Pew Center Summary of the Waxman-Markey Discussion Draft

The American Clean Energy and Security Act of 2009

This summary is an overview of the discussion draft released by Chairmen Markey and Waxman on March 31, 2009. The draft consists of four titles:

TITLE I—CLEAN ENERGY

SUBTITLE A—RENEWABLE ELECTRICITY STANDARD

Sec. 101. Federal Renewable Electricity Standard

This section amends Title VI of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2601 and following) by adding as sec. 610 the language in this section.

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

- Wind energy
- Solar energy
- Geothermal energy
- Biomass or landfill gas
- Qualified hydropower
- Marine and hydrokinetic renewable energy

Retail electric suppliers—those electric utilities that sold at least 1 million megawatt hours of electric energy to electric consumers for purposes other than resale during the preceding calendar year—are required to generate, or purchase renewable energy credits for, a prescribed annual percentage of renewable energy. From 2012 through 2039, the required annual percentage is:

Calendar Year	Required Annual Percentage
2012	6.0
2013	6.0
2014	8.5
2015	8.5
2016	11.0
2017	11.0
2018	14.0
2019	14.0
2020	17.5
2021	17.5
2022	21.0
2023	21.0
2024	23.0
2025 through 2039	25.0

The governor of a given state can petition the Secretary to reduce, by up to one fifth, the required annual percentage as it applies to his or her state. The Secretary must comply with such a request if the Secretary makes a determination that the generators within the state in question are in compliance with the Federal Energy Efficiency Resource Standard that is established by Section 611 of the bill.

The section establishes in detail the structure and function of the Federal Renewable Electricity Standard program.

SUBTITLE B—CARBON CAPTURE AND SEQUESTRATION

Sec. 111. National Strategy

This section requires the Administrator—not later than 120 days after enactment—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 and regulatory 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 Clean Air Act (as added by this title) 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, including enhanced hydrocarbon recovery combined with geologic sequestration.

The section sets out further requirements for such regulations and amends the Safe Water Drinking Act with regulations for CO_2 geologic sequestration wells.

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). 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: 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. 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

This section requires the Administrator—not later than 2 years after enactment—to promulgate regulations to establish a program to distribute authorized funds 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 250 megawatts (MW) or more, and derive at least 50% of annual fuel input from coal, pet-coke, or any combination of these fuels.

Eligible industrial sources would, without CCS technology, emit more than 250,000 tons of CO_2e annually.

The Administrator is directed to split funding for eligible projects into tranches, each devoted to supporting a quantity of electric generating capacity to be specified by the Administrator, or such alternative metric as the Administrator may designate for industrial projects. Funding is provided on a first-come first-served basis in the form of payment per ton of CO_2 captured and stored. Higher payment rates are created for higher rates of capture, and each successive tranche shall offer lower payments on a per-ton basis.

The Administrator is further directed to establish the payment schedule so as to cover the incremental capital and operating costs of a project that are attributable to the implementation of CCS.

Eligible projects may receive funds for the first [not yet specified] years of operation. Industrial sources are limited to receiving no more than 15% of funds, and an industrial

source will not be eligible for funds if it produces transportation fuel that contains more than 10kg of fossil-based carbon per million BTU.

Funding under this section is limited to supporting the deployment of no greater than [not yet specified] gigawatts (GW) of electric generating capacity with CCS technology, and that GW 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.

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

This section amends title VIII (added by this act) of the CAA by adding the language in this section as section 812.

This section sets a CO_2 emissions standard for coal-fired power plants. The standard applies to plants finally 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:

- 1,100 lbs CO_2/ MWhr for plants finally permitted after Jan 1, 2015
- 800 lbs CO_2 / MWhr for plants finally permitted after Jan 1, 2020
- 1,100 lbs CO_2 / MWhr for plants finally permitted between 2009 and 2015

The section further directs that plants must comply with the performance standard by the earliest of the following:

- 4 years after the date that EPA determines that either there are in commercial operation in the US a total of 2.5 GW of CCS capacity on electric generating units that are capturing and sequestering at least a total of 5 million tons of CO_2 per year; or
- 4 years after the EPA determines that there are in commercial operation worldwide at least a total of 5 GW of electric generation capturing at least a total of 10 million tons of CO_2 per year, of which at least 2 million tons are captured and stored in the US; or
- Jan 1, 2025.

SUBTITLE C—CLEAN TRANSPORTATION

Sec. 121. Low Carbon Fuel Standard

This section amends title VIII (added by this act) of the CAA by adding the language in this section as section 822.

This section directs the Administrator—not later than 3 years after enactment—to promulgate regulations developing a Low Carbon Fuel Standard (LCFS) under section 211(c) of the CAA.

Transportation fuels used in on-road vehicles, non-road engines and aircraft are covered by the standard. The standard sets a baseline of the average life-cycle GHG emissions per unit of energy—the unit of energy is to be determined by the Administrator—in 2005. Refiners, blenders, importers, and such other transportation fuel providers as determined by the Administrator, are required to reduce life-cycle GHG emissions per unit of energy of covered fuels by 5% below baseline levels by 2023, and by 10% below baseline levels by 2030.

The Administrator also is directed to require that, from 2014 to 2022, transportation fuels other than renewable fuels, may not on average exceed the baseline carbon intensity for transportation fuels.

The Administrator is required to permit the generation and trading of credits for compliance with the LCFS.

Sec. 122. Electric Vehicle Infrastructure

This section amends section 111(d) of the Public Utilities Regulatory Policies Act of 1978 (16 U.S.C. 2621 (d)) (PURPA) by requiring electric utilities to develop plans to support the use of plug-in hybrid electric vehicles (PHEVs) and electric vehicles by providing the infrastructure to support such vehicles.

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

Sec. 123. Large-Scale Vehicle Electrification Program

This section directs the Secretary of Energy to establish a program to assist with the deployment of PHEVs 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 PHEVs; Smart Grid equipment and infrastructure to facilitate the charging and integration of plug-in electric drive vehicles; and other projects to support the large scale deployment of PHEVs.

Sec. 124. Plug-in Electric Drive Vehicle Manufacturing

This section directs the Secretary of Energy to establish a program to provide financial assistance to PHEV and electric vehicle manufacturers for:

- The reconstruction or retooling of facilities to manufacturer PHEVs in the United States; and
- If appropriate, the purchase of domestically produced vehicle batteries .

SUBTITLE D—STATE ENERGY AND ENVIRONMENT DEVELOPMENT FUNDS

Sec. 131. Establishment of SEED Funds

This section requires the Administrator to establish a program under which a state may create a State Energy Efficiency Development (SEED) Fund. The purpose of the SEED Funds is to offer low- or zero-interest loans, or interest rate subsidies for commercial loans, for increased energy efficiency in new or existing buildings, vehicles, systems, or industrial processes, and to carry out other activities as provided in Waxman-Markey.

