

## **V&E Climate Change Program**

V&E's Guide to the American Clean Energy and Security Act of 2009 (ACESA) — H.R. 2454, as Passed by the U.S. House of Representatives on June 26, 2009

July 14, 2009



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## V&E's Guide to the American Clean Energy and Security Act of 2009 (ACESA)

**July 14, 2009**

This guide provides an introduction to the 1,427-page comprehensive energy and climate bill adopted by the U.S. House of Representatives on June 26, 2009, which is formally named the American Clean Energy and Security Act of 2009 (ACESA). The bill was primarily authored by Representative Henry Waxman (D-CA) and Edward Markey (D-MA) who are the chairs, respectively, of the House Energy and Commerce Committee and the Subcommittee on Energy and the Environment. Their bill, also known as H.R. 2454, has five titles.

Title I, which focuses on clean energy, would establish a new combined energy efficiency and renewable electricity standard (RES) requiring major electric utilities to use an increasing amount of power from renewable sources beginning at 6 percent in 2012 and escalating to 20 percent in 2020. Up to one-quarter of this mandate can be met by energy efficiency or conservation measures, however, and states may also petition to have up to two-fifths of the mandate met by such activities. Title I also creates the framework for a new ratepayer funded program to implement carbon capture and sequestration (CCS) technologies at fossil fuel power plants and industrial facilities; sets emission performance standards for new coal-fired power plants; authorizes new funding for the large scale introduction of electric and other advanced technology vehicles; promotes the deployment of smart electricity grids; and creates a new “Green Bank” known as the “Clean Energy Investment Fund” within the Department of Energy.

Title II concentrates on energy efficiency across multiple sectors of the economy by advancing new efficiency standards and programs for buildings, appliances, industrial facilities, and transportation vehicles. The title also creates various new federal grant programs to promote energy efficiency, including a new state block grant program and a state revolving loan fund to help manufacturers of clean energy and energy efficient products. In addition, the bill directs the Department of Housing and Urban Development (HUD) to integrate energy efficiency standards into the agency's public housing programs; Fannie Mae and Freddie Mac are also directed to foster second mortgages to finance energy efficiency improvements.

Title III, which focuses on global warming, would establish an economy-wide cap-and-trade program to reduce U.S. emissions of CO<sub>2</sub> and other greenhouse gases (GHGs) by 17 percent from 2005 levels by 2020, and just over 80 percent by 2050. Under this program, the Environmental Protection Agency (EPA) would issue a capped and steadily declining number of tradable emissions allowances to achieve these goals — hence the popular reference to “cap-and-trade.” Large GHG emitters, suppliers of petroleum-based fuels, and certain other parties would be required to have a sufficient number of allowances or GHG offset credits each year to cover their activities. Offsets are issued for activities that reduce or sequester GHGs (*e.g.*, by trapping methane from landfills) by parties not covered by ACESA's emissions cap.



To mitigate the cost of transitioning to a lower-carbon economy, ACESA would initially distribute free allowances to electric and gas utilities (for the benefit of rate payers), to energy intensive and trade-exposed industries, small refiners and state governments. Other allowances would be directed to fund a variety of GHG-reducing programs, such as energy efficiency, CCS, and renewable energy. Some allowances would also be auctioned to provide funds to reduce the impact of any energy price increases on low income tax payers.

The new cap-and-trade program contemplated by Title III generally would preclude the EPA from regulating GHG emissions under existing provisions of the Clean Air Act (CAA) and would also impose a temporary moratorium on analogous state cap-and-trade programs.

Title IV of ACESA contains provisions to help energy intensive U.S. manufacturers address unfair competition from importers that are not subject to similar GHG regulations. This title also contains provisions to promote green jobs; to increase the export of clean energy technologies; and to help communities and habitats adapt to the physical impacts of climate change. Climate change adaptation plans are also mandated for all federal agencies and a new foreign aid program is established to provide climate adaptation assistance to the most vulnerable developing countries.

Title V creates a new program within the Department of Agriculture for issuing offsets based on domestic agricultural and forestry practices (*e.g.*, altered tillage practices; reforestation activities). This program is intended to complement the EPA's issuance of offsets related to other domestic activities as well as from non-U.S. offset projects.

## **Title I – Clean Energy**

### **Combined Efficiency and Renewable Electricity Standard**

Subtitle A of Title I amends the Public Utility Regulatory Policies Act of 1978 (PURPA) by adding a federal Combined Efficiency and Renewable Electricity Standard (RES). Starting in 2012, the RES would require retail suppliers of electricity to submit to the Federal Energy Regulatory Commission (FERC or the “Commission”) either federal renewable electricity credits (RECs) or “demonstrated total annual electricity savings” each year in an amount equal to a rising percentage of the power they sell to customers. The percentage starts at 6 percent in 2012 and gradually escalates to 20 percent by 2020. Both federal RECs and energy efficiency savings are measured on a megawatt hour (Mwh) basis. Only up to 25 percent of an electric supplier's annual target can be met through energy efficiency savings, with the rest to be satisfied by submitting federal RECs. This energy efficiency share can be increased to 40 percent upon written request by the state governor in which a retail electric supplier is located.

Federal RECs representing one Mwh of electricity each would be issued by the Commission with a unique serial number to generators of eligible renewable electricity. Eligible power sources include wind, solar and geothermal energy, renewable biomass, landfill gas, certain qualified hydropower, and marine and hydrokinetic renewable energy. Federal RECs may be sold, exchanged, and transferred to entities that need them for compliance with the



RES or otherwise. This trading is similar to that which currently exists under various state-level REC trading programs created by state mandates for the provision of electricity from renewable resources.

The Commission will specify what energy conservation measures can generate “electricity savings” that can be used for compliance purposes. However, these measures must exclude savings achieved as a result of mandatory appliance and equipment efficiency standards or building codes. Retail electric suppliers may purchase savings from another retail electric supplier, an electric distribution facility, a state, or a third-party efficiency provider to meet compliance obligations.

As an additional, alternative means of complying with the RES, a retail electric supplier may satisfy the RES requirement in whole or in part by submitting, in lieu of a federal REC or Mwh of electricity savings, an “alternative compliance payment” equal to \$25, adjusted for inflation. All alternative compliance payments are made to the states where utilities use this option, with the funds dedicated to supporting deploying renewable energy and implementing energy efficiency measures.

When a generator sells renewable electricity to a retail electric supplier from a facility placed in service before ACESA was enacted, and if the contract is silent on the ownership of the federal RECs, the bill states that the Commission shall award the federal RECs to the retail electric supplier. Thus, generators would need to address this issue in supply contracts or face the potential loss of the associated federal RECs.

The RES provides a credit multiplier for distributed generation facilities up to four megawatts in size (*e.g.*, for small scale solar and wind installations). The multiplier provides up to three federal RECs for each Mwh of renewable electricity.

Banking of federal RECs is limited. RECs may be submitted only for the compliance year in which the credit is issued or for any of the three immediately subsequent compliance years. If a federal REC is not submitted for compliance within that deadline, the Commission shall retire the REC, which means it cannot be used for any future compliance period. This places a premium on the proper management of a federal REC portfolio, as federal RECs that are not traded or used by a certain time period may lose their value.

Civil penalties for noncompliance with the RES may be assessed in the amount equal to double the federal alternative compliance payment for each missing submittal of a REC or Mwh of electricity savings.

The RES also preserves a state’s right to “adopt or enforce any law or regulation respecting renewable electricity or energy efficiency, including any law or regulation establishing requirements more stringent than those established by this [RES].” The federal RES would sunset in 2040.

The RES also includes a mandate that the electric consumption of federal agencies shall be made up of the same percentages of electricity mandated for retail electric suppliers (*i.e.*, 20



percent by 2020). There is no energy efficiency compliance option available to the federal government, although the requirements may be suspended by the President of the United States if they cannot be feasibly met.

### **Carbon Capture and Sequestration**

Subtitle B contains several measures to advance the timetable for deploying CCS at coal-fired power plants and industrial facilities. First, the bill directs the EPA, in consultation with the DOE and other relevant federal agencies, to submit a report to Congress containing a unified and comprehensive national strategy to address the key legal and regulatory barriers to the commercial-scale deployment of CCS. The report is due no later than one year after ACESA becomes law.

