed sector or subsector, unless a finding is made by the President, and supported by Congress, to exclude a particular sector (see section 767). Countries are considered exempt from these requirements if they meet the criteria in section 767, are considered Least Developed Countries, or account for less than 0.5 percent of total global GHG emissions and less than 5 percent of U.S. imports in a particular sector. International reserve allowances may not be held by covered entities for compliance purposes pursuant to section 722.

Sec. 769. Iron and Steel Sector

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

SUBTITLE B—GREEN JOBS AND WORKER TRANSITION

PART 1—GREEN JOBS

Sec. 421. 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. 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. 422. Increased Funding for Energy Worker Training Program

This section increases funding from $125 million to $150 million for training programs under the Workforce Investment Act of 1998.

Sec. 423. 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. 424. Monitoring Program Effectiveness

This section requires the Secretary of Labor to monitor the potential growth of affected and displaced workers to ensure that the necessary funding is available to meet their needs.

Sec. 424A. 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. 425. 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 allowances, training and other related benefits.

Sec. 426. Program Benefits

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

Sec. 427. 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. Resources for this program shall not exceed the amount available each year under the Climate Change Worker Assistance Fund established under section 782(j).

SUBTITLE C—CONSUMER ASSISTANCE

Sec. 431. Energy Refund Program

The Social Security Act is amended by adding at the end the following:

TITLE XXII—ENERGY REFUND PROGRAM

Sec. 2201. Energy Refund Program

This section establishes an Energy Refund Program specifically for low-income families, those with incomes up to 150 percent of the poverty line or who qualify for existing supplemental nutritional assistance programs. This program should be based on the added energy costs associated with implementation of ACESA and should be implemented by states using existing mechanisms (e.g., state electronic benefit transfer systems) where such exist.

Sec. 432. Modification of Earned Income Credit Amount for Individuals with No Qualifying Children

This section amends subsection (b) of section 32 of the Internal Revenue Code to make adjustments in the earned income credit calculations of qualifying individuals without children to compensate for reductions in purchasing power due to ACESA.

Sec. 433. Protection of Social Security and Medicare Trust Funds

This section authorizes the Secretary of the Treasury to transfer from the general fund of the Treasury to the Social Security and Medicare trust funds any amounts required to compensate for changes that result from ACESA.

SUBTITLE D—EXPORTING CLEAN TECHNOLOGY

Sec. 441. Findings and Purposes

This section sets out the findings and the purposes of this subtitle, which are:

- To provide U.S. assistance to encourage widespread deployment, in developing countries, of technologies that reduce GHG emissions; and

- To provide such assistance in a manner that encourages such countries to adopt policies and measures that substantially reduce emissions of GHGs, promotes the successful negotiation of a global agreement to reduce GHG emissions under the United Nations Framework Convention on Climate Change, and promotes robust compliance with and enforcement of existing legal requirements for the protection of intellectual property rights.

Sec. 442. Definitions

This section defines terms for this subtitle.

Sec. 443. Governance

This section requires the President to establish an interagency group to administer the program established under this subtitle. The Secretary of State or other federal agency head that the President designates, in consultation with the interagency group, is required to oversee the distribution of allowances allocated under section 782(o) of the CAA.

Sec. 444. Determination of Eligible Countries

The section requires the interagency group to determine countries eligible for assistance under this subtitle. The section also establishes criteria that the interagency group is required to consider in determining a given country's eligibility.

Sec. 445. Qualifying Activities

This section details the type of clean technology activities that can qualify to receive assistance under this subtitle.

Sec. 446. Assistance

This section authorizes the Secretary of State, or other federal Agency head that the President designates, to provide assistance, through the distribution of allowances allocated for this purpose under section 782(o) of the CAA, for activities that occur in eligible countries. Allowances shall be distributed to multilateral funds or institutions, for bilateral assistance, or for a combination of the above mechanisms. The section outlines the criteria and conditions under which allowances may be distributed.

The section also designates the Secretary of State or other federal Agency head that the President designates, in consultation with the interagency group, to establish and implement a system to monitor and evaluate the performance of activities receiving assistance under this subtitle. Assistance shall be suspended or terminated in whole or in part for an activity if it is determined that the activity is not operating in compliance with the approved proposal.

This section requires the President—not later than March 1, 2012, and annually thereafter—to submit to appropriate Congressional Committees a report on the assistance provided under this subtitle during the prior fiscal year. The section specifies what such reports are required to include. Activities that are supported under this subtitle will not be eligible for offset credits.