States are permitted to deposit into their SEED Funds amounts received from Federal appropriations for the above purposes, including funds from:

- The Weatherization Assistance Program
- The Low-Income Home Energy Assistance Program
- Grants from the Energy Policy and Conservation Act of 2005
- State portions of energy efficiency and conservation block grants as detailed in the EISA of 2007; and
- Monies from the American Recovery and Reinvestment Act of 2009.

States are required to use SEED Fund expenditures to support clean energy, energy efficiency, or climate change purposes through loans, grants, and other forms of support. Not more than 5% of SEED funds may be used for administrative costs.

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

SUBTITLE E—SMART GRID ADVANCEMENT

Sec. 141. Definitions

This section defines the terms used in this subtitle.

Sec. 142. Incorporation of Smart Grid Capability in Energy Star Program

This section requires the Secretary of Energy and the Administrator to—within one year of enactment—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 savings from such integration.

The section further directs that for cost-effective Smart Grid products, the Energy Star label shall highlight the inclusion of Smart Grid technologies where such integration exists.

Sec. 143. 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 is required to prepare a peak load reduction plan that shall include energy efficiency, demand response programs, Smart Grid technology, energy storage, and distributed generation. The Federal Energy Regulatory Commission is permitted, "for good cause," to grant relief to LSEs from these requirements.

Sec. 144. 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. 145. 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

This section amends Part II of the Federal Power Act (16 U.S.C. 824 et seq.) by adding after section 216 the text of this section as a new section.

The section establishes 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. 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.

SUBTITLE G—FEDERAL PURCHASES OF ELECTRICITY GENERATED BY RENEWABLE ENERGY

Sec. 161. Federal Purchases of Electricity Generated by Renewable Energy

This section amends section 203 of the Energy Policy Act of 2005 by adding the text of this section. The Secretary of Energy is directed—not later than 90 days after enactment—to publish, through the Federal Emergency Management Program, a standardized renewable energy purchase agreement that Federal agencies may use to acquire renewable energy. The section does not allow the duration of such contracts to be longer than 30 years.

SUBTITLE H—TECHNICAL CORRECTIONS TO ENERGY LAWS

Sec. 171. 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.

Sec. 172. Technical Corrections to Energy Policy Act of 2005

This section contains various provisions which make technical corrections to the Energy Policy Act of 2005.

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).

The Secretary of Energy will establish a process for creating model building energy codes, and for updating them every three years. Targets are set for overall energy savings compared to the 2006 IECC (residential) and ASHRAE Standard 90.1-2004 (commercial). The targets are 30% after enactment, 50% after 2016, and set by the DOE in subsequent years. Future codes will also be coordinated with IECC and ASHRAE. The Secretary may also set supplementary targets to achieve the maximum level of energy savings that is technologically feasible and life-cycle cost-effective.

The Secretary can set the model energy codes if IECC and ASHRAE codes are not updated every 3 years, or if they fail to comply with national targets. The revised codes are required to achieve the maximum level of energy savings that is technologically feasible and life-cycle cost-effective."

States are required to certify to the Secretary that they have updated their own codes and standards to meet or exceed any revised federal codes and standards, and funding is available to complying states (or complying local governments in non-complying states). A state is in compliance if at least 90% of buildings (or another reasonably achievable level that is determined by the Secretary) meet energy efficiency codes or standards, or achieve equivalent energy savings, or if excess energy use for non-compliance buildings is less than 5% of comparable new or renovated buildings.

The Secretary is directed to develop voluntary advanced model codes and standards for savings of at least 30% compared with national model codes.

In addition, future federal roofing standards are required to include specifications for solar reflectance.

Sec. 202. Building Retrofit Program

This section requires the Secretary of Energy to develop a Retrofit for Energy and Environmental Performance (REEP) program to facilitate building retrofit programs for energy efficiency and efficient water use. Funding will be made available through REEP to the State Energy Programs for state and local efforts, including audits, incentives, technical assistance, and training. States are permitted to choose funding mechanisms, with options including credit support, such as interest rate subsidies or credit enhancement, providing initial capital, and allocating funds for utility programs.

After the second year of the REEP program, half of state funding will be tied to energy efficiency performance.

Sec. 203. Energy Efficient Manufactured Homes

This section permits the Secretary of Energy to provide grants to states, in order to provide manufactured home owners with rebates to replace manufactured homes constructed before 1976 with new, Energy Star-qualified homes. The grants are allocated to states based on the proportion of homes that qualify for rebates.

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 on the above building types.

Once the model labeling program was developed, states must require that the building information be 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. Funding is made available to states that create building labeling regulations or statutes.

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 2011 and will increase every two years thereafter until 2020. The section also mandates standards for Portable Light Fixtures (including fixtures for art work and certain LEDs).

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, portable electric spas, and certain commercial furnaces. It also sets energy consumption standards for these appliances.

Sec. 213. Appliance Efficiency Determinations and Procedures

This section amends section 321(6) of the Energy Policy and Conservation Act to clarify certain appliance efficiency standards, which 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 the 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.

Payments are given out for the recovery and recycling of low-efficiency appliances. 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.

In addition, manufacturers that develop and produce superefficient best-in-class products will also be rewarded with bonus payments.

Sec. 215. Purpose of Energy Star

This section amends section 324A of the Energy Policy and Conservation Act to state the purpose of the Energy Star program.

SUBTITLE C—TRANSPORTATION EFFICIENCY

Sec. 221. Emissions Standards

This section directs the President to use existing statutory authorities to set vehicle standards that:

- Are achievable
- Harmonize CAFE standards set by National Highway Traffic Safety Administration, GHG standards set by EPA—under the CAA—and by California, to the extent possible
- Achieve at least the emissions reductions as the California standards would if adopted by California and the 17 other states that are poised to adopt them
- Do not preempt California's authority to adopt and enforce its own standards

The section also amends Title VIII of the Clean Air Act (as added by this act), 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 Secretary to develop GHG standards under the CAA for the following modes of transportation:

- New heavy-duty vehicles and engines, excluding vehicles covered by the Tier II standards
- New marine vessels and locomotives, from new engines used in marine vessels and locomotives, and from other classes and categories of non-road vehicles and engines
- New aircraft and new engines

The Administrator is permitted 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 Clean Air Act (as added by this act), by inserting after part C the following new part:

PART D—PLANNING REQUIREMENTS

Sec. 841. Greenhouse Gas Emissions Reductions Through Transportation Efficiency

This section requires each state to submit to the EPA goals for reducing transportation-related GHG emissions for 10- and 20-year periods. States are also required to ensure

that each metropolitan planning organization (MPO) submits a plan to achieve those goals.

The draft lists a number of transportation and land-use strategies that states and MPOs may use to reduce GHG emissions.

