

Climate Change Regulation

V&E's Guide to the American Power Act

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Analysis of the American Power Act

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V&E's Guide to the American Power Act

This guide provides an overview of the nearly 1,000-page energy and climate change policy bill introduced by Senators Kerry and Lieberman on May 12, 2010. The American Power Act (APA or “the Act”) is anticipated to reach the Senate floor for debate sometime in late June or July, and if passed, would go to conference with the American Clean Energy and Security Act (ACESA), passed by the House last summer.¹ As introduced, the bill has six major titles.

Title I focuses on promoting clean energy development in the United States. Subtitle A provides important incentives and guarantees to hasten the development of new nuclear generation capacity in the United States. Subtitle B addresses offshore oil and gas production, and reflects the need to increase domestic production to promote energy security while learning from the Deepwater Horizon incident and implementing proper environmental safeguards. Subtitle C provides significant new incentives for the development and deployment of carbon capture and geologic sequestration (CCS) technologies. Subtitle D provides emission allowances to support the development of renewable energy technologies. Subtitle E provides incentives to increase the efficiency of the transportation system.

Title II focuses on reducing greenhouse gas (GHG) pollution by placing a cap on greenhouse gas emissions that would gradually decrease emissions over time. Overall, the cap requires a 17 percent reduction from 2005 emissions levels by 2020 and an 83 percent reduction from 2005 emissions levels by 2050.

The American Power Act is anticipated to reach the Senate floor for debate sometime in late June or July, and if passed, would go to conference with the American Clean Energy and Security Act (ACESA).

Title II expands the Clean Air Act to include a new cap-and-trade program for large stationary sources of emissions. This cap-and-trade program would begin in 2013 for the electricity generation sector and in 2016 for all other covered

entities. Title II also would establish an offset credit program. Significantly, Title II would preempt Environmental Protection Agency (EPA) regulation of GHGs under other portions of the Clean Air Act and would preempt state and regional cap-and-trade programs.

Title III focuses on protecting consumers from the impacts of GHG regulation on power costs by providing several forms of economic relief. Title III allocates emission allowances to power generation companies in order to provide ratepayer benefits. Title III would also establish direct refund programs for low income households as well as a universal taxpayer benefit starting in 2026.

¹ For a summary of the key provisions of the American Clean Energy and Security Act, see V&E's Guide to the American Clean Energy and Security Act (ACESA), [www.velaw.com/resources/GuidetoAmericanCleanEnergySecurityActof2009\(ACESA\).aspx](http://www.velaw.com/resources/GuidetoAmericanCleanEnergySecurityActof2009(ACESA).aspx).



Title IV seeks to protect domestic manufacturing and energy jobs through a combination of programs. Title IV provides the manufacturing sector with emission allowances and also requires countries that lack domestic GHG caps to submit allowances with imports to the U.S. to offset the cost advantage of production without greenhouse gas regulations. Title IV also provides for education programs for clean energy jobs as well as tax incentives for clean fuel vehicles. Title IV departs from greenhouse gas regulation by imposing requirements amending the Emergency Planning and Community Right to Know Act to require the disclosure of chemical constituents used in hydraulic fracturing.

Title V addresses international climate change activities. Title V seeks to reduce international greenhouse gas emissions by creating incentives to decrease deforestation in developing countries. Title V also provides for development assistance for climate change adaptation.

Finally, Title VI addresses domestic climate change adaptation. Title VI concentrates on dealing with the impacts of climate change on natural resources.

The remainder of this guide provides a more detailed explanation and analysis of the APA and, where relevant, highlights major differences between the APA and ACESA.

Title I - Clean Energy Development

Subtitle A - Nuclear Power

Subtitle A of Title I seeks to encourage the development of nuclear power generation in the U.S. by providing financial incentives, including accelerated depreciation, investment tax credits, grants, and additional funding for the nuclear loan guarantee program. In addition, the Act directs the Nuclear Regulatory Commission (NRC) to develop and implement expedited licensing procedures for new nuclear reactors; provides for investment in research and development of small, modular nuclear reactors; and requires that the Department of Energy (DOE) designate an existing national laboratory as the lead nuclear waste processing development site in the U.S.

Improvements Regarding Efficiency of Regulatory Process

Subtitle A of Title I directs the NRC to establish and implement an expedited procedure for issuing the combined construction and operating license (COL) for qualified new nuclear reactors. In order to qualify for such expedited procedures, the applicant must propose: (a) a nuclear reactor design that has been approved by NRC; (b) a construction site where an operating reactor already exists that has been granted an early site permit; and (c) a means for demonstrating “sufficient financial commitment to the project” and a “preparedness to proceed in earnest” when the COL is issued (by, for example: (i) purchasing, or contracting to purchase, long lead time materials; or (ii) obtaining financing for the project).

Within 90 days after enactment of the APA, the NRC must recommend procedures to Congress that would enable NRC to pursue a transparent, fact-based process to make decisions regarding licensing as expeditiously as possible. This proposed process must



include an efficient process for interested parties to participate in the proceedings and for legitimate concerns to be heard and resolved without undue delay. Within one year after enactment of the APA, the NRC must report to Congress regarding “technology-neutral” guidelines for nuclear plant licensing in the future to facilitate entry of new technologies into the marketplace.