SUBTITLE E—ADAPTING TO CLIMATE CHANGE

PART 1—DOMESTIC ADAPTATION

SUBPART A—NATIONAL CLIMATE CHANGE ADAPTATION PROGRAM

Sec. 451. Global Change Research and Data Management

The purpose of this subsection is to provide for a U.S. observation, research, and outreach program to understand, assess, predict and respond to the effects of global change. The President is to establish an Interagency Committee to ensure the coordination and cooperation of federal research activities. This section also establishes an Interagency U.S. Global Change Research Program led by OSTP. It requires the President to create a research and assessment plan for this program that addresses the information needs of all levels of government to develop policies to address climate change. In addition, a vulnerability assessment is to be conducted every 5 years, a policy assessment conducted every 4 years to identify and evaluate policy options to mitigate or adapt to climate change, and an electronic information exchange is to be created for the purpose of making research and information accessible.

Sec. 452. National Climate Services

This section requires the establishment of a National Climate Service (NCS) and defines NOAA activities to advance understanding of climate change, provide information to the public, and support development of adaptation and response plans.

This section requires the President to initiate a 3 year process conducted by the national Science and Technology Council, and led by the OSTP Director to evaluate options for and create an NCS. The NCS would integrate the functions of the USGCRP established in section 451 and a Climate Service Program.

The Climate Service Program is established within NOAA and is comprised of a Climate Service Office, a network of regional and local facilities, 6 new Regional Climate Centers, and others as necessary.

Sec. 453. State Programs to Build Resilience to Climate Change Impacts

This section requires that states develop Climate Adaptation Plans which should identify key vulnerabilities and plans to build greater resilience to projected impacts from climate

change. Allowances under section 782(l)(1) shall be allocated to states with approved adaptation plans, based on state population and a per capita income factor, for the implementation of projects, programs, or measures to build resilience to the impacts of climate change.

SUBPART B—PUBLIC HEALTH AND CLIMATE CHANGE

Sec. 461. Sense of Congress on Public Health and Climate Change

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. 462. 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. 463. National Strategic Action Plan

This section requires the Secretary of Health and Human Services to create a national strategy in 2014, with updates every four years, for mitigating the impacts of climate change on public health in the United States.

Sec. 464. 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. 465. 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. 466. Definitions

This section defines key terms specific to this subpart.

Sec. 467. Climate Change Health Protection and Promotion Fund

This section authorizes the creation of the Climate Change Health Protection and Promotion Fund in the Treasury for use by the Secretary in carrying out the provisions required in this section. 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. Title IV, section 782(l)(2) requires that 0.1% of total available allowances from 2012-2050 be deposited into this fund.

SUBPART C—NATURAL RESOURCE ADAPTATION

Sec. 471. 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. 472. 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 and ocean acidification.

Sec. 473. Definitions

This section defines terms used in the subpart.

Sec. 474. Council on Environmental Quality

This section requires the Chair of the Council on Environmental Quality (CEQ) to advise the President on implementation and development of the Natural Resources Climate Change Adaptation Strategy required under section 476 (below), and federal natural resource agency adaptation plans required under section 478 (below); and to serve as the Chair of the Natural Resources Climate Change Adaptation Panel established under section 475 (below). In addition, the section requires the Chair of the CEQ to coordinate federal agency strategies, plans, and, and activities related to natural resources adaptation.

Sec. 475. 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; and
- Other federal agencies or departments as appropriate.

Sec. 476. Natural Resources Climate Change Adaptation Strategy

This section requires the President—not later than 2 years 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. 477. Natural Resources Climate Change 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 United States 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. This section also establishes a Science Advisory Board to advise the Secretaries on the state-of-the-science and impacts.

Sec. 478. 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 and ocean acidification 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. 479. State Natural Resources Adaptation Plans

In order to be eligible for funds from the Natural Resources Climate Change Adaptation Fund, as discussed in section 480 (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 476—to prepare a natural resources adaptation plan detailing the state's current and projected efforts to address the potential impacts of

climate change and ocean acidification 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, ESA recovery plans, etc.) and should be updated every 5 years.

Sec. 480. Natural Resources Climate Change Adaptation Fund

This section specifies that emission allowances, pursuant to section 782(m)(1), shall be made available for state adaptation activities in accordance with plans approved under section 479 (above) and distributed to states—84.4% to State wildlife agencies and 15.6% to State coastal agencies.