The Administrator may, in consultation with the Secretary of Transportation, award competitive grants to MPOs to develop or implement these plans. These provisions may not infringe upon the existing authorities of State or local governments on land use, or provide or transfer authority over land use to any other entity.

Sec. 223. SmartWay Transportation Efficiency Program

The section amends Part B of Title VIII of the Clean Air Act (as added by this act), 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 Treasure is required to collect data on energy and emissions for the US 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.

SUBTITLE D—UTILITIES ENERGY EFFICIENCY

Sec. 231. Energy Efficiency Resource Standard for Retail Electricity and Natural Gas Distributors

This section amends Title VI of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2601 and following) by adding the following section after section 610.

This section establishes a new energy efficiency resource standard requiring each local electricity and natural gas distribution company to demonstrate that its customers have achieved a required level of cumulative electricity or natural gas savings relative to

business-as-usual projections. The efficiency standard starts with a 1% electricity savings and 0.75% natural gas savings in 2012 and gradually increases to a 15% cumulative electricity savings and a 10% cumulative natural gas savings by 2020.

SUBTITLE E—INDUSTRIAL ENERGY EFFICIENCY PROGRAMS

Sec. 241. Industrial Plant Energy Efficiency Standards

The Secretary of Energy is required to develop certification standards for efficiency, as part of an existing DoE program of developing American National Standards Institute (ANSI) accredited standards for industrial benchmarking, and must seek accreditation of these standards by ANSI.

Sec. 242 – Electric and Thermal Energy Efficiency Award Programs

This section requires the Secretary of Energy to establish a program to financially reward electric energy 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 electric energy. 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 the minimum amount needed for a cost-effective incentive for innovation. Facilities are ineligible if they receive grants under Energy Policy and Conservation Act.

The Secretary is directed to assist state regulatory commissions in providing appropriate regulatory status for the thermal energy byproduct business of regulated utilities to encourage sales of recovered thermal energy. The Secretary is directed to encourage self-regulated utilities to sell recovered thermal energy.

Owners and operators of these facilities are eligible for SEED fund loans to cover start-up costs, and the Secretary of Energy will have access to appropriate funds needed for this program.

SUBTITLE F—IMPROVEMENTS IN ENERGY SAVINGS PERFORMANCE CONTRACTING

Sec. 251. Energy Savings Performance Contracts

This section contains various provisions which 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 G—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.

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 Clean Air Act (42 U.S.C. and following) is amended by adding at the end the following new title:

TITLE VII—GLOBAL WARMING POLLUTION REDUCTION PROGRAM
(This title is an amendment to the Clean Air Act)

[The following section is contained in Part F—Carbon Market Assurance]

Sec. 700. Definitions

This section sets out the definitions for terms contained in the act. “Covered entities” are:

(A) Any electricity source.
(B) Any stationary source that produces, and any entity that 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 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) Nitrogen trifluoride (NF_3);
    (vi) Any other fluorinated gas that a greenhouse gas, as designated by the Administrator under section 711(b) or (c); or
    (vii) Any combination of greenhouse gases described in clauses (i) through (vi).
(D) Any geologic sequestration site, whether certified under section 813 or not.
(E) 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

(F) Any stationary source in the chemical or petrochemical sector that, in 2008 or any subsequent year—
(i) Manufactures acrylonitrile, carbon black, ethylene, ethylene dichloride, ethylene oxide, or methanol; or
(ii) Manufactures a chemical or petrochemical product not manufactured as of the date of enactment of this title, if the Administrator determines that manufacturing that product results in annual process emissions of 25,000 or more tons of CO_2e.

(G) Any stationary source that—
(i) Is in one of the following industrial sectors: ethanol production; ferroalloy production; food processing; glass production; hydrogen production; iron and steel production; lead production; kraft 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.

(H) 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 (E), (F), or (G); and
(ii) Has emitted 25,000 or more tons of CO_2e in 2008 or any subsequent year.

Any local distribution company that (or any group of 2 or more affiliated 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.

Sec. 702. Economy-Wide Reduction Goals

This section establishes the greenhouse gas (GHG) emissions reductions 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 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 20% 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 sec. 781 below) the following percentages of emission allowances 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

These set-asides must achieve additional US GHG emissions reductions equal to an additional 10% below 2005 levels.

Sec. 705. Scientific Review

This section requires the Administrator to offer to enter into a contract with the National Academy of Sciences (NAS), under which the NAS shall, not later than July 1, 2012, and every 4 years thereafter, report to Congress and to the Administrator on, among other things:

- The latest scientific information relevant to climate change
- An analysis of the technological feasibility of achieving additional reductions in GHG emissions; and
- An analysis of the status of worldwide GHG reduction efforts in preventing dangerous GHG emissions and increase in global average temperature.

Sec. 706. Presidential Response and Recommendations

This section requires the President—not later than July 1, 2017, and every four years thereafter—to direct relevant Federal agencies to use existing statutory authority to take appropriate actions identified in the report required by section 705. If the NAS concludes in a report that the US 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).
- Hydrocarbons emitted as a byproduct.
- A perfluorocarbon (PFC).
- Nitrogen trifluoride (NF_3).
- Any other anthropogenic gas designated as a GHG by the Administrator.

The section also sets out the process by which the Administrator can designate another anthropogenic gas as a GHG, including the process by which any person can petition the Administrator to make such a designation.

Sec. 712. Carbon Dioxide Equivalent Value of 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 covered entities are required to report their GHG emissions; as well as any entity that is a covered entity if it had emitted in 2008 or any subsequent year more than 25,000 tons of CO_2e, and has emitted in 2008 or any subsequent year more than 25,000 tons of CO_2e. If the Administrator determines that including any vehicle fleet with emissions of more than 25,000 tons of CO_2 equivalents annually, or any other entity that emits a GHG, in the registry would help achieve the purposes of the act, then those entities are 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 allowance schedule for years 2012-2050.

Calendar Year	Emission allowances (in millions)
2012	4770
2013	4666
2014	5058
2015	4942
2016	5391
2017	5261
2018	5132
2019	5002
2020	4873
2021	4739
2022	4605
2023	4471
2024	4337
2025	4203
2026	4069
2027	3935
2028	3801
2029	3667
2030	3533
2031	3408
2032	3283
2033	3158
2034	3033
2035	2908
2036	2784
2037	2659
2038	2534
2039	2409
2040	2284
2041	2159
2042	2034
2043	1910
2044	1785
2045	1660
2046	1535
2047	1410
2048	1285
2049	1160
2050 and each year thereafter	1035

In addition, the section permits 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:

- US 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 68.2% of US 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 US 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 US 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 nonemissive 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 production process, including semiconductor research or manufacturing, if emission allowances were retired for the production of such gas.