Title 17 Innovative Technology Loan Guarantee Program

Subtitle A of Title I increases the total amount of funding for nuclear loan guarantees from \$47 billion to \$100 billion under the Innovative Technology Loan Guarantee Program and specifically increases the amount of funds available for loan guarantees for nuclear power plants from \$18.5 billion to \$54 billion. In addition, the Energy Policy Act of 2005 (EPA 2005) is amended to require the Secretary of the Department of Energy (Secretary) to collect a loan guarantee retention fee from each advanced nuclear energy facility project to which the Secretary has made a guarantee. The Secretary cannot collect the loan guarantee retention fee until the date (the “Retention Fee Start Date”) that is five years after the date that the project is completed and the rate is as follows: (a) during the one-year period after the Retention Fee Start Date: 0.5 percent; (b) during each one-year period thereafter until the 10th anniversary of the Retention Fee Start Date: the sum of (A) the rate charged during the prior one-year period and (B) 0.5 percent; and (c) for each one-year period after the 10th anniversary of the Retention Fee Start Date: 5 percent

Standby Support for Certain Nuclear Plant Delays

The APA expands the regulatory risk insurance under EPA 2005 to include as many as 12 reactors instead of six. The Secretary may enter into contracts with the sponsors of advanced nuclear facilities² that cover, at any one time, up to 12 reactors, which shall consist of not less than two and not more than four different reactor designs. With respect to advanced reactors that receive the COL and commence construction but are delayed for regulatory reasons, the Secretary is directed to pay 100 percent of certain covered costs up to a maximum limit of \$500 million per contract. EPA 2005 is further amended to include debt obligations incurred to pay “increased project costs” within the subcategory of covered costs for an advanced nuclear facility owned by a non-federal entity. The term “increased project costs” means the increased costs of constructing, commissioning, testing, operating, or maintaining a reactor prior to full-power operation³ incurred as a result of a delay covered by the contract, including demobilization/remobilization costs, increased costs of equipment, materials, and labor due to delay, increased general and administrative costs, and escalation costs for completing construction.

² “Advanced nuclear facilities” are defined in EPA 2005 as any nuclear facility the reactor design for which is approved after December 31, 1993 by NRC and such design or a substantially similar design if comparable capacity was not approved on or before that date.

³ Full-power operation is defined as the earlier of: (a) the commercial operation date, or equivalent term pursuant to the financing documents for the facility or (b) the date on which the facility operates at 50 percent or more of nameplate generating capacity during any consecutive 30 day period after completion of start-up testing.



Spent Fuel Recycling Research and Development Center

The APA requires the Secretary to designate an existing National Laboratory as a “spent fuel recycling research and development center of excellence” to serve as the lead site for continuing research and development of advanced nuclear fuel cycles and separation techniques. The center of excellence is supposed to conduct research initiatives to: (a) develop technologies that reduce the quantity of waste requiring disposal or storage and (b) ensure adequate protection against the proliferation of nuclear materials that could be used in the manufacture of nuclear materials. In selecting the center of excellence, the DOE Secretary is instructed to give preference to the site that has the most technically sound bid, demonstrated technical expertise in spent fuel recycling, and community support.

Non-Contested Hearings

The APA amends the Atomic Energy Act of 1954 (AEA) by removing the requirement that an administrative hearing regarding non-contested issues be held prior to granting construction permits or operating licenses for nuclear facilities. The APA does not purport to make any changes or amendments to AEA with respect to public hearings regarding contested issues.

Environmental Reviews for Nuclear Projects

The APA also amends the AEA to provide that, in a proceeding for a combined construction permit and operating license for a site at which an early site permit has been issued, only a supplemental environmental impact statement (SEIS), building upon the data and conclusions from the original environmental impact statement (EIS) conducted when the plant was initially licensed, will be required. This SEIS should incorporate by reference the analysis, findings, and conclusions from the early site permit EIS, supplementing the findings, analysis, and conclusions regarding matters resolved in the early site permit proceeding only to the extent that such information is “new” and “significant in that the information would materially change the prior findings or conclusions.”

Extension of Duty Suspension for Certain Nuclear Parts

Subchapter II of the Harmonized Tariff Schedule of the United States is amended by suspending for an additional 10 years the duty on certain components used in nuclear facilities that are not available in the U.S., including: water tube boilers, reactor vessels, pressurizers, reactor coolant system loop pipe and cold legs, heat exchangers, main step-up transformers, steam turbines, generators, condensers, and moisture separator re-heaters. In each case, the duty is suspended when these parts are purchased for use in nuclear facilities provided that the contract for purchase is entered into prior to December 31, 2010.

Tax Incentives for Nuclear Power

Subtitle A provides a number of tax incentives for the development of new nuclear power facilities. These proposals are similar to existing tax incentives for renewable energy generation, including wind and solar.



Five-Year Accelerated Depreciation. New nuclear power facilities (not including buildings or their structural components) placed in service after the date of enactment would be entitled to five-year depreciation.

Ten Percent Investment Credit. New nuclear power facilities placed in service before January 1, 2025, would be eligible for an investment tax credit (ITC) equal to 10 percent of eligible basis. A taxpayer may also claim the ITC for certain qualified progress expenditures with respect to a nuclear power project during a taxable year even if the project has not yet been placed in service. Rules similar to the existing ITC rules for solar property would apply, including a 50 percent basis reduction and recapture of the ITC if the taxpayer's interest in the property is sold within five years of the date the facility was placed in service. Taxpayers would be able to use the ITCs to offset their alternative minimum tax liability. A taxpayer eligible for the advanced nuclear facility production tax credit may elect that credit instead of the ITC.

Advanced Energy Project Credit. Eligibility for the 30 percent credit for new manufacturing facilities would be extended to facilities used to produce an advanced nuclear power facility.

Amendment of Production Tax Credit. The national limitation for the existing production tax credit (PTC) for advanced nuclear power facilities would be increased from 6000 megawatts to 8000 megawatts. In addition, if a project is owned by a public-private partnership, a qualified public entity (e.g., a government-owned utility or an electric cooperative) would be permitted to transfer its allocation of PTCs to a non-public partner; the transfer would not be considered a private use under the tax-exempt financing rules.