This section establishes a Natural Resources Climate Change Adaptation Fund in the Treasury to carry out this subpart (includes an authorization of appropriations). Total allowances for federal domestic adaptation efforts, pursuant to section 782(m)(2), shall be auctioned and deposited into this fund. Funds shall then be distributed to federal agencies as follows:

- 27.6% to DOI for agency adaptation activities;
- 8.1% to DOI for cooperative grant programs;
- 4.9% to DOI for financial assistance to Indian tribes for adaptation efforts;
- 19.5% to the existing Land and Water Conservation Fund;
- 8.1% to the Forest Service for national forest and grassland adaptation activities;
- 11.5% for adaptation activities on coastal, estuarine, and marine habitats;
- 12.2% to EPA for large-scale freshwater and aquatic ecosystems; and
- 8.1% to the Corps of Engineers for restoration activities.

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

Sec. 481. National Wildlife Habitat and Corridors Information Program

This section requires, within 6 months of enactment, that the Secretary of Interior establish a National Wildlife Habitat and Corridors Information Program to inform planning and development decisions by states and Indian tribes.

Sec. 482. Additional Provisions Regarding Indian Tribes

This section provides an exemption of Indian cultural items and resources from FOIA if disclosure would cause harm or significant invasion of privacy.

PART 2—INTERNATIONAL CLIMATE CHANGE ADAPTATION PROGRAM

Sec. 491. Findings and Purposes

This section makes a number of Congressional findings including that global climate change has a disproportionate impact on developing countries, and that climate change

is a potentially significant threat multiplier for instability around the world. The purposes of this part are to provide new and additional assistance from the United States to the most vulnerable developing countries in order to support adaptation programs and increase the resilience of communities to climate change impacts, and to do so in a manner that protects and promotes the national security, foreign policy, environmental, and economic interests of the United States.

Sec. 492. Definitions

This section defines terms used in this part.

Sec. 493. International Climate Change Adaptation Program

This section directs the Secretary of State, working with the Administrators of USAID and the EPA, and the Secretary of the Treasury, to establish an International Climate Change Adaptation Program ("the Program") to be supported by the allowances allocated under section 782(n).

Sec. 494. Distribution of Allowances

This section requires the Secretary of State—or such other federal agency head as the President may designate—after consultation with the Secretary of the Treasury, the USAID Administrator, and the EPA Administrator, to direct the distribution of allowances allocated to the Program. The allowances shall be distributed in the form of bilateral assistance, multilateral assistance, or some combination of the two. Bilateral assistance shall be provided pursuant to section 495. The section also describes eligibility requirements for multilateral funds or international institutions.

Sec. 495. Bilateral Assistance

This section directs the Administrator of USAID to distribute the funds for the purposes of providing support for adaptation activities in the most vulnerable developing countries, and sets out regulations governing the distribution of those funds.

TITLE V—AGRICULTURAL AND FORESTRY RELATED OFFSETS

SUBTITLE A—OFFSET CREDIT PROGRAM FROM DOMESTIC AGRICULTURAL AND FORESTRY SOURCES

Sec. 501. Definitions

This section outlines the definitions of terms used in this Title.

Sec. 502. Establishment of Offset Credit Program for Domestic Agricultural and Forestry Sources

Within one year, the Secretary of Agriculture ("Secretary") shall establish a program governing the generation of offset credits from domestic agricultural and forestry sources that are verifiable, additional, and permanent. The Secretary shall:

- Establish by rule methodologies by practice types for quantifying greenhouse gas benefits;
- Establish by rule methodologies for each practice type for establishing activity baselines and determining additionality;
- Establish by rule methodologies by practice types for accounting for and mitigating potential leakage;
- Establish rules to account for and address reversals;
- Establish rules to require third-party verification;
- Provide technical assistance to offset project developers using funds appropriated to the Conservation Operations account;
- Establish rules for approval of offset project plans;
- Establish rules for certification and implementation of offset project plans;
- Establish by rule requirements for reporting and record keeping; and
- Conduct audits.