Second, the bill amends the CAA by requiring EPA to adopt regulations within two years to minimize the risk of geologically-sequestered carbon dioxide escaping to the atmosphere. These regulations must include the certification of geologic sequestration sites and related monitoring, record keeping, and reporting. A companion amendment is made to the Safe Water Drinking Act, requiring the EPA to adopt within one year of enactment rules (including requirements for financial responsibility) for operating CO<sub>2</sub> geologic sequestration wells.

Third, the bill directs the EPA to convene a task force to review the legal framework for geologic sequestration sites, including existing environmental and safety laws at the state and federal level, subsurface mineral and water rights, and models for public and private sector assumption of the financial risks associated with CCS. The task force's report and recommendations must be submitted to Congress within 18 months, with an earlier, related report due by EPA within one year of enactment.

Fourth, the bill authorizes the electric utility industry to create a new Carbon Storage Research Corporation (CSRC) that would potentially have as much as \$10 billion in private funding to support commercial-scale demonstrations of CCS technologies. The CSRC would operate as a division or affiliate of the Electric Power Research Institute (EPRI) and have an independent board representing utility, fossil fuel, generator, and consumer and environmental interests.

CSRC's budget would be derived from a new assessment (2-4 cents per Mwh) on electricity derived from fossil fuels.<sup>1</sup> Total assessments would be capped at approximately \$1 billion per year for ten years. Funds raised by the CSRC would be used for commercial-scale CCS demonstrations involving varieties of coal and fossil fuels, and diverse storage media and technologies that are suitable for new or retrofit applications. Electric utilities and other private entities, academic organizations, non-profits, and state research agencies would all be eligible for funding.

The creation of this new research entity is dependent on a referendum that leads to approval by utilities representing two-thirds of the fossil fuel-based electricity delivered

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<sup>1</sup> The assessment would generally be borne directly by rate payers except for utilities that are part of the Texas electricity grid (ERCOT), in which case assessments would be levied directly on scheduling entities.



to retail consumers. Yet, despite a positive referendum, formation of the new company could still be blocked if at least 40 percent of state regulatory authorities are opposed.

Fifth, the bill directs the EPA to establish its own program, within two years, for funding commercial CCS projects for both electric generating units (with a capacity of over 200 megawatts that derive at least 50 percent of their fuel from coal) and certain industrial operations (which otherwise would annually emit over 50,000 tons of CO<sub>2</sub>). The program would be funded through a set-aside of “bonus” allowances equal in amount to 1.75 percent of the total allowances available under Title IV’s cap-and trade program in years 2014-2017, then rising to 5 percent of total allowances from 2020 through 2050. Funding for generating units would be divided into various tranches with a sliding payment scale. Each tranche would support a specified quantity of generating capacity using CCS. Projects achieving higher CCS rates would receive higher bonus allowance values. For instance, in the first tranche, for those generating units achieving an 85 percent capture and sequestration rate, bonus allowances would be awarded in an amount that equates to a value of \$90 per ton of CO<sub>2</sub> avoided. Under this program, no greater than 72 gigawatts of total cumulative generating capacity can receive allowances (including both electric generating units and industrial sources), a project may only receive allowances for its first 10 years of operation, and industrial sources may receive no more than 15 percent of the allowances.

Finally, the bill adds a new provision to the CAA establishing GHG emission performance standards for coal-fired power plants permitted after January 1, 2009. Units initially permitted starting in 2020 must reduce CO<sub>2</sub> emissions by 65 percent. Units that are initially permitted after January 1, 2009 through 2019 shall reduce CO<sub>2</sub> emissions by 50 percent by the earlier of: (a) four years following the commercial operation of four gigawatts of generating capacity equipped with CCS, or (b) 2025 (though the EPA may postpone this 2025 date by 18 months upon a finding of technical infeasibility). These emission performance standards essentially mandate CCS. Under the bill, coal-fired generating units permitted from 2015 through 2019 would lose eligibility for the bonus allowances mentioned above if they don’t reduce emissions by 50 percent when they commence operations, and they would still have to retrofit with CCS generally by 2025 without the ability to get bonus allowances. Units permitted from 2009 through 2014 would lose eligibility for bonus allowances if they do not retrofit with CCS within five years of commencing operations; if they don’t retrofit with CCS by then, they would have to retrofit with CCS generally by 2025 without bonus allowances.

### **Clean Transportation**

The bill establishes a requirement for electric utilities to develop an infrastructure plan to support the use of plug-in hybrid electric vehicles and electric vehicles. State regulatory authorities are directed to ensure that each utility establishes appropriate protocols and standards for integrating the vehicles into the electricity grid. In addition, state regulatory authorities are directed, to the extent feasible, to ensure each plug-in vehicle on the electricity grid is associated with its owner’s electric utility account regardless of where the vehicle is plugged in.

The bill authorizes the Secretary of Energy to establish a program to deploy and integrate plug-in hybrid electric vehicles in selected regions. Any state, Indian tribe, or local government may apply to the Secretary of Energy for funding to assist in the regional



deployment of plug-in hybrid electric vehicles. The funding would be available for deployment of electrical charging stations, smart grid infrastructure development, and purchase of plug-in hybrid electric vehicles. In addition, emission allowances will also be made available to qualifying applicants.

In addition, the Secretary of Energy is authorized to establish a program to fund the manufacturing of plug-in electric drive vehicles in the United States. Specifically, the program is to provide funding for projects to reconstruct or retool U.S. manufacturing facilities to construct plug-in electric drive vehicles and vehicle batteries. In selecting recipients of financial assistance, the Secretary of Energy is to give preference to proposals that are most likely to be successful and are located in markets with the greatest need for the manufacturing facility. Emission allowances will also be made available to qualifying applicants. In addition, the bill increases the funding for advanced technology manufacturing incentive loans from \$25 billion to \$50 billion.

Subtitle C also establishes an open fuel standard where the Secretary may create regulations to require light-duty automobile manufacturers to have a minimum percentage of their automobiles run on either E85 or biodiesel. Manufacturers will have the ability to request an exemption from the regulation if unavoidable events prevent the manufacturer from producing the required volume of automobiles that run on either E85 or biodiesel.

Finally, among other provisions, the bill provides for alternative fuel credits to fleets that convert existing vehicles so that they are capable of operating on an alternative fuel and requires the Administrator to submit a report on natural gas vehicle emissions reductions to Congress within a year.

### **State Energy and Environment Development Funds**

Subtitle D directs the Administrator of the Environmental Protection Agency (“Administrator”) to establish a program under which states may operate a State Energy and Environment Development (SEED) Account to serve as a common state-level repository for managing and accounting for emissions allowances provided to states under section 311 of ACESA. Emission allowances are designated for renewable energy and energy efficiency purposes, with a minimum percentage of a state’s allowances to be distributed to local governments, among specified renewable energy and energy efficiency programs. Use of the SEED Account would be mandatory for emissions allowances designated for these purposes. States may create a financial account associated with their SEED Account to deposit, retain, and manage any proceeds of any sale of any allowance provided pending expenditure for renewable energy and energy efficiency purposes. Grants of allowances or the proceeds of the sale of allowances that are not appropriated for specific uses could be used for loans, grants, or other forms of support for programs authorized to use SEED Account allowance value or for any other renewable energy or energy efficiency purpose authorized by the federal government. Accountability and transparency measures are required, and states must identify annually the intended use of the allowances or proceeds from the sale of allowances in its SEED Account.



## **Smart Grid Advancement**

Subtitle E requires the DOE and EPA to evaluate whether the existing Energy Star program that designates appliances and other consumer devices as qualified products should be expanded to integrate Smart Grid Technology (SGT). A Smart Grid, for the purposes of this section, is an electric distribution system designed to send digital information regarding real-time incremental electric prices to appliances and consumer devices that have the capability to respond to such price signals and modify time of usage to achieve cost savings. The DOE and the EPA are directed to determine, within two years, whether implementation of this technology would be cost effective. If the DOE evaluation is positive, the DOE and the EPA are to notify the manufacturers of such products. The Federal Trade Commission (FTC) is required to initiate a rulemaking regarding the inclusion of Smart Grid functionality, time-of-use rates, and annual energy savings on any Energy Guide label for any product actually including Smart Grid capability.

Subtitle E also requires that load-serving entities and states shall determine and publish peak demand reduction goals for any load-serving entities with a baseline energy usage of 250 MW or more. The 250 MW minimum baseline is to be adjusted prospectively for load growth and other specified factors, using a methodology to be determined by FERC. The goals shall provide that load-serving entities will reduce or mitigate peak demand by a minimum percentage amount by 2012 and a higher minimum percentage by 2015. The minimum percentage reductions must be realistically achievable through an aggressive effort to deploy Smart Grid and demand reduction technologies. Although FERC is required to report to Congress those load serving entities that fail to meet their goals, there is no sanction for entities that do not.