Treasury Grants in Lieu of Tax Credits. Public power providers and cooperatives that place nuclear power facilities in service would be eligible for 10 percent grants from the Treasury Department in lieu of tax credits. Recapture rules similar to the existing rules for grants in lieu of tax credits for renewable energy would apply.

Subtitle B - Offshore Oil And Gas

Responding to the Deepwater Horizon accident, Subtitle B of the APA calls for a moratorium on new offshore drilling activities, greater producer liability for offshore drilling accidents, more stringent safety regulations, and veto power for the states in determining whether to allow offshore drilling. In an attempt to expand offshore oil and gas production, Subtitle B also increases revenue sharing to give states a larger portion of the royalties from offshore production.

The bill's oil and gas provisions focus primarily on creating a system of revenue sharing between the federal government and the states for new production areas. Coastal states⁴ will receive 37.5 percent of the federal government's revenues from lease rental and royalty

⁴ The bill defines coastal states as states that are within 300 statute miles of a leased offshore tract that had no oil or gas production on January 1, 2000, and are not Gulf Producing States as defined in section 102 of the Gulf of Mexico Energy Security Act of 2006, 43 U.S.C. 1331.

payments, proceeds from the sale of royalties taken in kind, and any revenues from federal bidding systems.

While the APA would substantially increase the amount of revenues available to states, it does not distribute all of these revenues directly to the states. The bill specifies that 20 percent of each state's share of royalties from a given leased tract will go to counties in coastal states that lie within the coastal zone⁵ and are within 300 statute miles of a leased offshore tract. An additional 33 percent of Alaska's share of federal royalty revenues will go directly to Regional Corporations established under section 7(a) of the Alaska Native Claims Settlement Act. State revenues from each leased tract will be distributed among qualifying counties in inverse proportion to each county's distance from the leased tract. Payouts to the states may not exceed \$500 million in any fiscal year.

The federal government will also pay 12.5 percent of applicable federal royalty revenues into the land and water conservation fund established under section 2 of the Land and Water Conservation Fund Act of 1965. Fifty percent of the remaining federal royalties (after revenue is shared with the states) will go toward direct federal deficit reduction.

The APA amends Section 12 of the Outer Continental Shelf Lands Act to withdraw federal preemption over offshore drilling. If a five-year plan developed by the Secretary of the Interior pursuant to section 18 of the Act includes an area off the coastline of a state that is eligible to receive revenue sharing, the Secretary must prepare an impact assessment covering the probability of an oil spill, taking into consideration (i) the anticipated volume of oil in the area, (ii) the location of planned exploration and drilling activities in the area, and (iii) local tides, currents, winds, and weather patterns and events, such as hurricanes. It must

The bill specifies that 20 percent of each state's share of royalties from a given leased tract will go to counties in coastal states that lie within the coastal zone and are within 300 statute miles of a leased offshore tract.

also consider the environmental impact of an oil spill on the coastline of the state, the impact on the coastal economy of the state or any other states that would be directly impacted by an oil spill, and the impact on any military operations in the area. If the assessment indicates

that "a State would be significantly impacted by an oil spill resulting from drilling activities," the state may enact a law prohibiting the federal government from issuing oil and gas leasing in the area proposed for drilling. States may prohibit the federal government from leasing for oil and gas, or natural gas, within 75 miles of the coastline of the state. Should a state pass such a law, its governor may request that an area within 75 miles of the coastline of the state be withdrawn from the applicable five-year plan. The Secretary of the Interior will have 90 days to approve such a request. If the request is not approved within 90 days, it will be considered approved. The Secretary of the Interior will then have 180 days from approval to amend the applicable five-year plan to reflect the action of the state. States can impose prohibitions on either oil or natural gas leasing, or on both.

⁵ The Coastal Zone is defined by reference to the Coastal Zone Management Act of 1972, 16 U.S.C. 1453.



Subtitle C - Coal

Although focused primarily on coal-fired electric generating utilities, Subtitle C describes the implementation of a carbon capture and geologic sequestration (CCS) not only for coal-fired facilities, but also for any other significant (emitting more than 50,000 tons of CO₂ per year) industrial sources (ISs) of CO₂ emissions that use coal as a power source.

National Strategy for CCS Development

Part I of Subtitle C lays out a framework to develop a “national strategy” for CCS and establishes various deadlines for creating a task force to study and deliver reports to identify existing barriers to the deployment of CCS including existing laws and regulations applicable to CCS:

Within 180 days, a task force drawn from the Departments of the Interior, Energy and Transportation, state and tribal agencies, state attorneys general, academics, and non-governmental organizations will be formed.

Within 18 months after enactment of the APA, the task force is supposed to deliver a report covering the following: (i) existing environmental laws applicable to CCS; (ii) statutes applicable to existing enhanced hydrocarbon recovery (EHR); (iii) models for public or private assumption of CCS risks; (iv) private sector mechanisms, including insurance, to manage CCS safety risks; and (v) mineral, water, and property rights laws and statutes affecting CCS.

Within one year after enactment of the APA, the Administrator of the EPA is supposed to submit two reports to Congress: (1) a report identifying key legal, regulatory, and other barriers to commercial-scale deployment of CCS and which barriers (A) could be addressed at the federal level under existing authority, (B) would be best addressed by new federal laws, and (C) would be best addressed at the state, tribal, or regional level; and (2) a report summarizing the Administrator’s study of the means by which, and under which circumstances, existing environmental laws administered by the EPA could apply to CCS.

Special Funding Program

Part II establishes a “Special Funding Program” to accelerate the commercial availability of CCS technologies, only if, within 180 days of enactment, state regulatory agencies of 30 states (including Washington, D.C. and Puerto Rico) opt into the program.