Sec. 503. List of Eligible Domestic Agricultural and Forestry Offset Practice Types

Not later than 1 year after enactment, the Secretary shall publish a list of domestic agricultural and forestry practice types that are eligible to generate offset credits under this Title. At a minimum, the list prepared under this section shall include those practices that avoid or reduce greenhouse gas emissions or sequester greenhouse gases, such as:

- Agricultural, grassland, and rangeland sequestration and management practices, including:
    - Altered tillage practices;
    - Winter cover cropping, continuous cropping, and other means to increase biomass returned to soil in lieu of planting followed by fallowing;
    - Reduction of nitrogen fertilizer use or increase in nitrogen use efficiency;
    - Reduction in the frequency and duration of flooding of rice paddies;
    - Reduction in carbon emissions from organic soils;

    - Reduction in greenhouse gas emissions from manure and effluent; and
    - Reduction in greenhouse gas emissions due to changes in animal management practices, including dietary modifications.
- Changes in carbon stocks attributed to land use change and forestry activities, including:
    - Afforestation or reforestation of acreage that is not forested;
    - Forest management resulting in an increase in forest carbon stores including but not limited to harvested wood products;
    - 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.
- Manure management and disposal, including:
    - Waste aeration;
    - Biogas capture and combustion; and
    - Application to fields as a substitute for commercial fertilizer.

Not later than 2 years after enactment and every 2 years thereafter, the Secretary shall add to and revise the types of offset practices. The Secretary shall consider petitions to add types of offset practices to the list and make a decision to grant or deny a petition within 1 year after its receipt.

Sec. 504. Requirements for Domestic Agricultural and Forestry Practices

This section calls for the promulgation of standardized methodologies for establishing activity baselines, additionality, quantification, monitoring and verification, and addressing leakage. The Secretary shall give due consideration to existing methodologies. Additionality, at a minimum, is to be defined as a project not required by existing government regulations, not exceeding the applicable activity baseline, and not commenced prior to January 1, 2009 (except in the case of projects commenced after January 1, 2001 and registered with a program recognized under section 740; or readily reversible activities that should have an earlier start date, but after January 1, 2001, to remove the incentive to cease and reinitiate the activity).

The Secretary shall establish requirements to account for and address reversals including reporting and provisions to require allowances or offset credits to be held in amounts to fully compensate for reversals. Specific mechanisms to deal with reversals could include an offsets reserve, insurance that provides for purchase and provision to the Secretary for the amount of credits equivalent to the amount reversed, and/or other mechanisms.

If a reversal is intentional, the project developer must replace 100% of the credits lost. If it is unintentional, the developer must replace ½ of the credits lost.

This section also defines the use of Term Offset Credits as a way to address reversals on a temporary basis for projects that have a crediting period of no more than 5 years.

The Secretary shall specify a crediting period for each offset practice type. The terms shall be:

- 5 years for agricultural sequestration practices;
- 20 years for forestry sequestration practices; and
- 10 years for other practice types.

Offset practices within an offset project shall be eligible to generate offset credits only during the crediting period. A project developer may re-enroll for a subsequent crediting period within 18 months of the end of the current crediting period, subject to the methodologies and practice type eligibility list in effect at the time of reenrollment. The Secretary may limit the number of subsequent crediting periods.

The Secretary shall use conservative assumptions and methods in establishing the requirements of this Title.

Sec. 505. Project Plan Submission and Approval

This section describes the requirements for an offset project plan, and that the Secretary shall have 90 days after submission to either approve or deny a plan, and must also establish procedures for appeal and review.

Sec. 506. Verification of Offset Practices

This section directs the Secretary to establish requirements for offset practice verification, including the submission by project developers of a third-party verification report, and requirements for verifier accreditation.

Sec. 507. Certification of Offset Credits

The Secretary shall make a determination of the quantity of emissions that have been reduced/avoided/sequestered by the offset practice and notify the project developer within 90 days after receiving a verification report. The Secretary shall establish procedures for appeal of this process. One offset credit with a unique serial number shall be issued for each ton reduced/avoided/sequestered within 14 days of the determination.

Sec. 508. Ownership and Transfer of Offset Credits

Initial ownership of an offset credit shall lie with the offset project developer unless otherwise specified in a legally binding contract or agreement, and an offset credit may be sold, traded, or transferred, unless it has expired or been retired.

Sec. 509. Program Review and Revisions

At least once every 5 years, the Secretary shall review, update, and revise the list of eligible practice types, methodologies, reversal requirements and mechanisms, measures to improve accountability, and any other requirements necessary.