## **Transmission Planning**

Subtitle F amends the Federal Power Act (FPA) by permitting FERC to issue a permit for the construction or modification of electric transmission facilities in a national interest electric transmission corridor only if, among other conditions, the facility is interstate in nature or is an intrastate segment integral to a proposed interstate facility. A new section is also added to the FPA to mandate federal transmission planning for renewable resources and directs FERC to adopt national electricity grid planning principles not later than one year after enactment. Entities that are responsible for regional planning and that are willing to incorporate the principles promulgated by FERC are to identify themselves and the regions for which they propose to develop regional transmission plans. FERC is to encourage planning in all regions of the United States and to support and participate in the regional planning processes.

No specific appropriation is made by ACESA to support the foregoing initiatives by FERC. However, it is likely that FERC would propose including the expense of these activities within the annual fees that FERC collects from entities over which it has jurisdiction under the FPA. Regional planning entities are required to submit initial regional electric grid plans to FERC within 18 months after adoption of the regional planning principles, and must update such plans not less than every three years thereafter. FERC shall review and comment on the plans but is granted no authority to require changes in the plans. Within three years of enactment, FERC is to report to Congress on the results of the regional planning process and



shall make recommendations to address needs that are beyond the reach of existing state and federal authority.

Subtitle F also adds to the FPA a new section 216B which is only applicable to states located in the Western Interconnection. The amendment authorizes FERC, under certain conditions, to issue a certificate of public convenience and necessity for the construction or modification of a multistate transmission facility needed “in significant measure” to meet demand for renewable energy as identified in a regional or interconnection-wide plan. FERC’s siting authority under the amendment may be exercised when a state commission or other entity that has authority to approve the application seeking approval for the siting of the facility: (i) did not issue a decision on a complete application within one year after the complete application was submitted; (ii) denied a complete application; or (iii) authorized the siting of the facility subject to conditions that unreasonably interfere with the development of the facility. While FERC is designated as the lead agency for purposes of coordinating all applicable federal authorizations and environmental reviews of the facility, if any agency has denied a necessary federal authorization, upon appeal the President may decide whether to deny or grant the certificate.

Subtitle F amends PURPA to require electric utilities to offer to arrange to make interconnection and net metering available to federal government agencies, with affiliated costs passed on to customers. The public utility must offer a meter and billing arrangement with time-differentiated rates. The interconnection and net metering requirement applies only to electric utilities that sold over 4,000,000 megawatt hours of electricity to end users in the preceding year. Finally, ACESA extends loan guarantees authorized in the American Recovery and Reinvestment Act of 2009 to include guarantees for qualified advanced electric transmission manufacturing plants, qualified high efficiency transmission property, and qualified advanced electric transmission property.

### **Technical Corrections to Energy Laws**

Subtitle G contains technical corrections to the Energy Independent and Security Act of 2007 (EISA) and the EPA 2005. Certain corrections pertain to the provisions of EISA that amended the Energy Policy and Conservation Act (EPCA) and improve standards for appliances such as air conditioning and heating equipment, electric motors, and lighting.

### **Energy and Efficiency Centers and Research**

Subtitle H contains several programs designed to foster research into clean energy technology. These programs include the establishment of Energy Innovation Hubs, additional funding for the Advanced Research Projects Agency-Energy, the creation of Building Assessment Centers and Centers for Energy and Environmental Knowledge and Outreach, and a research program for high efficiency natural gas turbines. In particular, Subtitle H directs DOE to establish Energy Innovation Hubs to promote the commercial application of clean, domestic energy production, the reduction of greenhouses gas emissions, and the establishment of U.S. prominence in state-of-the-art energy technologies. Multi-party consortia consisting of research universities, state and federal organizations, and non-governmental organizations may be designated as Hubs to support research leading to



commercial application of clean energy technologies. Funding for the Hubs will be provided through the competitive distribution of emissions allowances under Title III of ACESA.

### **Changes to the DOE Loan Guarantee Program under Title XVII of EAct 2005**

Subtitle I amends the existing DOE loan guarantee programs created under Title XVII of the Energy Policy Act of 2005, as amended by ARRA. First, the bill specifies that the DOE cannot guarantee a loan until: (1) an appropriation to cover the costs of the loan has been made; (2) the borrower has paid the costs in full; or (3) a combination of the two that covers the obligation. A borrower's payments cannot be made from loan or other debt made or guaranteed by the federal government. Second, funds collected as fees for the program will go into a special "Incentives for Innovative Technologies Fund" that the Secretary of Energy can spend without additional appropriation. This section also adds a requirement that borrowers must pay Davis-Bacon wage rates.

Most significantly, Section 181 alters the previous requirement that the government has rights in any acquired property superior to all other parties. As amended, the government need not have superior rights so long as the terms and conditions provide a lien sufficient to protect the financial interests of the government in the case of default. The government is also permitted to share the proceeds from the sale of assets with other creditors or control the disposition of assets if necessary to protect the financial interest of the government. This same provision also strips out the provisions in the original program that detailed the steps the government could take or was required to take in the event of default, which gives DOE more flexibility.

### **Establishment of the Clean Energy Investment Fund**

Subtitle I also establishes the "Clean Energy Investment Fund," ("Fund") the purpose of which is to support the financing of clean energy, advanced energy infrastructure, energy efficient technologies, and manufacturing technologies. The bill directs the Fund to support the deployment of clean energy technologies to promote; (1) clean energy generating capacity to meet U.S. needs; (2) clean energy for vehicles to reduce reliance on foreign energy sources and consumer exposure to energy market volatility; (3) domestic manufacturing of clean energy technologies; (4) infrastructure to support clean energy technology deployment; (5) zero net energy consumption by U.S. building stock; (6) recovery, use, and prevention of waste energy; (7) price parity between domestic manufacturing of clean energy technologies with conventional energy sources; (8) domestic production of materials using clean energy technologies; (9) smart grid technologies; (10) financial products that allow buildings to invest in energy efficient technology; (11) the availability of financial services to small businesses developing and deploying clean technology through private partnerships; and (12) other goals consistent with the general principles of the Fund.

The Fund will operate generally by issuing direct loans, letters or credit, and loan guarantees in support of clean energy technologies. The bill directs the Fund to establish a loan loss reserve consistent with its goal and with a recommended initial rate of 10 percent of its portfolio. The Fund's portfolio is to be diversified across technology, with no individual technology accounting for more than 30 percent of the available support. The bill directs the Fund to attempt to achieve



both self-sustainability and to provide maximum support for breakthrough technologies and reduction in GHG emissions. As with the existing DOE loan guarantee program, support from the Fund is not to exceed 80 percent of the cost of the project that is the subject of the loan, letter of credit, or guarantee. The Fund may also provide support to portfolios of taxable debt obligations with the goal of supporting private financing for clean energy technologies.

The bill directs the Fund to issue \$7.5 billion in “Green Bonds” that the government will purchase to provide the initial capital investment for the Fund and which will be repaid with stock certificates in the Fund. The Fund will be an independent corporation whose obligations are supported by the full faith and credit of the government. The Fund will be governed by a board consisting of an administrator and four additional members appointed by the President for staggered five-year terms, and the Secretaries of Energy, Treasury, Interior, and Agriculture as *ex officio* members. The board, in turn, will select the eight members of the Energy Technology Advisory Council who will develop a methodology to evaluate projects suitable for the Fund. Council members are to be from academia, private research, national laboratories, the project development community, and energy financing and operations.

The bill also includes some standard limitations and stipulations for the Fund. Projects supported by the Fund must pay Davis-Bacon wage rates. Further, the Fund may not be used to provide support for any loan guarantees under the existing DOE loan guarantee program.

## **Title II – Energy Efficiency**

### **Buildings**

Subtitle A requires regular updates to national and state building energy codes and standards to achieve specified energy efficiency targets. Technical assistance and funding is provided to assist states in improving and implementing the building energy efficiency codes and standards, and grants are available to local building code enforcement departments that demonstrate financial need. States not in compliance with applicable standards face restrictions of funds otherwise available under ACESA. The Retrofit for Energy and Environmental Performance Program (REEP) is created to facilitate the retrofitting of existing buildings, to achieve cost-effective energy efficiency, and other improvements. As part of REEP, funds would be provided “to support utility-operated retrofit programs with repayments over time through utility rates,” with funding through the emission allowances allocated to the states’ SEED Accounts.