Under the Special Funding Program, assessments would be levied on fossil fuel-based electric utilities to raise money for grants for commercial-scale CCS projects. The Special Funding Program is designed to raise between \$2.0 and \$2.1 billion per year by assessing a



fuel type-based fee on electric utilities.⁶ To be eligible for grant funding, the projects must be significant; no grants will be awarded to projects smaller than 100 megawatts (MW), and only 20 percent of the grants will be awarded to projects between 100 and 300 MW. The assessed electric utilities are not precluded from recovering the assessments levied on them from their customers, if otherwise permitted under applicable federal and state laws. The APA includes special provisions applicable to the assessments made on qualified scheduling entities in Electric Reliability Council of Texas (ERCOT), requiring that the amounts assessed shall take into account the number of renewable energy credits retired by the load serving entities represented by a qualified scheduling entity during the prior calendar year.

CCS Program Partnership Council

A CCS Program Partnership Council (Council) of not more than 15 members, comprising representatives from investor-owned utilities, state and local government utilities, retail electric cooperatives, fossil fuel producers, nonprofits, independent generators or wholesale providers, consumer groups, and employee organizations, will advise and make recommendations to the Secretary of Energy and the Special Funding Program Director regarding grants to CCS applicants. A majority of the voting members on the Council will be representatives of the electric utilities that pay the assessments.

Distribution of Emission Allowances to Fund CCS Development

Part III amends the federal Clean Air Act (CAA) to provide for the distribution of emission allowances to qualified EGUs to support the development of CCS. A “qualifying” electric generating unit (EGU), is a unit of an electric utility that (1) derives at least 50 percent of its annual fuel input from coal, waste coal, petroleum coke, or any combination thereof; (2) has a nameplate capacity of 200 megawatts or more or, in the case of retrofit, the CCS technology will be applied to a flue gas or fuel gas stream from at least 200 MW of the total nameplate capacity of the unit; (3) reduces CO₂ emissions from the unit by 50 percent or more; (4) geologically sequesters, or convert to a stable form, the CO₂ safely and permanently; (5) meets all other applicable permitting requirements; and (6) is located in the U.S.

Essentially the same requirements apply to ISs, except there is no coal-based fuel input requirement (thus, gas-fired generation facilities could be ISs), and the 200 MW capacity requirement for EGUs is replaced with a requirement that the ISs emit 50,000 tons or more of CO₂ per year. Note: although CCS is defined to be “permanent” sequestration or conversion, a provision of the APA contemplates reducing emission allowances otherwise available for CCS, if the CCS is undertaken in connection with enhanced hydrocarbon recovery, and if the costs the allowances are intended to pay would otherwise have been incurred without receiving the allowances, due to the value of the hydrocarbon recovery. Presumably the permanent sequestration of CO₂ in the enhanced hydrocarbon recovery context is the CO₂

⁶ The initial fee structure has the following minimum assessments: coal – \$0.00145/kilowatt-hour (kWh); natural gas – \$0.00074/kWh; and oil – \$0.00108/kWh.



injected and not recycled, but the APA does not specifically provide for mechanisms to measure or account for recycled CO₂.

Phase I of the distribution of emission allowances is intended to apply to projects with approximately 20 gigawatts (GW) of treated generating capacity. Phase I is divided into two tranches of 10 GW of treated generating capacity each. None of the emission allowances for the first tranche are available to ISs, but up to 15 percent of the allowances to be applied to the second 10 GW of capacity are available to be distributed to ISs. The APA does not specify how CCS technologies deployed at ISs that do not generate electricity will reduce the second tranche’s limit of 10 GW of treated capacity.

The EPA Administrator will determine the emission allowances to be distributed to a qualifying EGU by applying a formula using (i) the metric tons of CO₂ emissions avoided, (ii) a sliding scale “bonus allowance value,”⁷ and (iii) the average fair market value of an emission allowance during the year preceding the earlier of (a) the year the project received an advance emission allowance and (b) the year the project actually sequestered the CO₂. For the second tranche’s 10 GW of treated generating capacity, the sliding scale for the bonus allowance value still begins at \$50 for a 50 percent reduction in emissions, but is capped at \$85 for reductions of 90 percent or more. If the owner of an eligible project submits a notice to the Administrator by January 1, 2012, that it will use CCS technology and commences operation by not later than January 1, 2017, the bonus will be increased by \$10 per ton of reduction.

Phase II will commence after CCS technologies have been applied to treat 20 GW of U.S. electric generating capacity. In Phase II, distribution of emission allowances will be allocated 85 percent to EGUs and 15 percent to ISs, pursuant to at least two “reverse auctions” per year. Owners of eligible projects will submit bids in the reverse auctions that include: (i) the desired level of CO₂ CCS incentive and (ii) the estimated quantity of CO₂ to be permanently

For the second tranche’s 10 GW of treated generating capacity, the sliding scale for the bonus allowance value still begins at \$50 for a 50 percent reduction in emissions, but is capped at \$85 for reductions of 90 percent or more.

sequestered over a 10-year period. Winning bids will be selected based on the lowest incentives per ton of CO₂ expected to be sequestered, until available allowances are committed. If the Administrator determines a reverse auction

will not result in efficient, cost-effective deployment of CCS technologies, the Administrator may distribute allowances in a different manner, pursuant to regulations to be promulgated, based on the number of tons of CO₂ captured and permanently sequestered, or on a first-come, first-served basis.

⁷ The bonus allowance value begins at \$50 for the minimum 50 percent sequestration growing in direct proportion with increasing rates of capture and sequestration to \$96 if 90 percent or more of a unit’s CO₂ is sequestered.