Sec. 510. Environmental Considerations

If the Secretary lists forestry practices as eligible, the Secretary, in consultation with appropriate federal agencies, shall promulgate regulations for the selection and use of species in forestry and other land management practices that: are in accordance with widely accepted, environmentally sustainable forestry practices, ensure native species are given primary consideration, encourage biological diversity, prohibit the use of designated noxious weeds and species listed as invasive in the applicable region or State.

Sec. 511. Audits

The Secretary shall conduct annual random audits of offset projects, offset credits, and the practices of third-party verifiers.

SUBTITLE B—USDA GREENHOUSE GAS EMISSION REDUCTION AND SEQUESTRATION ADVISORY COMMITTEE

Sec. 531. Establishment of USDA Greenhouse Gas Emission Reduction and Sequestration Advisory Committee

This section amends section 1245 of the Food Security Act of 1985, as added by section 2709 of the Food, Conservation, and Energy Act of 2008, to set up the Advisory Committee.

The Secretary of USDA shall establish the Committee within 30 days to provide scientific and technical advice on establishing, implementing, and ensuring the overall environmental integrity of the offset program in this Title.

The Committee shall have 9 members appointed by the Secretary and shall be qualified by education, training, and experience to evaluate scientific and technical information for domestic agricultural and forestry offset practices. Terms shall be 3 years in length, with reappointment for only one additional term. The Committee will meet at least on a

quarterly basis each year.

The Committee shall provide options and recommendations within 6 months to the Secretary regarding the establishment of methodologies, new practice types, and advice and comments on other ways to improve or safeguard the environmental integrity of the office practice types listed in section 503.

No later than January 1, 2017, and at 5 year intervals thereafter, the Committee shall:

- Submit to the Secretary and the public an analysis of relevant scientific and technical information regarding agricultural and forestry offset practices;
- Review approved and potential practice types, methodologies, scientific studies, offset project monitoring, offset project verification reports, reporting of reversals, audits, and other relevant information needed to evaluate the program;
- Evaluate the net emission effects of implemented offset projects; and
- Recommend changes to offset methodologies, procedures, practice types, or the overall program to ensure that:
    - The offset practices result in reduced/avoided/sequestered GHG emissions;
    - The offset credits issued do not compromise the integrity of the annual reductions established under this Act; and
    - The offset program avoids or minimizes adverse affects to human health and the environment.

To avoid duplication, the Committee shall coordinate its activities with those of any other federal advisory committees working in related areas, and shall to the maximum extent possible use research data and services of USDA.

The Committee shall periodically consult with EPA's Offsets Integrity Advisory Board.

SUBTITLE C—MISCELLANEOUS

Sec. 551. International Indirect Land Use Changes

This section amends the Renewable Fuel Standard (section 211(o) of the CAA). It changes the existing requirements for calculating lifecycle emissions, by excluding emissions from indirect land use changes (ILUC) that occur outside of the country of origin for the feedstock used to produce the fuel.

The section directs the National Academies of Science to begin to review and report on specified issues related to indirect GHG emissions for transportation fuels, not later than 6 months after enactment of the bill. The NAS study shall evaluate and report on whether there are economic and environmental models and methodologies that can project with reliability, predictability, and confidence ILUC from the production of renewable fuels, and the impacts of these changes on GHG emissions. NAS shall also evaluate and report on the indirect effects related to non-renewable transportation fuels,

and the impact of these on GHG emissions. The section describes the validation procedures and methodologies for the report, which shall be completed within 3 years of the date of enactment.

Not later than 4 years after the date of enactment, the Administrator and the Secretary shall publish a proposed determination on whether, for purposes of determining compliance with the lifecycle GHG requirements in the RFS, models and methodologies exist to project ILUC from the production of renewable fuels and that occur outside the country in which the feedstocks are grown, and the impact of these changes on GHG emissions. The determination shall take into account the findings and recommendations of the NAS report. A final determination shall be made not later than 5 years after enactment.

If the determination is positive, the Administrator and Secretary shall jointly establish methodologies to calculate GHG emissions from ILUC for purposes of the lifecycle GHG emission reductions under the RFS. The Administrator shall issue a regulation by the same date that shall include emissions from ILUC for purposes of calculating a renewable fuel's lifecycle GHG emissions to determine compliance with requirements of the RFS. The effective date of the regulation shall be 6 years after the date of enactment of this paragraph.

Sec. 552. Biomass-Based Diesel.

This section amends the Renewable Fuel Standard (section 211(o)(2)(A) of the CAA) and instructs the Administrator to exempt biomass-based diesel that comes from facilities that commenced construction before the date of enactment of the Energy Independence and Security Act of 2007, from the lifecycle greenhouse gas requirements required under the RFS program.