Sec. 722. Compliance Obligation

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

The following sources are required to hold emission allowances as of April 1, 2013, for their previous year's GHG emissions:

- Electricity sources (as defined in sec. 700), must hold 1 emission allowance for each ton of CO_2e emitted in the previous calendar year, excluding emissions resulting from the use of:
    - Petroleum-based or coal-based liquid gaseous fuel
    - Natural gas liquid
    - Renewable biomass
    - Pet-coke
    - HFCs, PFCs, NF_3, or any other fluorinated gas that is a GHG purchased for use at that covered entity

- Fuel producers and importers (as defined in sec. 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.

- Fluorinated gas producers and importers (as defined in sec. 700) must hold 1 emission allowance for each ton of CO_2e of PFCs, SO_6, NF_3, or any other fluorinated gas that is a GHG, or any other combination thereof, produced or imported by such covered entity during the previous calendar year for sale or distribution in interstate commerce.

- Geological sequestration sites (as defined in sec. 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 (E), (F), or (G) as defined in sec. 700) must hold 1 emission allowance for each ton of CO_2e emitted in the previous calendar year, excluding emissions resulting from the use of:
    - Petroleum-based or coal-based liquid gaseous fuel
    - Natural gas liquid
    - Renewable biomass
    - Pet-coke
    - HFCs, PFCs, NF_3, or any other fluorinated gas that is a GHG purchased for use at that covered entity

- Industrial fossil fuel-fired combustion devices (sources (H), as defined in sec. 700) must hold 1 emission allowance for each ton of CO_2e emitted in the previous calendar year, excluding emissions resulting from the use 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 (I), as defined in sec. 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 also sets out the bill's alternative compliance provisions.

Covered entities are allowed to satisfy a percentage of their compliance obligations by using offset credits. Said percentage is equal to 2 billion tons / (2 billion tons* + prior year's cap) x 100. The President has the authority to recommend to Congress an adjustment in the * amount.

Covered entities are permitted to hold 1.25 offset credits in lieu of an emission allowance.

Covered entities are permitted to use international emissions allowances (except as modified under section 728) and compensatory allowances (obtained under section 721) 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, F, G, or H of sec. 700. 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 emissions allowances the entity failed to hold by the deadline, by twice the fair market value of emissions allowances issued for emissions occurring in the calendar year for which the emission allowances were due.

Sec. 724. Trading

This section permits allows the full trade, sale, exchange, transfer and holding of compliance of emissions allowances; these rights are not restricted to those entities which are required to comply with the Act.

Sec. 725. Banking and Borrowing

This section allows the full banking of allowances. 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 repay 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.

In addition, a covered entity may use an allowance to meet its compliance requirement for emissions in the calendar year immediately preceding the vintage year for 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. Not later than 2 years after enactment, the Administrator is required to reserve for the SRA allowances established for 2012-2050. 1% of allowances established from 2012-2019 are reserved for this purpose, 2% of allowances established from 2020-2029, and 3% of allowances established from 2030-2050. The reduction from each year shall be reflected throughout the legislation, whenever the quantity of emissions established for a given year is referred to. The Administrator is required to transfer to the strategic reserve any allowance that was offered for sale at the regular auction but not purchased.

The Administrator must use the proceeds from each SRA to purchase international offset credits issued for reduced deforestation (REDD) activities pursuant to sec. 753. The Administrator retires these credits, and establishes 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.

The Administrator is required to set a minimum price per emission allowance at each SRA. In 2012, the minimum price is [amount twice the EPA-modeled 2012 allowance price EPA provides to the Committee on Energy and Commerce]. For the SRAs held in 2013 and 2014, the minimum price is the minimum price of the previous year increased by 5% plus the rate of inflation (as measured by the Consumer Price Index).

For the SRAs held in 2015 and each year thereafter, the minimum auction price will be 100% above a rolling 36-month average of the daily closing spot price for that year's allowance vintage as reported on carbon trading facilities that have registered pursuant to section 405 of the Federal Power Act.

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 allowance 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 SRA will auction one-quarter of the allowances to be auctioned in SRAs 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.

Entities may purchase allowances up to a quantity equal to 10% of their compliance obligation. In 2012, the purchase limit is equal to 10% of a covered entity's emissions reported to the registry for 2011. The section requires the Administrator to establish a separate purchase limit for new entrant entities, permitting them to purchase at least 10% of their expected compliance obligation for their first year of operation.

Proceeds from the SRAs are deposited in the Strategic Reserve Fund established in the Treasury by sec. 782. The funds will be available without further appropriation or fiscal year limitation, and the Administrator is directed to use them to purchase international offset credits for international forest carbon activities.

The Administrator will also issue regulations that allows 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 bill 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 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.

The section also sets out additional regulations that will govern SRAs.

Sec. 727. Permits

This section mandates that for any stationary sources covered by Title V of the Clean Air Act, 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.

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 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 1 or more foreign countries, or from 1 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 specifies that an international offset allowance may not be submitted for compliance if it is was an offset created by the increase of biological sequestration, or by reduction in GHG emissions that are not subject to the mandatory absolute tonnage limits referred to above.

The section further sets out what are the regulations for retirement of international emission allowances, among other provisions.

PART D—OFFSETS

Sec. 731. Offsets Integrity Advisory Board

This section requires the Administrator—within 30 days of enactment—to establish an 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.

- 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. The section also requires the Administrator to establish an Offset Registry.

Sec. 733. Eligible Project Types

Among other provisions, this section requires the Administrator—within 2 years of enactment –to establish a list of project types eligible for offset credits.

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 modify the list (project types added or removed) 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 requires 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 an 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 use of a different methodology.

The Administrator must to establish policies for the reporting of reversals, as well as policies for the assigning of liability and responsibility for mitigating and fully compensating for reversals. The Administrator is required to prescribe mechanisms to ensure permanence in sequestration, and these mechanisms must include at least one of the following:

- Offsets reserve:
  - 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 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 the number of offset credits that were originally reserved for that project.
  - Reserve credits may not be able to 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 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 administrator 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.

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, and each offset credit must be registered with a unique serial number.

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 until the date 3 years after the bill's enactment, or the offsets program is established, whichever is sooner; and
- The offset credit was issued under any regulatory 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 are 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.
- Offset credits will not be permitted if they had expired, been retired or cancelled or already 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. Ownership and Transfer of Offset Credits

This section specifies that 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 Advisory Board, to issue international offset credits from activities that reduce, avoid or sequester emissions in a developing country, but only if:

- The U.S. is party to a bilateral or multilateral agreement or arrangement that includes the country in which the project has occurred, and all the requirements of the U.S. domestic offset program apply to the issuance of international offset credits.

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 reductions or avoidance or sequestration of GHGs achieved across the sector relative to a baseline level of performance established by multilateral or bilateral agreement or arrangement. The baseline level of emissions used for additionality and performance are required to be lower than business-as-usual scenario.

In general, a sectoral basis is appropriate for activities:

- In countries that have comparatively high GHG emissions, or comparatively greater levels of economic development; and
- That, if located in the U.S. would be within a capped sector.