The APA restricts the ability of “covered” EGUs to obtain emission allowances. A “covered” EGU is a utility unit required to have a permit under section 503(a) of the CAA, and authorized to have at least 30 percent of its annual heat input from coal, petroleum, coke, or a combination thereof. Covered EGUs will be subject to limitations on their eligibility for emission allowances based on (i) when the covered EGU is initially permitted and (ii) how long after commencement of operations the unit first achieves, and maintains, at least a 50 percent reduction in annual CO₂ emissions. These limitations will apply to existing and currently proposed EGUs, with EGUs initially permitted from January 1, 2009 to December 31, 2014, requiring particularly involved calculations regarding reductions of allowances. Covered EGUs initially permitted from January 1, 2015 to December 31, 2019, are ineligible to receive allowances unless they achieve the 50 percent reduction of CO₂ emissions upon commencement of operations and maintain it thereafter. Regulation of covered EGUs — after 2019 and more generally — is addressed at more length in Part IV of Subtitle C of the APA, discussed below.

A project owner may apply to the Administrator for certification that the project is eligible for emission allowances if (i) the owner demonstrates a commitment to construct a project that meets the criteria of a “qualifying” EGU; and (ii) the Administrator considers it eligible based on a consideration of documentation including the following: (A) in the case of a planned project receiving advanced distribution of allowances, a commitment to implement CCS within 18 months after commencement of operations; (B) technical information;

Reservations of allowances can be terminated if the owner does not achieve “a reasonable number of milestones for commencing construction or commercial operation of the project.”

(C) annual reductions in CO₂ expected be achieved over 10 years; (D) demonstration of owner’s commitment to construct the project; (E) amount of federal funding received; and (F) an assessment of the costs of constructing the project. Commitment by the owner to construct the project can be

demonstrated by any one of the following: (i) a commitment by lenders or “other appropriate entities” to finance the project; (ii) an authorization by a state regulatory authority to allow recovery of the project’s costs from retail customers of a state-regulated utility that plans to construct the project; (iii) an authorization by a state legislature to allow recovery from retail electric utilities that are required to purchase some or all of the electricity of the project, if the project has been approved by the legislature and retail electric providers are required by law to purchase all of the project’s net output; or (iv) a commitment by the owner to execute a surety bond “in sufficient amounts” no later than two years after the Administrator issues the certification for the project.

Reservations of allowances can be terminated if the owner does not achieve “a reasonable number of milestones for commencing construction or commercial operation of the project.” If the average annual emissions avoided over a three-year period are less than were projected, future allowances shall be reduced to make up the difference. The Administrator may provide advanced distribution of emission allowances for Phase I projects in an amount equal to 70 percent of the expected allowances for projects in the first tranche of Phase I and 50 percent



for projects in the second tranche. The advanced distributions shall equate to no more than certain costs specified in the APA that are incurred during the construction phase of the project. If the advanced distributions exceed the emission allowances to which the project is ultimately entitled, based on actual CO₂ reductions, the owner and Administrator have an array of reconciliation techniques available, including the owner's increasing future CO₂ sequestration, the Administrator's reduction of future distributions of emission allowances, or equalizing payments in cash or allowances by the owner over a period of 18 months.

Performance Standards for Coal and Petroleum Coke-Fired Power Plants

The APA would amend the CAA to establish performance standards for carbon dioxide emissions from coal and petroleum coke-fired power plants. The specific performance standards that would be set by the bill are identical to those proposed in ACESA, passed by the House last summer. Plants permitted between January 1, 2009 and December 31, 2019, would be required to meet an emissions limitation representing at least a 50 percent reduction in carbon dioxide emissions, or a more stringent limitation set by EPA. The compliance date would be the earlier of January 1, 2020, or four years after EPA publishes a report concluding that there are power plants in commercial operation and equipped with carbon capture and sequestration technology with a cumulative capacity of at least 10 gigawatts and meeting other specified thresholds. Starting 18 months after enactment, EPA would be required to publish semi-annual reports on the capacity of power plants equipped with carbon capture and sequestration technology.

Plants permitted after January 1, 2020, would be required, upon startup, to meet an emission limitation that represents at least a 65 percent reduction in carbon dioxide emissions, or a more stringent standard set by EPA. Individual power plants would have the option of requesting an 18-month extension of the applicable performance standard deadline based on a showing of technical infeasibility. The bill would require EPA to promulgate rules implementing the performance standards within two years of enactment.

Incentives for Retiring or Retrofitting Coal-Fired Power Plants

The APA would amend the Internal Revenue Code to provide tax benefits for qualifying replacements or retrofits of coal-fired power plants, and require the establishment of a task force to study and issue a report within one year of enactment on whether various types of financial and other types of incentives would be effective in promoting and accelerating a transition from the use of coal-fired power plants to the use other technologies to generate electricity.

Subtitle D - Renewable Energy and Energy Efficiency

Subtitle D contains a number of programs to promote the development of renewable energy and the adoption of energy efficiency measures. Overall, Subtitle D's programs are locally-focused and small scale, and they do not rise to the level of the energy efficiency and renewable energy provisions in the House bill.



The APA amends the Consolidated Farm and Rural Development Act to create the Rural Energy Savings Program. The Rural Energy Savings Program would allow public utilities to make low interest loans to consumers for investments in energy efficiency. Under the program, allowances are granted to public utilities that are part of the Rural Utilities Service, and these allowances are used to make loans to customers. The loans under the Rural Energy Savings Program are to be used by customers to install energy efficiency measures that use commercial off-the-shelf technologies to reduce home energy use. The money would be distributed from 2012 – 2015 from Clean Air Act allowances allocated to this program. Customers must then repay their loans over a period of 10 years through an additional charge on their utility bill.

In order to receive allowances under the Program, the rural utilities must prepare implementation plans with lists of energy efficiency measures, and they must measure and verify the effectiveness of loans under the Rural Energy Savings Program. The rural utilities could also qualify for jump-start grants to help defray the costs of implementation of the program. The Rural Utilities Service is required to hire a contractor to provide measurement and verification services.