Sec. 553. Modification of Definition of Renewable Biomass

Not later than 1 year after the date of enactment of this Act, the Administrator of the Environmental Protection Agency, the Secretary of Agriculture, and the Federal Energy Regulatory Commission shall jointly arrange for the National Academy of Sciences to evaluate how sources of renewable biomass contribute to the goals of increasing America's energy independence, protecting the environment, and reducing global warming pollution.

After reviewing the report, EPA and FERC may modify the non-federal lands portion of the definition of “renewable biomass.”

The Secretary of the Interior, the Secretary of Agriculture, and the Administrator of the Environmental Protection Agency shall conduct a joint scientific review, within 1 year after the date of enactment of this Act, to evaluate how sources of biomass from federal lands could contribute to the goals of increasing America's energy independence,

protecting the environment, and reducing global warming pollution. Based on this review, the agencies may modify the definition of “renewable biomass.”

Appendix A: Allocation of Emission Allowances

Year	Electricity Consumers Sec.782(a)(1)	Natural gas Consumers Sec.782(b)	Home Heating Oil and Propane Consumers Sec.782(c)	Low Income Consumers Sec.782(d)	Trade-Vulnerable Industries Sec.782(e)	Deployment of CCS Sec.782(f)	Energy Efficiency and Renewables Sec.782(g)(1)	Building Codes and Retrofits Sec.782(g)(2) and (3) Sec.782(h)(1)	Energy Innovation Hubs Sec.782(h)(1)	Advanced Energy Research ARPA-E Sec.782(h)(2)
2012	43.75		1.875	15	2		9.5	0.55	0.45	1.05
2013	43.75		1.875	15	2		9.5	0.55	0.45	1.05
2014	38.89		1.67	15	15	1.75	9.5	0.55	0.45	1.05
2015	38.89		1.67	15	15	1.75	9.5	0.55	0.45	1.05
2016	35	9	1.5	15	13.4	1.75	6.5	0.55	0.45	1.05
2017	35	9	1.5	15	13.4	1.75	6.5	0.55	0.45	1.05
2018	35	9	1.5	15	13.4	4.75	5.5	0.53	0.45	1.05
2019	35	9	1.5	15	13.4	4.75	5.5	0.53	0.45	1.05
2020	35	9	1.5	15	13.4	5	5.5	0.53	0.45	1.05
2021	35	9	1.5	15	13.4	5	5.5	0.53	0.45	1.05
2022	35	9	1.5	15	13.4	5	1.0 [a]	0.53	0.45	1.05
2023	35	9	1.5	15	13.4	5	1.0 [a]	0.53	0.45	1.05
2024	35	9	1.5	15	13.4	5	1.0 [a]	0.53	0.45	1.05
2025	35	9	1.5	15	13.4	5	1.0 [a]	0.53	0.45	1.05
2026	28	7.2	1.2	15	12.1	5	4.5	0.53	0.45	1.05
2027	21	5.4	0.9	15	10.7	5	4.5	0.53	0.45	1.05
2028	14	3.6	0.6	15	9.4	5	4.5	0.53	0.45	1.05
2029	7	1.8	0.3	15	8.1	5	4.5	0.53	0.45	1.05
2030				15	6.7	5	4.5	0.53	0.45	1.05
2031				15	5.4	5	4.5	0.53	0.45	1.05
2032				15	4	5	4.5	0.53	0.45	1.05
2033				15	2.7	5	4.5	0.53	0.45	1.05
2034				15	1.3	5	4.5	0.53	0.45	1.05
2035				15		5	4.5	0.53	0.45	1.05
2036				15		5	4.5	0.53	0.45	1.05
2037				15		5	4.5	0.53	0.45	1.05
2038				15		5	4.5	0.53	0.45	1.05
2039				15		5	4.5	0.53	0.45	1.05
2040				15		5	4.5	0.53	0.45	1.05
2041				15		5	4.5	0.53	0.45	1.05
2042				15		5	4.5	0.53	0.45	1.05
2043				15		5	4.5	0.53	0.45	1.05
2044				15		5	4.5	0.53	0.45	1.05
2045				15		5	4.5	0.53	0.45	1.05
2046				15		5	4.5	0.53	0.45	1.05
2047				15		5	4.5	0.53	0.45	1.05
2048				15		5	4.5	0.53	0.45	1.05
2049				15		5	4.5	0.53	0.45	1.05
2050				15		5	4.5	0.53	0.45	1.05