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 are eligible.

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 those of the US domestic offset program.

The Administrator is directed, in accordance with an agreement described in the preceding paragraph, to issue international offset credits for reduced deforestation activities if:

- The activity occurs in a an eligible country;
- 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; 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, and:

- 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 by 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 peatlands within the meaning of deforestation.

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 centigrade 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 Secretary of Agriculture, within 2 years of enactment, to establish a program to use the allowance set-aside under section 781 to achieve reduced 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 by 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 to only support activities in countries which are experiencing deforestation or have standing forest carbon stocks that may be at risk of deforestation or degradation, and 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 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 Sec. 753.

The section also describes the general mechanisms the Administrator 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 account for leakage and uncertainty.

These standards requires 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.

In addition, the standards require:

- Activities must have achieved emissions reductions before receiving emissions 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;
- Management in accordance with widely accepted, environmentally sustainable forestry practices and promotion of 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 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 has the discretion to include forest degradation and soil carbon losses associated with forested wetlands or peatlands 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 determined that the country was making

substantial progress toward adopting and implementing a program with a national baseline, that there was not significant leakage, and that reductions were 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 of which reports 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 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.

PART F—CARBON MARKET ASSURANCE

Sec. 761. Oversight and Assurance of Carbon Markets

In this section, a "regulated allowance" is defined as any emission allowance, compensatory allowance, or offset 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 excess speculation;
- To ensure that position limitations for individual market participants as well as margin requirements are established;

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 to make recommendations 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.

The President is required to delegate the authority to promulgate regulations for the establishment, operation and oversight of all regulated allowance derivatives markets to the working group created by this section.

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.

PART H—DISPOSITION OF ALLOWANCES

Sec. 781. Allocation of Allowances for Supplemental Reductions

This section requires the Administrator to set aside (referring to sec. 781 below) 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 set forth in 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, and auction those surplus allowances not later than March 31 of that next vintage year.

Sec. 782. Disbursement of Allowances and Proceeds from Auctions of Allowances

This section directs the Administrator to allocate emission allowances in amounts to be supplied.

The section also directs the Administrator to auction emission allowances in amounts to be supplied.

The section further establishes a Strategic Reserve Fund in the Treasury, as well as other funds to be named.

Sec. 783-789. [Sections Reserved]

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 emissions allowances issued before Dec. 31, 2011, by the State of California or for the Regional Greenhouse Gas Initiative (RGGI) for emission allowances established by the act. A person exchanging these allowances shall receive an amount of allowances in return sufficient to compensate for the cost of obtaining and holding the original allowances.

Sec. 791. Auction Procedures

This section, to the extent that auctions of emission allowances by the Administrator are authorized by the act, establishes regulations for their conduct.

This section sets out regulations for allowance auctions. The auctions are held four times a year at regular intervals, with the first auction to be held no later than March 31, 2010. Except for auctions held in 2010 and 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.

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 be 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.

SUBTITLE C—ADDITIONAL GREENHOUSE GAS STANDARDS

Sec. 331. Greenhouse Gas Standards

This section amends the Clean Air Act (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 Clean Air Act a list of categories of industrial sources that 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, 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 must issue performance standards under section 111 that cover source categories with at least 80% of the emissions from the categories contained on the list of sources not covered by the cap.

Sources covered under the emissions trading cap are not be 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 criteria air pollutants under Sec. 108(a) of the CAA on the basis of its effect on climate change.

Sec. 832. Hazardous Air Pollutants

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

Sec. 833. 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. 834. Title V Permits

This section prohibits GHGs from being considered under permitting requirements of Title V of the CAA.

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 sec. 619 below.

Sec. 619. Hydrofluorocarbons (HFCs)

This section provides a list of HFCs 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 schedule for phasing down the production and consumption of these compounds and imported products containing them. The schedule calls for a cap of 96 percent of baseline emissions (defined as average of 2004-2006) in 2012 and the cap is reduced by 3 percent each year through 2038 when 15 percent of baseline emissions are permitted.

Allowances are divided into two pools: 80% is designated for producers/importers only and the remaining 20 percent put into a secondary pool.
Of the producers/importers pool, 20 percent is to be auctioned in 2012 and that percent increases by 10 percentage points per year until 2020 when all of this pool of allowances is auctioned. The non-auctioned part of the producer/importer pool is offered for sale at the market clearing 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) and new entrants.

To provide compliance flexibility, allowances may be banked and offsets may be created through the destruction of CFCs 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 and allows for modifications to be consistent with any international treaty.

Sec. 333. Black Carbon

This section requires the Administrator to submit a report within 1 year of enactment which details information on the domestic and international sources of black carbon, the climate impact of past and future emissions, an analysis of technologies to limit emissions, and recommendations for actions to reduce its impact on climate and public health. The section further amends the CAA by adding Part E below after Part D to Title VIII (which is added by this act).

PART E—BLACK CARBON

Sec. 851. Black Carbon

This section requires the Administrator—not later than 1 year after enactment—to issue domestic regulations to reduce emission 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.

Sec. 334. States

This section amends Section 116 of the CAA to add language defining a state cap-and-trade activity as a "standard or limitation respecting emissions of air pollutants," and as "requirements respecting control or abatement of air pollution." Unless otherwise specified in the CAA, states retain their authority to issue regulations that are more stringent than that required under the CAA (see sec. 861 below).

Sec. 335. State Programs

The section further amends the CAA by adding Part F below after Part E to Title VIII (which is added by this act).

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.

Sec. 336. Enforcement

This section amends Section 304 of the CAA to permit persons to commence legal action, under certain circumstances, if they have suffered, or expect to suffer, a harm including effects or risk of effects of air pollution—including climate change—and the incremental exacerbation of any such effect or risk that is associated with a small incremental emission of any air pollutant—including any GHG.

The bill also amends Part F of Title VIII of the CAA (added by this act) by adding sec. 862 below.

Sec. 862. Judicial Review

This section sets out regulations regarding civil actions arising from Title VII and Title VIII of the CAA (added by this act).

Sec. 337. Conforming Amendments

This is a technical section to reconcile legislative language.

TITLE IV—TRANSITIONING TO A CLEAN ENERGY ECONOMY

SUBTITLE A—ENSURING DOMESTIC COMPETITIVENESS

PART 1—PRESERVING DOMESTIC COMPETITIVENESS

Sec. 401. Purposes

This section sets out the purposes of this part of the act.

Sec. 402. Definitions

This section sets out definitions for this part of the act, including defining "carbon leakage," 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 U.S. resulting from the implementation of Title VII of the CAA (added by this bill).

Sec. 403. Distribution of Rebates

This section directs the Administrator to annually distribute rebates to the owners and operators of entities in eligible industrial sectors and subsectors.
The Administrator is required—not later than January 1, 2011—to promulgate a rule designating the industrial sectors and subsectors eligible for rebates.