The bill provides for one or more loan demonstration projects to serve areas with a large percentage of manufactured homes or housing units more than 50 years old. Agreements for the demonstration projects must be entered into within 90 days of the bill being enacted.

The APA would also provide allowances to states and Indian tribes for renewable energy and energy efficiency programs from 2012 – 2021. These allowances may be used for energy efficiency programs related to more efficient building codes, energy-efficient manufactured homes, building energy performance labeling, low-income community efficiency improvements, and retrofits of existing buildings. The state allowances may

Perhaps most significant are the renewable energy provisions that the Senate bill does not include.

also be used for renewable energy purposes including the deployment of technologies to generate electricity from renewable sources and, in urban settings, deployment of facilities and equipment in and on buildings —

such as solar panels — to generate electricity or thermal energy from renewable resources. In addition, the state allowances could be used for cost-effective energy efficiency programs for end-use consumers, enabling the development of a smart grid, and providing the non-Federal share of support for surface transportation capital projects (up to 10 percent of the allowances). The bill would require the states to report on the use of their allowances and the success of the programs implemented.

Perhaps most significant are the renewable energy provisions that the Senate bill does not include. ACESA (the “House bill”) included a national renewable energy standard that would require utilities to obtain 20 percent of electricity from renewables and increased energy efficiency, but the Senate bill does not contain any similar provisions. In addition, ACESA mandated the adoption of a national energy efficiency building code and contains several additional provisions to promote energy efficiency through building retrofits and community



design. A bill that came out of the Senate Energy Committee last summer (the “Bingaman bill”) contained a national renewable energy standard, so it is possible provisions from the Bingaman bill may be merged with the APA before it reaches the Senate floor.

The House bill also contained provisions to help in siting transmission lines (expanding FERC jurisdiction in the Western Interconnection) and encouraging the development of a national smart grid. The APA does not include similar provisions, other than allowing states to use their allowances for smart grid development.

Despite the limited direct incentive for renewable energy, Senators Kerry and Lieberman argue that the entire bill is a renewables bill because the price on carbon alone should drive increased investment in renewable energy. They state that the bill will help America return to its position as the world’s clean energy leader because pricing carbon through a cap-and-trade system should spur renewable energy demand and drive innovation. While the bill does contain substantial incentives to support clean coal and nuclear, discussed above, it lacks a direct support structure for renewable energy and smart grid development. However, the Bingaman bill, which Senator Kerry has stated will be incorporated into the APA, does contain both transmission improvement and federal renewable energy portfolio standards provisions.⁸

Subtitle E - Clean Transportation

Electric Vehicle Infrastructure

The APA calls for the establishment of the National Transportation Low-Emission Energy Plan pilot program. Under the program, the Secretary of Transportation is required to develop a National Transportation Low-Emission Energy Plan (the “Plan”), supporting the use of electric vehicles. By January 1, 2020, the Plan must analyze and identify infrastructure and standardization needs to support electric cars.

Transportation Planning and Efficiency to Reduce Greenhouse Gas Emissions

The APA also requires federal, state, and local governments to do their part in reducing transportation-related GHG emissions. In particular, the bill would amend the CAA to require the Secretary of Transportation to establish “national transportation-related [GHG] emission reduction goals,” commensurate with the overall emission reduction targets established by the bill. However, meeting transportation-related GHG emission reduction goals would largely be the responsibility of individual states and metropolitan planning organizations (MPOs). Indeed, the bill requires that both states and MPOs develop surface transportation-related GHG emission reduction plans, which must identify emission reduction targets and strategies to meet those targets. States and MPOs must submit these plans to the Secretary of Transportation and the EPA Administrator for certification, and failure to meet certification requirements renders uncertified states and MPOs ineligible for certain grants.

⁸ American Clean Energy Leadership Act of 2009, S.1462, 111th Cong. (2010).



The bill provides that between 2 and 4 percent of total emission allowances, depending on the year, would be distributed to states and MPOs to support the development, updating, and implementation of their surface transportation-related GHG emission reduction plans. These allowances would be distributed based on population (10 percent) and other merit-based factors (90 percent) such as total GHGs to be reduced and plan effectiveness.

Despite heavy reliance on states and MPOs to develop surface transportation-related GHG emission reduction plans, the federal government will still play a significant role in influencing the course of such plans. In particular, the bill requires the Secretary of Transportation to develop standardized emission models to be used by states, MPOs, and air quality agencies to track, analyze, and research actual and projected surface transportation-related GHG emissions. Moreover, the EPA Administrator and the Secretary of Transportation must evaluate the nation's progress towards reaching its GHG emission reduction goals at least once every six years, by examining such variables as improvements in vehicle efficiency, use of transportation fuels, reduction in miles traveled, and changes in consumer demand.

Highway Trust Fund

Finally, Subtitle E allocates the proceeds from the sale of emissions allowances to the Highway Trust Fund. Through allowance sales, the APA will allocate up to \$2.5 billion per year from 2013 to 2034 to the Highway Trust Fund for measures to increase the safety, efficiency, and effectiveness of transportation. The distribution of allowances to the Highway Trust Fund would be a substantial contribution to a program that has been constrained by the fact that its primary source of revenue is the federal gas tax. Pointing to the near impossibility of raising the federal gas tax, transportation industry representatives have written to Senators Kerry and Lieberman requesting that all proceeds from the sale of allowances to the refining industry be dedicated to the Highway Trust Fund to cover the federal share of badly needed infrastructure improvements.⁹

Title II - Greenhouse Gas Pollution Reduction and Investment Program

Title II would amend the CAA to establish an entirely new program for reducing domestic greenhouse gas emissions through a cap-and-trade system similar to the one proposed in ACESA. The goal of the program would be to reduce GHG emissions from a 2005 baseline by at least 4.75 percent by 2013, at least 17 percent by 2020, at least 42 percent by 2030, and at least 83 percent by 2050. With the exception of the 2013 and 2020 targets, which were stated in ACESA as a 3 percent reduction by 2012 and a 20 percent reduction by 2020, the targets in the bill are identical to the targets passed by the House.