[Continued on next page]

Year	Clean Vehicle Technology Sec.782(i)	Domestic Fuel Production Sec.782(j)(1)	Small Domestic Refiners Sec.782(j)(2)	Invest in Workers Sec.782(k)(1) and (2)	Domestic Adaptation Sec.782(l)(1)	Public Health Adaptation Sec.782(l)(2)	State Natural Resources Adaptation Sec.782(m)(1)	Natural Resources Adaptation Sec.782(m)(2)	International adaptation Sec.782(n)	International Clean Technology Sec.782(o)	Supplemental Agriculture and Renewable Energy Sec.782(u)
2012	3			1.25	0.9	0.1	0.385	0.615	1	1	0.28
2013	3			1.25	0.9	0.1	0.385	0.615	1	1	0.28
2014	3	2	0.25	0.5	0.9	0.1	0.385	0.615	1	1	0.28
2015	3	2	0.25	0.5	0.9	0.1	0.385	0.615	1	1	0.28
2016	3	2	0.25	0.5	0.9	0.1	0.385	0.615	1	1	0.28
2017	3	2	0.25	0.5	0.9	0.1	0.385	0.615	1	1	
2018	1	2	0.25	0.5	0.9	0.1	0.385	0.615	1	1	
2019	1	2	0.25	0.5	0.9	0.1	0.385	0.615	1	1	
2020	1	2	0.25	0.5	0.9	0.1	0.385	0.615	1	1	
2021	1	2	0.25	0.5	0.9	0.1	0.385	0.615	1	1	
2022	1	2	0.25	1	1.9	0.1	0.77	1.23	2	2	
2023	1	2	0.25	1	1.9	0.1	0.77	1.23	2	2	
2024	1	2	0.25	1	1.9	0.1	0.77	1.23	2	2	
2025	1	2	0.25	1	1.9	0.1	0.77	1.23	2	2	
2026		2	0.25	1	1.9	0.1	0.77	1.23	2	2	
2027				1	3.9	0.1	1.54	2.46	4	4	
2028				1	3.9	0.1	1.54	2.46	4	4	
2029				1	3.9	0.1	1.54	2.46	4	4	
2030				1	3.9	0.1	1.54	2.46	4	4	
2031				1	3.9	0.1	1.54	2.46	4	4	
2032				1	3.9	0.1	1.54	2.46	4	4	
2033				1	3.9	0.1	1.54	2.46	4	4	
2034				1	3.9	0.1	1.54	2.46	4	4	
2035				1	3.9	0.1	1.54	2.46	4	4	
2036				1	3.9	0.1	1.54	2.46	4	4	
2037				1	3.9	0.1	1.54	2.46	4	4	
2038				1	3.9	0.1	1.54	2.46	4	4	
2039				1	3.9	0.1	1.54	2.46	4	4	
2040				1	3.9	0.1	1.54	2.46	4	4	
2041				1	3.9	0.1	1.54	2.46	4	4	
2042				1	3.9	0.1	1.54	2.46	4	4	
2043				1	3.9	0.1	1.54	2.46	4	4	
2044				1	3.9	0.1	1.54	2.46	4	4	
2045				1	3.9	0.1	1.54	2.46	4	4	
2046				1	3.9	0.1	1.54	2.46	4	4	
2047				1	3.9	0.1	1.54	2.46	4	4	
2048				1	3.9	0.1	1.54	2.46	4	4	
2049				1	3.9	0.1	1.54	2.46	4	4	
2050				1	3.9	0.1	1.54	2.46	4	4	

[a] At the same time 2022-2025 allowances are distributed, 3.55 percent for the vintage year 4 years later will also be distributed.

Note: In addition to the amounts shown in the table above, section 782(a)(2) provides approximately 0.5% of emission allowances in early years for small electricity LDCs. Section 782(a)(3) provides for 0.35% of allowances in 2012 to be given to states for cogeneration at industrial parks. Section 782(t) provides for 1% of allowances in 2012 to be used to compensate early actors. Allowances in vintage years 2012-2025 not designated for distribution or auction shall be auctioned with the proceeds deposited in the treasury. Allowances in vintage years 2026-2050 not designated for distribution or auction shall be auctioned with the proceeds deposited in the Climate Change Consumer Refund Account