Subtitle A also creates an incentive for low-income households residing in manufactured homes constructed prior to 1976 to purchase a new Energy Star qualified manufactured home. A building energy performance labeling program is also created to facilitate knowledge about building energy performance by owners and occupants, and to aid efforts to reduce energy consumption. In addition, Subtitle A creates a grant program to assist retail power providers, defined as any entity authorized under federal or state law to generate, distribute, or provide retail electricity, natural gas, or fuel oil service, to establish and operate targeted tree-planting programs in certain settings to attain a number of benefits including reduction in peak energy demand and absorbing carbon dioxide. Finally, Subtitle A



establishes a limit for permit fees required for the installation of solar energy systems, and requires the promulgation of regulations prohibiting private covenants or similar agreements restricting the installation of solar energy systems.

### **Lighting and Appliances**

Subtitle B sets new lighting efficiency and other appliance efficiency standards and test procedures, amends the DOE's process for determining such efficiency standards, and requires that the GHG output associated with or caused by certain appliances be included on the appliance's "Energyguide" label. Manufacturers of products covered by the energy efficiency standards must provide annual reports to the DOE. The bill creates an incentive program for manufacturers to develop, and for retailers to increase sales of, high-efficiency building equipment, consumer electronics, and household appliances.

Subtitle B creates the WaterSense program within the EPA to identify and promote through voluntary labeling, outreach, or other forms of communication the most water efficient products, buildings and landscapes, and services. The heads of federal agencies are also required to procure WaterSense products or services when cost-effective, and funds can be allocated to support government- or utility-established financial incentive programs established to encourage consumers to purchase and install water efficient products and services.

### **Transportation**

Subtitle C requires the EPA to issue GHG emissions standards for certain heavy-duty vehicles and non-road vehicles and engines (such as, marine vessels). The EPA must also establish provisions for averaging, banking, and trading of GHG emissions credits (for mobile sources), as the EPA deems appropriate. States are required to submit to the EPA goals for and specific plans to achieve transportation-related GHG emissions reductions, including plans from metropolitan planning organizations. Finally, this subtitle creates a "SmartWay Transport Program" to promote the benefits of, and enhance financing for, "technologies, products, fuels and operational strategies" that reduce petroleum consumption and decrease GHG and other emissions from the mobile source sector.

### **Industrial Programs**

Subtitle E requires the Secretary of Energy to establish a program to make monetary awards encouraging owners and operators of new and existing electric energy generation facilities and thermal energy production facilities that use fossil or nuclear fuel to use innovative means of recovering thermal energy, potentially useful as a by-product to either generate additional electric energy, or to make other sales of thermal energy. The subtitle also requires the DOE to support the voluntary development of industrial plant efficiency certification standards.

Subtitle E requires the Secretary of Energy to conduct an assessment of electric motors and the electric motor market in the United States and, using the assessment, establish a proactive, national program to increase awareness of available energy and cost savings. The Secretary must also establish a program to provide rebates for expenditures made by entities purchasing more efficient electric motors.



The Secretary must also establish a program to award grants to states to establish revolving loan funds to provide loans to small and medium-sized manufacturers to finance the cost of re-equipping, expanding, or establishing a facility in the United States to produce clean energy technology or energy efficiency products, or integral components thereof.

### **Other Efficiency Provisions**

Subtitle E sets out competition requirements for awarding federal energy savings performance contracts and authorizes such contracts for up to 30 years. Subtitle F amends the Energy Policy and Conservation Act to allow Indian tribes, nonprofit hospitals, and public health facilities to receive energy efficiency grants and loans. Subtitle F also authorizes the Secretary of Energy to make grants to private, nonprofit, community development organizations to: (1) provide financing to businesses and projects that improve energy efficiency; (2) identify and develop alternative, renewable, and distributed energy supplies; (3) provide technical assistance and promote job and business opportunities for low-income residents; and (4) increase energy conservation in low income rural and urban communities. The Secretary is also authorized to provide grants to establish a research program to identify the factors affecting consumer actions to conserve energy and make improvements in energy efficiency.

Subtitle G requires each federal agency to create an implementation strategy for the purchase and use of energy efficient information and communications technologies and practices. Also, the Secretary of Energy must develop a strategic plan to achieve the national goals for improvement in energy productivity set forth in Subtitle G, and must report on progress and update the plan biennially. Subtitle G also requires the Secretary to assemble a team of technical, policy, and financial experts to address the energy needs, including energy efficiency and reliance on fossil fuels, of the various islands affiliated with the United States (*i.e.*, Puerto Rico, Guam, etc.).

Under Subtitle G the Administrator of the EPA must study the feasibility of establishing a national program for measuring, reporting, publicly disclosing, and labeling products or materials sold in the United States for their carbon content. Following the study, the Administrator must establish a voluntary national product carbon disclosure program. Finally, Subtitle G requires the Secretary of Energy to carry out a national education and awareness program regarding the energy-saving potential of greater use of mechanical insulation and other benefits.

### **Green Resources for Energy Efficient Neighborhoods Act of 2009 (GREEN Act of 2009)**

Subtitle H of Title II requires the Secretary of Housing and Urban Development (HUD) to promulgate regulations establishing energy efficiency standards and integrating those energy efficiency standards into existing federal housing programs. The Secretary must create incentives for participants in programs receiving HUD assistance to achieve substantial improvements in energy efficiency. Subtitle H also provides additional mortgage purchase credits for Fannie Mae and Freddie Mac for energy-efficient and location-efficient mortgages, requires public outreach programs to support such mortgages, and requires the housing enterprises to facilitate a secondary market for some energy-efficient and location-efficient mortgages, as well as second and junior mortgages made for purposes of energy



efficiency or renewable energy improvements. The Secretary may establish a program to guarantee the portion of mortgages used to finance eligible elements of the housing purchase, subject to specified criteria.

Developers of housing for which HUD assistance is provided are encouraged to enter into agreements and partnerships with tree-planting organizations, and new and rehabilitated projects for which HUD assistance is provided must meet specific requirements that ensure maintenance and planting of indigenous trees. Subtitle H also establishes an energy efficiency block grant program to assist state and local governments to carry out energy efficiency improvements in new and existing single-family and multi-family housing, as well as a grant program to support community development programs specializing in conservation and energy efficiency.

Subtitle H also establishes a fund in the United States Treasury from which the HUD Secretary may make loans to states and Indian Tribes to provide incentives to private parties to provide renewable energy, energy efficiency, and related infrastructure. Finally, Subtitle H requires the development of guidelines to encourage federally insured depository institutions to create “green banking centers” at which consumers can obtain information on renewable energy-, energy efficiency-, and conservation-based mortgage programs.

### **Title III – Reducing Global Warming Pollution**

This title would establish a new long term economy-wide program to reduce U.S. emissions of carbon dioxide and six other GHGs<sup>2</sup> by issuing a steadily declining number of tradable emissions allowances. The stated goal of ACESA is to reduce total GHG emissions by 17 percent from 2005 levels by 2020, and just over 80 percent by 2050.

The program would be implemented by adding two new titles (VII and VIII) to the CAA to be primarily administered by the EPA. Under these amendments, each year the owners of fossil fuel-fired electric power plants, major industrial emitters, natural gas utilities, producers and importers of petroleum-based fuels, and certain other parties are obliged to hold EPA-issued emissions allowances or equivalent carbon rights.<sup>3</sup> The allowances (and/or offset credits) must be equal in amount to the metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) that were either (a) emitted in the prior year or (b) would be released upon combustion of a covered fuel produced or imported in the prior year for sale or distribution in interstate commerce.

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<sup>2</sup> The other GHGs are methane (CH<sub>4</sub>), nitrous oxide (NO<sub>x</sub>), sulfur hexafluoride (SF<sub>6</sub>), and hydro fluorocarbon, a per fluorocarbon and nitrogen trifluoride. The EPA is also given discretion to bring other anthropogenic gases under the new program.

<sup>3</sup> As discussed below, per Section 722(d), a covered entity also may be able to meet its annual compliance obligation by holding domestic and international “offset credits,” domestic “term offset credits,” and international emissions allowances.



The new obligations would be phased in for different covered entities from 2012 to 2016. Entities that emit less than 25,000 metric tons of CO<sub>2</sub>e annually would not generally be required to hold GHG emissions allowances.