These emission reduction goals would be based on a series of legislative findings related to the causes and nature of climate change. For example, there would be legislative findings that climate change is occurring and is the result of the combined anthropogenic GHG emissions

⁹ Letter from Amalgamated Transit Union et al. to Senator Kerry and Senator Lieberman, May 18, 2010, available at www.eenews.net/features/documents/2010/05/19/document_gw_02.pdf.



from all sources; that GHG emissions cause or contribute to injuries to persons in the U.S. including displacement of human populations, severe weather changes, and adverse health effects; and that each increment of emission, when combined with other emissions, causes or contributes materially to the acceleration and extent of climate change.

EPA would be required to promulgate rules to implement this new program within two years following the date of enactment. In developing those rules, EPA would be required to consult with the states in the Regional Greenhouse Gas Initiative, the Western Climate Initiative, and the Mid-West Governors Accord, and representatives of other states.

Ongoing Study of Climate Change

The APA would require EPA to issue a report in 2013, and every four years thereafter, which would include analyses of the capabilities to monitor and verify GHG reductions on a worldwide basis, the status of worldwide GHG reduction efforts, and the technological feasibility of achieving additional reductions in GHG emissions (not required in the 2013 report); as well as assessments of the current and potential impacts of global climate change. Among the required elements of the reports would be consideration of the global temperature data assessment of the European Union and reports developed by the International Panel on Climate Change, the United States Global Change Research Program, the Natural Resources Climate Change Adaptation Panel that would be established by the bill, and federal agencies. Additionally, EPA would be required to analyze whether actions being taken domestically and around the world are sufficient to avoid atmospheric GHG concentrations above 450 parts per million carbon dioxide equivalent and a global average surface temperature that is 3.6 degrees Fahrenheit above the preindustrial average, or such other temperature thresholds that EPA considers to be appropriate.

GHG Designation and Registration

The gases designated as GHGs are identical to those in the ACESA and EPA’s 2009 GHG reporting rule, namely, carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, certain hydrofluorocarbons, certain perfluorocarbons, and nitrogen trifluoride. EPA must evaluate other anthropogenic gases for their global warming contribution and if that contribution on a

The APA would require EPA to issue a report in 2013, and every four years thereafter, which would include analyses of the capabilities to monitor and verify GHG reductions on a worldwide basis . . .

ton-for-ton basis is at least as great as carbon dioxide’s, either add the gas to the list of GHGs or, to the extent the gas is a substitute for a Class I or Class II ozone-depleting substance, regulate it under Title VI of the CAA. EPA would be required

to add additional GHGs as a result of a citizen petition process unless EPA determined that the global warming contribution of the subject of the petition was less than carbon dioxide’s on a ton-for-ton basis. The carbon dioxide equivalency factors for the designated GHGs are identical to those in the House bill, and similar to those in EPA’s GHG reporting rule,



although methane has a slightly higher and nitrous oxide has a slightly lower equivalency factor than in EPA's rule.

To provide the information for determining compliance with the bill's regulatory program, Part B of Title II would establish a new federal GHG registry that is substantially identical to the one specified in ACESA. The registry would be based on new quarterly GHG emissions reports from all reporting entities beginning in calendar year 2011, with reports due 60 days after the end of each calendar quarter. Reporting entities must also report annual GHG emission data from calendar years 2007 to 2010 unless EPA determines that the reporting entities did not maintain sufficient data or records to make the reports. The entities required to report their GHG emissions are generally the same as the entities required to report under EPA's existing GHG reporting rule, and EPA would be authorized to expand the list of reporting entities. Unlike the House bill, however, EPA would not be required to include 10,000 metric ton sources of CO_{2e} unless EPA determines that the lower threshold would help achieve the purposes of Title II. Like the House bill and EPA's reporting rule, the APA would allow reporting entities to self-certify their GHG emissions. EPA would be required to conform its GHG reporting rule to the requirements set out in the bill within 18 months of the bill's enactment.

The Requirement to Hold GHG Allowances

The APA would direct EPA to specify a quantity of GHG emission allowances for each calendar year, starting in 2013. The number of allowances created by EPA under each year would steadily decrease between 2013 and 2050 to achieve the APA's GHG emission reduction goals. Beginning on January 1, 2013, certain covered entities would be prohibited from emitting GHGs, and having attributable GHG emissions, in a calendar year without allowances for those emissions. Compliance with the allowance requirement would be determined by the number of allowances a covered entity holds as of April 1 of the following calendar year.

The covered entities subject to the APA's cap-and-trade program generally align with the sources required to report under EPA's GHG reporting rule and would include those in electricity generation and cement production, suppliers of gasoline and other refined products, as well as any other entity with more than 25,000 metric tons of annual carbon dioxide equivalent of GHG emissions resulting from combustion of fossil fuels. Each covered entity would be required to select an individual to be a designated representative for purposes of compliance with the APA. For a covered entity that is already required to hold a Title V operating permit, the bill would require that the obligation to hold GHG allowances be incorporated into the entity's permit. EPA would be required to establish and implement an education and outreach program to assist covered entities, especially those with little experience with environmental regulations, in preparing to meet the APA's compliance obligations.