Entities are is considered presumptively eligible if their sectors or subsectors have:

- A 6-digit classification under NAICS;
- An energy intensity of at least 5%, calculated by dividing the cost of purchased electricity and fuel costs of the sector or subsector by the value of the shipments or the sector or subsector; or a greenhouse gas intensity of at least 5%, calculated by taking the EPA projected allowance price for 2020, multiplied by the CO_2e emissions (including direct emissions from fuel combustion, process emissions, and indirect emissions from the generation of electricity used to produce the output of a sector or subsector) and dividing that by the value of the shipments of the sector or subsector; and

- A trade intensity of at least 15%, calculated by dividing the value of the total imports and exports of such sector or subsector by the sum of the value of the shipments and the value of imports of the sector or subsector.

The Administrator has the discretion to designate additional eligible sectors or subsectors. Any person may petition the Administrator to grant rebates to a given sector or subsector, provided the petitioner can demonstrate that the sector or subsector was subject to carbon leakage comparable to that of sectors or subsectors that already meet the criteria for designation laid out in the Act.

Other factors may be used to determine whether a sector is subject to carbon leakage, including the effects of international competition on domestic production, the effects of international markets on product pricing, changes in imports and exports and domestic market share resulting from indirect carbon costs, and the state of international climate negotiations.

The section specifies that the quantity of rebates provided to an industrial entity is equal to the sum of the covered entity's direct compliance factor and its indirect carbon factor.

The direct compliance factor is calculated by multiplying the output of the covered entity by 85% of the average 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 output multiplied by both its emissions intensity factor and the electricity efficiency factor. In regulated electricity markets, the emissions intensity factor is the average GHG emissions per kilowatt hour of electricity purchased by the covered entity. In unregulated markets, the emissions intensity factor is the average GHG emissions per kilowatt hour of the marginal source of supply of electricity purchased by the covered entity.

The electricity efficiency factor is 85% of the average amount of electricity used per unit of output for all covered entities in the relevant sector or subsector.

The Administrator is directed to consider as in different sectors and subsectors entities using integrated iron and steelmaking technologies, and entities using electric arc furnace technologies.

The rebates are phased out over time. The rebates provided to covered entities are equal to a percentage multiplied by the sum of the entity's direct compliance factor and its indirect carbon factor (rebates to eligible entities not in covered sectors are equal to the percentage multiplied by the entity's indirect carbon factor). The percentage used in this calculation is equal to 100% each year through 2020, and beginning in 2021 and in every subsequent year, this percentage will go down by 10% per year.

Entities do not have to be covered by the cap-and-trade system to receive rebates.

Sec. 404. Reports to Congress

This section requires the Administrator—not later than one year after the first year in which rebates is distributed pursuant to this part, and at least every two years thereafter—to report to Congress on the carbon leakage of domestic industrial manufacturers and the effectiveness of the distribution of rebates.

Sec. 405. Modification or Elimination of Distribution of Rebates

This section requires that, beginning in 2021, the rebate that eligible entities receive be reduced by 10% annually.

The section permits the President to determine that other countries have not taken actions that have substantially mitigated the risk that companies in a particular sector or subsector will reduce existing, or not initiate new, production in the U.S. due to costs of complying with this act. If the President made such a determination, then the section directs the Administrator, by rule, to reduce or eliminate the rebate reduction to reflect such risk.

The section also allows the Administrator—in each calendar year after 2020—to eliminate the distribution of rebates to entities in an eligible sector or subsector if the Administrator determines that more than 70% of the global output from that sector or subsector is manufactured in countries subject to commensurate GHG regulation. The sector goes on to specify what the Administrator must consider when determining that another country has commensurate GHG regulation.

Sec. 406. Cessation of Qualifying Activities

This section specifies that if the Administrator determines that an entity is no longer in an eligible sector or subsector, then the Administrator may not distribute rebates to that entity.

Sec. 407. Authorization of Appropriations

This section authorizes to be appropriated such sums as are necessary to carry out the rebate program.

PART 2—INTERNATIONAL RESERVE ALLOWANCE PROGRAM

Sec. 411. Definitions

This section sets out the definitions of terms used in this part, including defining a "covered good" as a good that, as identified by the Administrator by regulation:

- Is a primary product;
- Generates in the course of the manufacture of the good, a substantial quantity of direct GHG emissions or indirect GHG emissions; and

- Is closely related to a good of the United States that is affected by a requirement of title VII of the CAA.

Sec. 412. Purposes

This section defines the purposes of the International Reserve Allowance Program as:

- To promote a strong global effort to significantly reduce greenhouse gas emissions;
- To ensure, to the maximum extent practicable, that greenhouse gas emissions occurring outside the United States do not undermine the objectives of the United States in addressing global climate change; and
- To encourage effective international action to achieve those objectives through—
    - Agreements negotiated between the United States and foreign countries; and
    - Measures carried out by the United States that comply with applicable international agreements.

Sec. 413. International Negotiations

This section makes a Congressional finding that the purpose of the International Reserve Allowance Program can be most effectively addressed and achieved through agreements negotiated between the United States and foreign countries.

It further states that the negotiating objective of the United States is to work proactively under the United Nations Framework Convention on Climate Change (UNFCCC) and, in other appropriate forums, to establish binding agreements committing all major GHG-emitting nations to contribute equitably to the reduction of global GHG emissions.

Sec. 414. Report to Congress and Finding

Among other provisions, this section requires the President—not later than June 30, 2017 —to make a finding as to whether the indirect compliance costs, as mitigated under the rebate program in Part 1, are causing any of the following adverse effects on a sector or subsector:

- A significant reduction in existing, or failure to initiate new, domestic production in sectors or subsectors that produce or manufacture covered goods;
- A significant reduction in existing, or failure to initiate new, domestic jobs in sectors or subsectors that produce or manufacture covered goods; or
- A significant increase in GHG emissions
    - By foreign manufacturing facilities that manufacture or produce covered goods and that do not have greenhouse gas compliance obligations commensurate with those that apply in the U.S.; and
    - That are caused by incremental cost increases resulting from compliance with title VII of the Clean Air Act;

If the President makes an affirmative finding, then he is directed to issue regulations creating the International Reserve Allowance program authorized by sec. 416 below.

Sec. 415. Prohibition

This section prohibits any person from importing into the US a covered good after the effective date of regulations issued by the Administrator under sec. 416 below, without submitting the required number of international reserve allowances in accordance with such regulations.

Sec. 416. International Reserve Allowance Program

This section, given the satisfaction of conditions in Sec. 414, requires the Administrator—not later than 24 month after the President's determination—to issue regulations establishing the international reserve allowance program, including regulations determining the appropriate price for international reserve allowances. 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 sector or subsector for which the President made an affirmative finding under section 414. Such allowances may not be held by covered entities for compliance purposes.