Based on the foregoing scheme, the point of regulation would vary by industry. Emissions from coal and natural gas would be regulated downstream at or near the point of combustion. Emissions from petroleum-based fuels and natural gas liquids (NGLs) would be regulated upstream where the product is first supplied to the market.<sup>4</sup> Large stationary sources of GHG emissions that are subject to the permit requirements of the CAA (*e.g.*, because they emit other regulated pollutants) would also be required to have a new or amended Title V air permit. The permit would incorporate the new GHG compliance mandates in the bill and would be predicated upon an advance compliance commitment by the sources' owner or operator.<sup>5</sup>

To reduce the compliance costs for covered entities, the program would create a market for emissions allowances and offsets. Once issued, allowances and offsets generally could be freely traded, and the EPA would be required to register and track all transfers. Accordingly, entities with excess allowances would be able to sell them to entities whose annual emissions may exceed their own store of allowances. The total number of allowances generally would decrease by approximately 3 percent each year and the program contemplates that allowance prices would rise over time — thus incentivizing reduced emissions. From 2012 to 2020, allowance prices are expected to range between \$13 to \$26 per ton of CO<sub>2</sub>.<sup>6</sup>

### **Distribution of Free Allowances**

To provide covered entities and consumers with a period to adjust to the compliance costs associated with the GHG caps adopted in Title III, the bill distributes free allowances for an initial period to electric and gas utilities, merchant coal generators, energy intensive industries, small refiners, state governments, and certain other parties. These free allowances are typically phased out after 2025. Some allowances are also set aside to support CCS and other clean energy technologies. Other allowances are to be auctioned to fund various U.S. and international climate adaptation programs. A chart showing the allocation of most allowances is provided in Appendix 1 hereto.

The allocation to utilities is designed to cover approximately 90 percent of the emissions attributable to the fossil fuels they burn or distribute. However, the financial benefit of the allowances must be passed through to rate payers, and Sections 783 and 784 of the bill

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<sup>4</sup> Section 722(b)(12) provides that the party holding title to the NGL when it is separated into merchantable products has the compliance obligation. Midstream entities are also eligible for “compensatory” offsetting allowances, where an NGL is acquired for non-combustion purposes (*e.g.*, because it is used as petrochemical or fertilizer feedstock).

<sup>5</sup> *See* Section 727.

<sup>6</sup> For example, the Congressional Budget Office (CBO) has estimated allowance prices will rise from approximately \$16 to \$26 per ton of CO<sub>2</sub>e in the 2012-2020 period. The EPA has estimated a more modest price rise from \$13 to \$16 per ton of CO<sub>2</sub>e in the 2015-2020 period.



provide special protection for industrial rate payers, permitting a pro rata share of such benefits based on energy use.

During this transition period, only approximately 15 percent of the annual pool of emissions allowances will be auctioned by the government for the direct benefit of energy consumers. Revenues from these auctions will be used to provide tax credits to low income consumers.<sup>7</sup> After 2030, however, the great majority of emissions allowances are to be auctioned with the proceeds used to provide tax refunds on a per capita basis to all U.S. households.

### **Offset Credits**

ACESA contains several other provisions that may substantially reduce the cost of emissions allowances for covered entities. Some of these provisions, however, may also dampen the incentive for covered entities to meet the nominal emissions reduction targets written into the bill from domestic activities.

Most importantly, for compliance purposes, a covered entity may substitute offset credits derived from reducing CO<sub>2</sub> emissions or sequestering CO<sub>2</sub> (or other GHGs) in sectors not directly subject to emissions caps (*e.g.*, agricultural and forestry). Section 722(d)(1) of the bill authorizes up to two billion tons of CO<sub>2</sub>e offset credits annually to meet the compliance requirements of covered entities. This provision inflates the nominal GHG emissions caps for covered entities by up to 30 percent in the early years (before 2020) and by an even larger proportion in later years (*e.g.*, 36 percent in 2030). One half of the available offset tonnage may be satisfied by either domestically sourced offsets or international offsets. However, the EPA can increase the proportion of U.S. emissions that may be offset by international credits by 50 percent (up to 1,500 million tons) if enough low-priced domestic offsets are unavailable.<sup>8</sup>

Offset credits may be issued by both the EPA and the Department of Agriculture (DOA), with the DOA responsible for offsets sourced from domestic agricultural and forestry activities. *See* Title V below. The EPA is charged with drawing up an initial list of appropriate domestic offsets and related validation procedures within one year and adopting final regulations for issuing offsets within two years. Among other rewards for early action, the EPA must also issue domestic offset credits to entities that reduce or sequester GHGs after 2009 under certain voluntary “early action” programs. Eligible projects can only generate early action credits for emissions reductions through the date that is three-years following the enactment of ACESA. These early offset credits also may be exchanged later for emissions allowances.

In consultation with the State Department, the EPA would also issue U.S. offset credits derived from projects in developing countries. Credits may be issued in exchange for pre-existing foreign credits granted pursuant to the Clean Development Mechanism (CDM) or a successor treaty established by the 1992 UN Framework Convention on Climate Change

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<sup>7</sup> This low income energy refund program is detailed in Title IV of the bill.

<sup>8</sup> After 2017, however, a covered entity must hold 1.25 international offsets in lieu of every one emission allowance.



(UNFCCC). The integrity of CDM offsets must be assured by safeguards that are at least as strict as those in the bill, and all offsets generally must be verified by accredited third parties.

In addition to using domestic and international offset credits, a covered party may also satisfy its compliance obligation by using time-limited or “term offset credits” for projects that sequester CO<sub>2</sub> or reduce GHG emissions. However, entities using term offset credits are required to post financial security equal to the cost of obtaining permanent credits or allowances to replace the expired term offsets. The issuance of term offset credits is discussed further under Title V.<sup>9</sup>

### **Other Cost Containment Measures**

ACESA also directs the EPA to create a “strategic” reserve of allowances equal to approximately 2.5 billion tons of CO<sub>2</sub>e. This amount is roughly 2 percent of the total allowance pool from 2012-2050. A portion of this reserve is to be auctioned quarterly, beginning in March 2012, at a minimum auction price of \$28 (in 2009 dollars); the price is subject to a 5 percent annual escalator in 2013 and 2014. Thereafter, prices are set at 60 percent above the rolling three-year average of allowance prices reported by registered carbon trading facilities. Only covered entities are eligible to bid in these auctions and eligible bidders may not buy allowances equal to more than 20 percent of their most recent annual compliance obligations. The EPA is also given authority to outsource strategic reserve auctions to third parties.

In addition, ACESA permits unlimited banking of allowances for use in future compliance years. Allowances with a future “vintage” may also be “borrowed” without interest to satisfy an obligation for the immediately preceding year, thereby creating a rolling two year compliance period.<sup>10</sup> A covered entity also may meet up to 15 percent of its annual obligation by holding allowances with vintages up to five years later than the compliance year, subject to an 8 percent annual in-kind interest payment.

Finally, ACESA permits a covered entity to hold an unlimited number of qualified international emissions allowances for compliance purposes. The use of foreign allowances is to be authorized by the EPA, in consultation with the Secretary of State, if the allowances are issued under a GHG control program that imposes an absolute tonnage limit and is at least as strict as ACESA. This provision, along with the role accorded international offset credits, would make the U.S. an integral part of the global market for carbon rights. This market developed after the 1997 Kyoto Protocol was adopted and is likely to be expanded by any follow-on treaty to curb GHG emissions worldwide that emerges from the upcoming December 2009 meeting of the UNFCCC’s signatories in Copenhagen.

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<sup>9</sup> Significantly, however, if an entity substitutes a regular domestic offset credit for a term offset credit, the use of that domestic credit is not subject to the 50 percent limit on use of such credits. *See* Section 722(d)(2)(D).

<sup>10</sup> The bill contemplates the issuance of a capped number of annual allowances which will have a designated vintage reflecting the annual pool from which the allowance is issued.



## Supplemental Emissions Reductions

ACESA sets aside a special tranche of allowances for curbing global deforestation. Deforestation and other land use changes are responsible for an estimated 20 percent of annual global GHG emissions, and the sponsors of the bill believe that mitigation of these trends outside the U.S. may be more cost effective ton-for-ton than many U.S. GHG reduction measures. The set aside is equal to 5 percent of the total U.S. allowance pool from 2012-2025 and 2-to-3 percent of the pool thereafter. These allowances may be distributed by the EPA as funding in-kind to eligible developing countries, international organizations, and private or public groups to stem deforestation. The goal is to achieve cumulative supplemental GHG reductions of 720 million tons of CO<sub>2</sub>e by 2020 and six billion tons by 2025.