Said regulations exempt from these requirements covered goods produced in foreign countries that the United Nations has identified as among the least developed of developing countries; or foreign countries that the President has determined to be responsible for less than 0.5 % of total global GHG emissions.

SUBTITLE B—GREEN JOBS AND WORKER TRANSITION

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, postsecondary institutions, and community representatives including businesses, labor organizations, and industry.

Sec. 422. Workforce Training and Education in Clean Energy, Energy Efficiency, Climate Change Mitigation, and Sustainable Environmental Practices

This section requires the Secretary of Labor to carry out a sustainability workforce training and education program. The program shall award grants to institutions of higher education to provide workforce training and education in industries and practices such as:

- Clean energy, including wind, solar, and geothermal energy;

- Green construction, retrofitting, and design;
- Green chemistry;
- Water and energy conservation;
- Recycling and waste reduction;
- Sustainable agriculture and farming;
- Sustainable culinary practices;
- Smart grid technology design and deployment;
- Advanced vehicle technology, including plug-in electric drive vehicles; and
- Electric power transmission systems, including upgrading and reconductoring (increasing the capacity of an existing transmission line by replacing existing conductors with thicker ones. As the higher capacity conductor is thicker and heavier, there may need to be some tower or foundation strengthening, higher towers, and, in some cases, replacement towers).

Sec. 423—Wage Rate Requirements

This section applies Davis-Bacon Act requirements to recipients of support under the provisions of this subtitle.

Sec. 424—Worker Transition

[to be supplied]

SUBTITLE C—CONSUMER ASSISTANCE

Sec. 431. [To Be Supplied]

SUBTITLE D—EXPORTING CLEAN TECHNOLOGY

Sec. 451. Purposes

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

- To provide United States 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 reduces emissions of GHGs.

Sec. 452. Definitions

This section defines terms for this subtitle.

Sec. 453. Fund Establishment and Governance

Among other provisions, this section establishes an International Clean Technology Fund in the US Treasury. This Fund is administered by an interagency group chaired by the Secretary of State.

Sec. 454. Determination of Eligible Countries

The section directs the President—not later than January 1, 2012, and annually thereafter—to determine and publish a list of countries eligible for assistance under this subtitle. The section also establishes criteria the President is required to consider in determining a given country's eligibility.

Sec. 455. Funding

This section authorizes the Secretary of State, in consultation with the interagency group established in sec. 453, to provide assistance from the International Clean Technology Fund for projects that are in eligible countries. The section also establishes eligible project categories, and criteria for project selection.

Sec. 456. Annual Reports

This section requires the President—not later than March 1, 2012, and annually thereafter—to submit to Congress a report on the assistance provided under this subtitle during the prior fiscal year. The section specifies what such reports are required to include.

SUBTITLE E—ADAPTING TO CLIMATE CHANGE

PART 1—DOMESTIC ADAPTATION

SUBPART A—NATIONAL CLIMATE CHANGE ADAPTATION PROGRAM

Sec. 461. Definitions

This section defines terms for this subtitle.

Sec. 462. National Climate Change Adaptation Council

This section requires the President—not later than 90 days after enactment—to establish an interagency National Climate Change Adaptation Council, chaired by a representative from NOAA. The Council's function is to serve as a forum for interagency consultation on, and coordination of, Federal policies relating to assessment of, and adaptation to, the impacts of climate change on the US and its territories.

Sec. 463. National Climate Change Adaptation Program

This section requires the Secretary of Commerce, acting through the Administrator of NOAA, to establish within NOAA a National Climate Change Adaptation Program for the purpose of increasing the overall effectiveness of Federal climate change adaptation efforts. The section further establishes the duties of the Administrator of NOAA under the Program.

Sec. 464. National Climate Change Vulnerability Assessments

Among other provisions, this section requires the Administrator of NOAA—not later than January 1, 2012, and every 4 years thereafter—to publish and deliver to the President a National Climate Change Vulnerability Assessment. This Assessment shall evaluate regional national vulnerability to impacts of climate change, strategies to adapt to such impacts, and priorities for further research related to climate change impacts and adaptive capacity.

The section further specifies the contents of the Assessment.

Sec. 465. Climate Change Adaptation Services

This section requires the Secretary of Commerce, acting through the Administrator of NOAA, to establish within NOAA a National Climate Service to serve as a clearinghouse to provide state, local and tribal government decisionmakers with access to regionally and nationally relevant information, data, forecasts, and services relating to climate change impacts and adaptation to such impacts.

The section further specifies the duties of the Service.

Sec. 466. Federal Agency Climate Change Adaptation Plans

This section requires each federal agency with representation on the National Climate Change Adaptation Council, within one year of the publication of each Assessment, to complete an agency climate change adaptation plan detailing the agency's current and projected efforts to address the potential impacts of climate change on matters within the agency's jurisdiction, and submit such plan to the President for review. Within 18 months of the publication of each Assessment, and after finalizing the report following Presidential review, each respective agency must submit its report to Congress.

The section also contains provisions further detailing requirements for the contents of each report.

Sec. 467. Federal Funding for State, Local, and Tribal Adaptation Projects

This section establishes a National Climate Change Adaptation Fund within the US Treasury, and authorizes to be appropriated to the Fund such sums as shall be necessary.

The section further directs the President —not later than January 1, 2013— directly, or through a designated Federal agency or agencies, to promulgate regulations establishing an integrated program to use funds in the National Climate Change Adaptation Fund to provide financial assistance to state, local, and tribal governments, individually or jointly, for implementation of projects to reduce vulnerability to climate change impacts; and submit such regulations to Congress. If Congress has not enacted a statute codifying the program established by these regulations, or an alternative to them, within one year, then the agency or agencies identified in the regulations shall implement them.

The section also contains provisions further detailing requirements for such regulations and the process by which they are promulgated and implemented.

SUBPART B—PUBLIC HEALTH AND CLIMATE CHANGE

Sec. 471. National Policy on Public Health and Climate Change

This section states the policy of the Federal Government on public health and climate change impacts.

Sec. 472. National Strategy

This section requires the Secretary of Health and Human Services—within two years after enactment—to promulgate a national strategy for mitigating the impacts of climate change on public health in the United States.

Sec. 473. Authorization of Appropriations

This section authorizes to be appropriated such sums as are necessary to develop and implement the provisions in sections 471 and 472.

SUBPART C—NATURAL RESOURCE ADAPTATION

Sec. 481. Purposes

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

- Establish an integrated Federal program to assist natural resources to become more resilient and adapt to and withstand the impacts of climate change and ocean acidification; and
- Provide financial support and incentives for programs, strategies, and activities that assist natural resources to become more resilient and adapt to the impacts of climate change and ocean acidification.

Sec. 482. Natural Resources Climate Change Adaptation Policy

This section establishes that it is the policy of the Federal government, in cooperation with State and local governments, tribal organizations, and other interested stakeholders to use all practicable means and measures to assist natural resources to become more resilient and adapt to and withstand the impacts of climate change and ocean acidification.

Sec. 483. Definitions

This section defines terms used in the subtitle. It defines "natural resources," as the terrestrial, freshwater, estuarine, and marine fish, wildlife, plants, land, water, habitats, and ecosystems of the United States.

Sec. 484. 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 486 (below), and Federal natural resource agency adaptation plans required under section 488 (below); and to serve as the Chair of the Natural Resources Climate Change Adaptation Panel established under section 485 (below). In addition, the section requires the Chair of the CEQ to coordinate Federal agency strategies, plans programs, and activities related to assisting natural resources to become more resilient and adapt to and withstand the impacts of climate change and ocean acidification.

Sec. 485. 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"). The Panel consists of the heads of:

- Department of Commerce, acting through the Administrator of NOAA;
- Department of the Interior;
- Environmental Protection Agency;
- Department of Agriculture; and
- Army Corps of Engineers; and
- Chair of the Council on Environmental Quality; and
- The heads of such other Federal agencies or departments with jurisdiction over natural resources of the United States as the President considers appropriate.

The Chair of the CEQ serves as the Chair of the Panel, whose function is to serve as a forum for interagency consultation on and the coordination of the development and implementation of the national Natural Resources Climate Change Adaptation Strategy required under section 486 (below).

Sec. 486. 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 assisting natural resources in becoming more resilient and adapting 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. 487. Natural Resources Climate Change Adaptation Science and Information Program

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.

The section also contains provisions further detailing the functions of the Program, and other components of it.

Sec. 488. 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 and 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 the plan to the President for approval.

Not later than 30 days after its report is approved by the President, each respective agency is required to submit it to Congress.

The section also contains provisions further detailing requirements for the adaptation plans, including requirements for their content and implementation.

Sec. 489. State Natural Resources Adaptation Plans

In order to be eligible for funds from the Natural Resources Climate Change Adaptation Fund, as discussed in section 490 (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 486—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 section also contains provisions further detailing the process for review and approval of such plans, as well as requirements for their content and implementation.

Sec. 490. Natural Resources Climate Change Adaptation Fund

This section establishes a Natural Resources Climate Change Adaptation Fund in the US Treasury.

This section further authorizes to be appropriated to the Fund such sums as shall be necessary to carry out this subpart, and directs that all amounts deposited into the Fund be available without further appropriation or fiscal year limitation.

It further specifies that 40% of the Fund is to be provided to states to carry out adaptation activities in accordance with approved state natural resource adaptation plans. Specifically, 32.5% shall be available to state wildlife agencies through the Wildlife Conservation and Restoration Account established under section 3(a)(2) of the Pittman-Robertson Wildlife Restoration Act (16 U.S.C. 669b(a)(2)); and 7.5% shall be available to state coastal agencies pursuant to the formula established by the Secretary of Commerce under section 306(c) of the Coastal Management Act of 1972 (16 U.S.C. 1455(c)).

In addition, the section requires that of the amounts made available each fiscal year to carry out this subtitle,17% shall be allocated to the Secretary of the Interior for carrying out various specified adaptation activities, a further 5% to the Secretary for various specified adaptation activities carried out under cooperative grant programs, and a further 1% to the Secretary to provide financial assistance to Indian tribes to carry out adaptation activities through the Tribal Wildlife Grants Program of the United States Fish and Wildlife Service.

The section also requires that of the amounts made available each fiscal year to carry out this subtitle, 12% shall be deposited into the Land and Water Conservation Fund established under section 2 of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l–5), and makes further specifications on how deposits to that Fund are divided up for various purposes.

In addition, the section requires that of the amounts made available each fiscal year to carry out this subtitle, a further 5% shall be allocated to the Secretary of Agriculture for use in funding adaptation activities carried out on national forests and national grasslands under the jurisdiction of the Forest Service, or pursuant to the cooperative Wings Across the Americas Program.

The section also requires that that of the amounts made available each fiscal year to carry out this subtitle, an additional 5% shall be allocated to the Administrator of the EPA for use in adaptation activities restoring and protecting various large-scale freshwater aquatic ecosystems, large-scale estuarine ecosystems, and freshwater and estuarine ecosystems, further specified by the section.

In addition, the sector also requires that that of the amounts made available each fiscal year to carry out this subtitle, an additional 7.5% shall be available to the Secretary of the Army for use by the Corps of Engineers to carry out adaptation activities restoring the large-scale freshwater aquatic ecosystems, large-scale estuarine ecosystems, and freshwater and estuarine ecosystems discussed above, as well as habitats and ecosystems through the implementation of estuary habitat restoration projects authorized by the Estuary Restoration Act of 2000 (33 U.S.C. 2901 et seq.), project modifications for improvement of the environment, aquatic restoration and protection projects authorized by section 206 of the Water Resources Development Act of 1996 (33 U.S.C. 2330), and other appropriate programs and activities.

The section also requires that of the amounts made available each fiscal year to carry out this subtitle, 7.5% shall be allocated to the Secretary of Commerce for use in funding adaptation activities to protect, maintain, and restore coastal, estuarine, and marine resources, habitats, and ecosystems further specified by the section.

Finally, the section requires that any state or Indian tribe 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.

PART 2—INTERNATIONAL CLIMATE CHANGE ADAPTATION PROGRAM

Sec. 491. Findings and Purposes

This section makes a number of Congressional findings concerning global climate change impacts, including that climate change is a potentially significant threat multiplier for instability around the world.

Sec. 492. Definitions

This section defines terms used in the subtitle.

Sec. 493. Establishment

This section directs the Secretary of State, working with the Administrators of USAID and the EPA, to establish an International Climate Change Adaptation Program within USAID.

Sec. 494. Functions of Program

This section authorizes the International Climate Change Adaptation Program, in order to achieve the purposes under section 491, to carry out activities and projects and make grants to any private or public group (including public international organizations), association, or other entity engaged in peaceful activities to carry out the functions of the Program.

Sec. 495. Funding

This section directs the Administrator of USAID to distribute the funds for the purposes of the Program, and oversee the expenditures of the Program.

The section also requires the Administrator of USAID, after consulting with the Secretary of State, the Secretary of the Treasury, and the Administrator of the EPA, to distribute at least 40% and up to 60% of the funds available to the Program to an eligible international fund. The section further establishes the eligibility requirements for such a fund.

Sec. 496. Monitoring and Evaluation of Program

This section requires the Administrator of USAID to establish and implement a system to monitor and evaluate the effectiveness and efficiency of assistance provided under this part in order to maximize the long-term sustainable development impact of such assistance, including the extent to which the assistance is meeting the purposes of this part and addressing the adaptation needs of developing countries.