The bill also grants the EPA broad authority under the CAA for drawing up emissions standards for uncapped stationary sources of GHG that exceed 10,000 tons of CO<sub>2</sub>e annually (*e.g.*, are below the proposed 25,000 tons/year threshold) and, in the aggregate, are responsible for at least 20 percent of the uncapped GHG emissions. Under new Section 811 of the CAA, the EPA would be required to bring these uncapped sources under the agency's new standards over a 10-year period. Compliance costs under a new standard are not to exceed the costs that would be incurred if a regulated entity had to obtain emissions allowances.

## Greenhouse Gas Reporting

To evaluate the program's effectiveness and to provide a factual basis for auditing compliance, Part B of Title VII establishes a new federal GHG registry. It is to be based on new quarterly GHG emissions reports from all covered entities beginning in March 2011. The EPA is also directed to obtain quarterly reports from other entities that would be covered by ACESA had they met the annual 25,000 metric tons of CO<sub>2</sub>e threshold, so long as they emit at least 10,000 metric tons of CO<sub>2</sub>e in any year. Emissions data is to be self-certified and filed electronically. The EPA must publish all GHG emissions data on the internet subject to the protection of certain confidential business information.

The GHG registry provisions in the bill are similar but not identical to the EPA's proposed GHG registry rules released for public comment in March 2009.<sup>11</sup> Thus, if the EPA's GHG reporting rules are adopted prior to the passage of ACESA, it is possible that the Congress will defer to the agency's rules and delete any GHG registry provisions from the cap-and-trade provisions. On the other hand, to the extent that any new law would cover a broader range of parties than the agency's reporting rules now contemplate (*e.g.*, because uncapped sources emitting more than 10,000 tons of CO<sub>2</sub>e annually may be subject to future emissions standards), then the current GHG registry rules may remain.

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<sup>11</sup> Significantly, the EPA's proposed rules would not initially require reports from facilities emitting less than 25,000 tons of CO<sub>2</sub>e annually. The EPA also would only require annual rather than quarterly reports.



## Regulation of HFCs

Under ACESA, the global warming impact of hydrofluorocarbons (HFC) would be regulated by amending Title VI of the CAA which already regulates ozone depleting substances, such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs). HFCs, which may have a global warming potential per ton that is several thousand times that of CO<sub>2</sub>, would be a new category of regulated substances under Title VI called “class II, group II” substances.<sup>12</sup>

These HFC provisions reflect the fact that ozone-depleting substances are already heavily regulated under the Montreal Protocol on Substances that Deplete the Ozone Layer (the “Montreal Protocol”) and the CAA regulations implementing that treaty. The amendment is designed to adopt this regulatory architecture for phasing down HFCs while still maintaining adequate supplies until alternatives are developed for important HFC uses, including air conditioning, refrigeration, and various industrial applications.

ACESA therefore establishes an HFC cap-and-trade program separate from the main cap-and-trade provisions for other GHGs. Under the HFC program, any person who produces, or imports a class II, group II substance, or who imports any product containing such substances, must hold one “consumption allowance” for each CO<sub>2</sub>e ton of such substance. Generally, the allowance cap declines by 2.5-to-4 percent annually after 2012 so that HFC allowances are reduced by 85 percent from baseline emissions by 2033.

HFC allowances would be distributed each year via two pools: 80 percent are placed in a producer-importer pool and 20 percent in a “secondary” pool. In 2012, 10 percent of the producer-importer pool is subject to auction, with the percent auctioned increasing each year until 90 percent of such allowances are auctioned in year 2020 and thereafter. Subject to a narrow exception, only producers and importers of class II, group II substances may participate in this auction. Each year following the auction, entities that were producers or importers during the baseline period may purchase the remaining producer-importer allowances.

Allowances from the secondary pool generally may be purchased by (in order of priority): (a) importers of products containing class II, group II substances, (b) persons who purchase such substances for use in a manufactured product or a manufacturing or reclamation process, (c) other persons whom EPA determines have “taken substantial steps to produce or import a substantial quantity of any class II, group II substance,” and (d) producers or importers of such substances in the baseline period.

The bill provides that EPA may also propose a more accelerated phase down of class II, group II substances if, based on the availability of substitutes, it determines that such more stringent schedule is practicable. Further, if the U.S. becomes a party or otherwise adheres to an international agreement, including any amendment to the Montreal Protocol, which

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<sup>12</sup> These Class II, Group II substances include specifically-enumerated HFCs, as well as two hydrofluoroolefins. These substances are collectively referred to herein as HFCs for ease of reference. The EPA may add to the list of Class II, Group II substances any other substance that is used as a substitute for a Class I or Class II substance.



restricts the production and consumption of class II, group II substances, EPA must issue new rules to take into account such an agreement.

EPA is also directed to adopt rules for the issuance of offset credits for the destruction, in 2012 or later, of CFCs. The destroying entity shall receive offset credits equal to .8 times the number of CO<sub>2</sub>e tons destroyed. These destruction offset credits may be held for compliance purposes in lieu of a consumption allowance by a regulated producer or importer.

The HFC provisions include limited exceptions to the phase down of HFCs for critical applications, such as for medical devices and in aviation safety, and for national security and fire suppression applications, to the extent consistent with international agreements.

### **Black Carbon**

New Title VIII, Part C of the CAA, would require the EPA to initiate a major study on black carbon emissions, their potential impact on global warming, and cost-effective abatement options. Black carbon, or soot, is the product of incomplete combustion of fossil fuels or biomass. It can lead to global warming by absorbing heat in the atmosphere or, when deposited on snow and ice, increasing the absorption of sunlight. The latter effect has reportedly contributed to warming in the Arctic.

The EPA is also directed to adopt new regulations to reduce emissions of black carbon if existing CAA regulations are found to be inadequate. In addition, the EPA, in coordination with the State Department, is to review U.S. assistance for reducing black carbon emissions in foreign countries and to recommend further measures to achieve significant emissions reductions.<sup>13</sup>

### **Exemption from Other Federal Controls**

So that entities covered by the new GHG cap-and-trade regime are not also subject to certain additional federal pollution controls, ACESA provides several express carve-outs from the CAA. Specifically, the bill provides that: (1) no GHG may be listed as an air “pollutant” under Section 108 of the CAA on the basis of its effect on climate change;<sup>14</sup> (2) no GHG may be added to the list of hazardous air pollutants under Section 112 of the CAA unless there is a reason for so doing independent of its effects on climate change;<sup>15</sup> and (3) for facilities permitted or modified after January 1, 2009, the “new source review” provisions of the CAA (Title I, Part C) shall not apply based upon a facility’s emission of a GHG. The latter provision of the CAA is designed to prevent significant deterioration

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<sup>13</sup> The bill focuses on the potential for more technical assistance to developing countries that are reliant on solid fuels (wood, dung, charcoal) for home cooking and heating.

<sup>14</sup> This provision of the CAA requires the EPA to draw up lists of air pollutants that may endanger public health or welfare and to establish national ambient air quality standards (NAAQS) for such pollutants which, in turn, provide the basis for mandated pollution controls.

<sup>15</sup> Pollutants listed under Section 112 are subject to emissions standards which typically require the maximum degree of reduction achievable, subject to considerations of cost and technology.



of air quality standards for listed pollutants through a pre-construction permit program for new sources.

In addition, ACESA would bar the EPA from taking into account GHG emissions in determining whether a stationary source is required to apply for or operate pursuant to an air permit under Title V of the CAA. Notwithstanding this provision, as noted earlier, other amendments made to the CAA expressly require the EPA to include the compliance provisions regarding the bill's emission caps in any Title V permit required for a stationary source that is also a covered entity. State Title V air permit programs must also conform with this new requirement within two years. The obligation of the EPA and the states to take into account GHG emissions before issuing Title V permits to entities wishing to construct or modify new fossil fuel power plants is currently the subject of extensive litigation.

### **State Pre-emption**

The new cap-and-trade program mandated by ACESA would not completely pre-empt state GHG regulations. Instead, new Title VIII, Part F to the CAA would place a six-year moratorium (2012-2017) on the implementation or enforcement of analogous GHG emission caps. The moratorium only applies to state GHG controls that are based on an absolute tonnage limit and preserves the right of the states to maintain alternative GHG control measures (*e.g.*, emission performance standards) or to adopt programs addressing entities that are not capped at the federal level. There is also no attempt to pre-empt state GHG reporting rules.

To assist entities facing significant compliance costs under three existing state GHG caps — the Regional Greenhouse Gas Initiative (RGGI), the Western Climate Initiative, and California Assembly Bill 32 — Part H of Title III (at Section 790) directs the EPA to adopt allowance exchange rules. Under the rules, state GHG allowances issued prior to January 1, 2012, when the federal program generally becomes effective, can be exchanged for federal emissions allowances in an amount sufficient to compensate a party for the cost of obtaining and holding the state allowances. Federal allowances so exchanged are to be subtracted from the allowance pool that would otherwise be auctioned.

### **Oversight of Carbon Markets**

The cap-and-trade scheme established by ACESA would be likely to create a market for U.S. emissions allowances and offset credits totaling over \$50 billion a year in 2012. Accordingly, ACESA provides for oversight of the market for carbon rights and derivative instruments by the FERC and the Commodities Future Exchange Commission (CFTC). The FERC is given jurisdiction over trading in government-issued allowances and offsets.<sup>16</sup> The CFTC would regulate derivatives, (futures contracts, swaps) unless an interagency working group to be convened by the President recommends otherwise; in that event additional legislation might be required.

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<sup>16</sup> Recall that under Title I, FERC also will police the market for the new federal renewable energy certificates (RECs) issued by the agency.



Regulators must adopt strict measures to prohibit fraud, market manipulation, and excess speculation. Rules to foster market transparency and to limit or eliminate counterparty risk, market power concentration risks, and other risks associated with over-the-counter trading are also mandated.<sup>17</sup>

The FERC and any other federal agency with jurisdiction over the trading of any regulated emissions right or contract is granted the same enforcement powers as the CFTC. Market manipulation, fraud, and false or misleading statements regarding a regulated instrument is a felony punishable by up to 20 years in prison and a fine of up to \$25 million.

Pending the adoption of comprehensive legislation to reform the regulation of derivatives, ACESA also expands the power of the CFTC to regulate derivative transactions related to energy commodities, including coal, crude oil, gasoline, diesel and jet fuel, propane, electricity and natural gas. The CFTC is granted authority to set position limits regarding such contracts, to require detailed reporting of market data and to mandate clearance of contracts through registered derivatives clearing organizations. Exemptions may be granted for *bona fide* hedging operations.

The broad and unprecedented sweep of these new CFTC market oversight provisions are of widespread concern in the energy industry. Among other things, this concern led to a last minute amendment that provides for the repeal of the CFTC's expanded authority over energy derivatives upon adoption of general "legislation that includes derivative regulatory reform."<sup>18</sup>

### **Regulatory Enforcement**

ACESA includes various provisions to ensure that covered entities meet their annual compliance obligations. If a covered entity fails to hold the required number of emissions allowances, it shall be liable to a penalty equal to twice the fair market value of the missing allowances. The violator also must make up the deficit in the next year or such longer period as the EPA may provide.

Violation of the new CAA titles added by ACESA, or the EPA rules adopted thereunder, may subject a covered entity to civil and administrative penalties under the CAA.<sup>19</sup> Criminal penalties may also be sought by the EPA for knowing violations of the CAA or the EPA's rules. Significantly, however, the bill passed by the House drops provisions in earlier versions that created liberal standing provisions for citizens to bring suit to enforce ACESA.

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<sup>17</sup> As discussed above, the transfer of all emissions allowances and offsets must be recorded by the EPA in a public registry which is designed to track the ownership of allowances.

<sup>18</sup> See Part IV, Subtitle E of Title III at Section 358.

<sup>19</sup> These penalties currently provide for fines of up to \$37,500 per day, per violation.

**Preserving Domestic Competitiveness**

Subtitle A begins by establishing an annual rebate program for certain industrial sectors based around the concept of “carbon leakage.” This term is defined as any substantial increase in GHG by manufacturing entities located in countries without commensurate GHG regulations that is “caused by an incremental cost of production increase in the United States” due to U.S. GHG regulations. Certain energy-intensive, greenhouse-gas-intensive, and trade-intensive sectors and subsectors (defined through the six-digit classification in the North American Industrial Classification System (NAICS)) will be presumptively eligible for the rebate program. In addition, any person may petition the EPA to designate a sector as rebate-eligible. The amount of rebate available is calculated by an entity according to a defined formula taking into account the entity’s cost of compliance with GHG regulations, manufacturing output, GHG emissions-intensity, and electricity efficiency.

Eligible industrial sectors would be determined no later than June 30, 2011, along with the initial value of rebates per unit of production for each sector. By February 1, 2013, the EPA must publish the first updated list of eligible sectors and rebate values, with future updates required every four years. Rebates in the form of emission allowances will be distributed for each vintage year no later than October 31 of the preceding calendar year. Beginning in 2026, the rebate amount is to be reduced by 10 percent annually until the rebate program is phased out. Additionally, the rebates applicable to a particular sector may be subject to an accelerated ten year phase out period based on a Presidential determination that more than 85 percent of the global output from a sector is manufactured in countries that are parties to an international climate change agreement, or otherwise have a GHG intensity comparatively less than that of the comparable U.S. sector.

**International Reserve Allowances**

Subtitle A also states that, absent U.S. participation in a multilateral climate change agreement meeting certain specified objectives by January 1, 2018, or a finding that an international reserve allowance program would not be in the national economic interest as to a particular sector, the President shall establish an international reserve allowance program for each eligible industrial sector. Should the President make such a finding that an international reserve allowance program is unnecessary as to a particular sector for the reasons set forth above, a joint resolution of Congress is necessary to approve such a determination to avoid imposing the program.

If an international reserve allowance program is established, the EPA, in conjunction with U.S. Customs and Border Protection, must adopt rules requiring U.S. importers in identified sectors to purchase international reserve allowances. The program could take effect as early as January 1, 2020. The EPA would also set the price of the allowances equal to the auction clearing price established at the most recent emission allowance auction, and set forth a methodology for determining the quantity of international reserve allowances to be tendered in conjunction with the importation of a covered good.



However, covered goods produced in either “foreign countries that the United Nations has identified as among the least developed of developing countries” or foreign countries responsible for less than 0.5 percent of the total global GHG emissions would be exempt from the program.

### **Green Jobs and Worker Transition**

Subtitle B authorizes the Secretary of Education to award grants to universities and colleges to develop programs of study for careers and jobs in clean energy, renewable energy, energy efficiency, and other forms of climate change mitigation. The Secretary is to give priority to those applications that use innovative means to deliver the curriculum and focus on low performing students and special populations. Under another provision, the Secretary of Labor is also authorized to carry out like programs of study.

### **Consumer Assistance**

Subtitle C establishes an Energy Refund Program within the Social Security Act, under which low-income households are provided with monthly cash reimbursements for their estimated loss in their purchasing power resulting from the implementation of ACESA. To be eligible, household gross income must not exceed 150 percent of the poverty line or the applicable income thresholds required for participation in various nutrition assistance programs. The amount of the refund will be based on an annual calculation by the Energy Information Administration due August 31 of each year, which will estimate the loss in purchasing power in the following year for households of various sizes. The program is funded through an annual allocation of 15 percent of available emissions allowances each year beginning in 2012.

### **Exporting Clean Technology**

Under Subtitle D, the President is to establish an “interagency group” which will determine the eligibility of developing countries to receive assistance to encourage widespread deployment of technologies that reduce GHG emissions and to encourage the adoption of policies that substantially reduce emissions of GHGs. In addition, the assistance will encourage compliance with existing international property rights. Only developing countries that have ratified an international treaty, have put in force national policies, and have undertaken “nationally appropriate” GHG mitigation activities that will achieve substantial GHG reductions are eligible for funding. The Secretary of State, in consultation with the interagency group, is authorized to select eligible projects to receive funding.

Assistance will be allowances allocated for clean technology activities in the form of bilateral assistance to multilateral funds or institutions. Such activities include those that achieve substantial reductions in GHG emissions and/or achieve capacity building. Sample projects include: CCS; renewable electricity generation; projects that increase the efficiency of electricity consumption, distribution, or transmission; and projects that reduce transportation sector emissions through increased efficiency or use of fuels that have lifecycle emissions that are substantially lower than those attributable to fossil fuel-based alternatives.



## **Adapting to Climate Change**

Subtitle E establishes an interagency committee consisting of representatives from various federal agencies conducting global change research to ensure an integrated federal response to the impacts of climate change. The interagency committee is directed to undertake vulnerability assessments, coordinate federal and international activities with global change research activities, and serve as the forum for the development of the “National Global Change Research and Assessment Plan.” The President will develop the Plan, which will contain global change research and assessment. The President will also establish an interagency United States Global Change Research Program, lead by the Office of Science and Technology Policy.

The Under Secretary of Commerce for Oceans and Atmosphere, building upon the resources of the National Weather Service and the weather and climate programs of the National Oceanic and Atmospheric Administration (NOAA), is directed to establish a National Climate Service (NCS). The NCS will coordinate NOAA programs and serve as a clearinghouse to provide federal, state, local, and tribal government decision-makers with access to information relating to the impacts of climate change and adaption to such impacts. Each federal agency<sup>20</sup> is directed to review climate impacts on matters within its jurisdiction and develop plans for addressing those impacts.

The bill also establishes a climate change adaptation fund to provide federal support for state, local, and tribal projects to reduce vulnerability to climate change impacts. In addition, the bill requires the Secretary of Health and Human Services to promulgate a national strategy for mitigating the impacts of climate change on public health. The bill further establishes an interagency Natural Resources Climate Change Adaption Panel to address the impacts of climate change on natural resources. A special fund will be created to carry out adaptation activities related to natural resources.

Finally, to address international adaptation issues, the bill creates an International Climate Change Adaptation Program within USAID to provide U.S. assistance to help the most vulnerable developing countries adapt to climate change.

## **Title V – Agricultural and Forestry Offsets**

Title V of ACESA establishes a program within the Department of Agriculture (DOA) to govern the generation of offset credits from domestic agricultural and Forestry Sources. Farm state legislators insisted on having the DOA, rather than EPA, oversee the issuance of offsets from agricultural and forestry practices in order to enhance and expedite the issuance of offsets from these sectors. To that end, Section 503 of the bill requires the DOA to issue a list of eligible offset projects within one year and specifically details 20

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<sup>20</sup> Including NOAA, EPA, the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, Housing and Urban Development, Interior, and Transportation, as well as the Army Corps of Engineers, the Centers for Disease Control, FEMA, NASA, and the United States Geological Survey.



agricultural, livestock and forestry CO<sub>2</sub> sequestration and management practices that shall be included in the DOA’s list. As with the EPA’s offset programs, however, the DOA offsets will be issued only upon the use of approved methodologies for quantifying and accounting for GHG benefits and reversals, and such offsets must be confirmed by an accredited third-party verification organization.

To facilitate the issuance of offset credits from projects with a crediting period of less than five years, Section 504(d) authorizes the DOA to issue a new category of temporary or “term offset credits.” The DOA may require a project developer seeking such credits to provide insurance or other security to cover the cost of obtaining non-term credits or allowances if the agricultural sequestration or other activity covered by a term offset credit is reversed during the five-year crediting period. Term offsets issued by DOA have the potential to play an important role during the early years of ACESA because they may be issued more quickly than some regular offset credits, even though they may need to be replaced (or renewed) after a few years.

### Allocation of GHG Emission Allowances Under ACESA

Beneficiary	%	Phase Implementation
Electric local distribution companies for the benefit of retail ratepayers	7.0 to 43.75%	2012-2013: 43.75% 2014-2015: 38.89% 2016-2025: 35.0% 2026: 28.0% 2027: 21.0% 2028: 4.0% 2029: 7.0%
EPA auction for the benefit of low income consumers	15.0%	2012-2050
States/tribes to invest in energy efficiency and renewable energy	4.5 to 9.5%	2012-2015: 9.5% 2016-2017: 6.5% 2018-2021: 5.5% 2022-2025: 1.0%, plus 3.55% of the emission allowances for the vintage year four years after 2026-2050: 4.5%
Natural gas local distribution companies for the benefit of natural gas consumers	1.8 to 9.0%	2016-2025: 9.0% 2026: 7.2% 2027: 5.4% 2028: 3.6% 2029: 1.8%
States to support the development, implementation, and enforcement of programs to retrofit existing buildings to achieve energy efficiency improvements	2.0 to 5.0%	2012-2025: 5.0% 2026-2030: 3.0% 2030-2050: 2.0%



Beneficiary	%	Phase Implementation
EPA distribution countries, private or public groups, or to an international fund to support programs to reduce GHG emissions from deforestation in developing countries	2.0 to 5.0%	2012-2025: 5.0% 2026-2030: 3.0% 2031-2050: 2.0%
EPA distribution to owners or operators of a project supporting the deployment of carbon capture and sequestration technology	1.75 to 5.0%	2014-2017: 1.75% 2018-2019: 4.75% 2020-2050: 5.0%
International adaptation ( <i>e.g.</i> , development of national or regional climate change adaptation plans for vulnerable communities/ populations)	1.0 to 4.0%	2012-2021: 1.0% 2022-2026: 2.0% 2027-2050: 4.0%
International clean technology deployment and distribution	1.0 to 4.0%	2012-2021: 1.0% 2022-2026: 2.0% 2027-2050: 4.0%
EPA Strategic Reserve Auction (used to purchase international offset credits)	1.0 to 3.0%	2012-2019: 1.0% 2020-2029: 2.0% 2030-2050: 3.0%
States/Indian tribes for domestic adaptation ( <i>i.e.</i> , implementation of projects, programs, or measures to build resilience to the impacts of climate change)	0.9 to 3.9%	2012-2021: 0.9% 2022-2026: 1.9% 2027-2050: 3.9%
Automobile manufacturers for the development and deployment of clean vehicles	1.0 to 3.0%	2012-2017: 3% 2018-2025: 1%
Natural Resources Climate Change Adaptation Fund	0.615 to 2.46%	2012-2021: 0.615% 2022-2026: 1.23% 2027-2050: 2.46%
Domestic petroleum refineries	2.25%  (0.25% for small business refiners)	2014-2026
States for the benefit of home heating oil and propane consumers	0.3 to 1.875%	2012-2013: 1.875% 2014-2015: 1.67% 2016-2025: 1.5% 2026: 1.2% 2027: 0.9% 2028: 0.6% 2029: 0.3%

Beneficiary	%	Phase Implementation
Energy-intensive, trade-exposed entities	1.5% to varies	2012 to 2013: Up to 2% 2014: Up to 15% 2015-2050: Varies based on use of formula
State agencies for wildlife and natural resource adaptation	0.385 to 1.54%	2012-2021: 0.385% 2022-2026: 0.77% 2027-2050: 1.54%
Distributed by the Director of the Advanced Research Projects Agency-Energy, to support universities, companies, trade groups, etc. engaged in advanced energy research projects	1.05%	2012-2050: 1.05%
Early actors	1.0%	2012: 1.0%
Climate Change Worker Adjustment Assistance Fund	0.5 to 1.0%	2012-2021: 0.5% 2022-2050: 1.0%
Energy Efficiency and Renewable Energy Worker Training Fund	0.75%	2012-2013
Small electricity local distribution companies (less than four million megawatt hours delivered) for energy efficiency, renewable electricity, and low income ratepayer assistance programs	0.1 to 0.5%	2012-2025: 0.5% 2026: 0.4% 2027: 0.3% 2028: 0.2% 2029: 0.1%
State and local governments to support the development, implementation, and enforcement of local energy efficiency building codes	0.5%	2012-2050: 0.5%
Energy Innovation Hubs ( <i>i.e.</i> , universities, state or federal institutions, NGOs specializing in the development of renewable energy technologies)	0.45%	2012-2050: 0.45%
Owners or operators of certain eligible cogeneration facilities to avoid disincentives to the continued use of existing energy-efficient cogeneration facilities	0.35%	2012
Secretary of Agriculture and Secretary of Energy to support supplemental agriculture and renewable energy programs to reduce GHG emission or sequester carbon	0.28%	2012-2016
Climate Change Health Protection and Promotion Fund	0.1%	2012-2050



Beneficiary	%	Phase Implementation
Domestic adaptation ( <i>e.g.</i> , climate change research)	0.03 to 0.05%	2012-2017: 0.05% 2018-2050: 0.03%
EPA auction for deficit reduction	Any unallocated allowances	2012-2025
Climate Change Consumer Refund Account	Any unallocated allowances	2026-2050

**This paper was authored by Vinson & Elkins lawyers [Christopher Carr](#), [Tres Cochran](#), [John Decker](#), [Larry Nettles](#), [Gregory Staple](#) and [John So](#). To learn more about V&E's [Climate Change](#), [Federal Public Policy](#) or [Energy](#) practices, visit our website.**

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