The method for determining the number of allowances a covered entity would be required to hold would depend upon the type of source. For example, a power plant would be required to hold one allowance for each ton of CO_{2e} it emitted during the



previous calendar year (excluding emissions from combustion of renewable biomass or gas derived from renewable biomass). A refined product provider would be required to hold one allowance for each ton of CO₂ that would be emitted by the combustion of the refined products for which the provider is responsible. While power plants, refined product providers, producers and importers of GHGs for sale or distribution in commerce, geological sequestration sites, and petroleum refiners would be subject to the prohibition against emissions in excess of held allowances on January 1, 2013, other covered entities, including other sources with more than 25,000 metric tons of annual carbon dioxide equivalent of GHG emissions resulting from combustion, would have until 2016 to comply with the prohibition. Sources would also have the option of using “offset credits,” discussed in more detail below, instead of allowances to meet their compliance obligations in each calendar year until such time that offset credits have been used to demonstrate compliance for cumulative, nationwide emissions of two billion tons of GHGs in that year.

The bill also provides for the establishment and distribution of “compensatory allowances” for qualifying destruction of fluorinated gases, non-emissive use of petroleum-based or coal-based fuels, and the conversion of fluorinated gases into one or more other GHGs

Sources would also have the option of using “offset credits,” discussed in more detail below, instead of allowances to meet their compliance obligations in each calendar year . . .

with lower carbon dioxide equivalent value. Compensatory allowances would be distributed within 90 days after the end of each calendar year to entities engaged in the aforementioned actions equivalent to the number of tons of CO₂ of avoided

emissions achieved through the actions. The bill would require EPA to assess the regulation of non-HFC fluorinated gases to determine whether the most appropriate point of regulation is at the gas producer or importer level or the downstream source of the emissions by March 31, 2014.

The APA would authorize EPA, in consultation with the Federal Aviation Administration, to establish a program to distribute compensatory allowances for GHG emissions of fuel used in foreign air transportation; and, in consultation with the Secretary of State, designate a foreign climate change program as a qualifying “international program.” In either case, allowances issued by the foreign governmental authority could be used, under certain circumstances, to comply with the allowance-holding requirements of the APA.

The bill would allow holders of allowances or offset credits to sell, exchange, or transfer them without restriction, or ask EPA to retire them. A tracking system would be established with the goal of allowing orderly and competitive functioning of the allowance and offset credit markets. Holders of allowances could also bank allowances for use in future calendar years, unless the allowance has expired pursuant to rules promulgated by EPA. Additionally, covered entities could, subject to certain limitations, borrow future vintage year allowances to meet their compliance obligations in a given calendar year.



Refined product providers would not participate in the allowance market, but would instead be required to purchase allowances to cover their attributable GHG emissions directly from EPA. The price for these allowances would be set according to most recent vintage year auction price, and EPA would be required to sell as many allowances as a refined product provider requires to demonstrate compliance. According to an initial analysis by transportation industry groups, the sale of allowances to refiners will generate over \$19.5 billion in 2013 alone.¹⁰

With the goal of ensuring market stability, EPA would be required to establish a “cost containment reserve” of emission allowances that would be stocked with 1.5 percent of the allowances established for each of calendar years 2013 through 2021, 2.5 percent of the allowances established for each of calendar years 2022 through 2029, and 5 percent of the allowances established for each of calendar years 2030 through 2050. Covered entities could buy allowances directly from this reserve during the 90 days preceding their compliance date in each calendar year at a price set by the APA.

Notably, the APA specifies that each ton of CO₂ for which a covered entity lacks an allowance by the April 1 deadline would be considered a separate violation of the CAA. The sanction for such non-compliance would include the payment of a penalty in an amount calculated as the product of (1) the tons of CO₂ for which the entity failed to demonstrate compliance and (2) twice the most recent auction clearing price for allowances with a vintage year identical to the calendar year of the missed deadline. The covered entity would be required to pay the penalty to EPA immediately, without demand, and the payment would not absolve the entity from liability for any fine, penalty, or assessment under any other provision of the CAA or any other law. Additionally, the entity would be required to offset the excess emissions with an equal quantity of emission allowances during the calendar year in which the failure to comply occurred.

Offset Credit Program

Covered entities could submit certified offset credits in lieu of allowances to meet up to two billion tons of covered GHG emissions.¹¹ The number of offsets that an individual covered entity may submit is equal to the entity’s pro rata share of all covered emissions in the previous calendar year times the total number of offset credits available. Covered entities could submit offsets from either domestic or international sources, but international offsets are subject to discounting. To substitute for allowances, covered entities must submit either one domestic offset or 1.25 international offsets for each allowance.

Domestic Offset Credit Program

The APA would create the Greenhouse Gas Emission Reduction and Sequestration Advisory Committee (Committee) to provide advice on the establishment and implementation of the domestic offset credit program. The Committee would provide to the Secretary, the EPA

¹⁰ Letter from Amalgamated Transit Union et al. to Senator Kerry and Senator Lieberman, May 18, 2010, available at www.eenews.net/features/documents/2010/05/19/document_gw_02.pdf.

¹¹ An offset credit is quantifiable, permanent, and equivalent to either a reduction in emissions or sequestered carbon.

Administrator, and the public an initial report recommending types of projects to generate credits, explaining relevant scientific data for emission reductions expected via those project types, and describing methodologies to use for each project type. The Committee would also provide periodic reports recommending techniques to ensure the emission-reduction integrity of offset credit projects. The Secretary and Administrator would publish a public response to the reports. Before 2017 and then in five year intervals, the Committee will publish a scientific and technological review of the offset credit program, including discussions of the methodologies, emissions effects, and recommended changes to ensure GHG emission limitations are met and adverse effects are met.

The Secretary and Administrator would establish an emissions offset credit program, where offset credits have a measurable equivalent to emissions or carbon sequestered. The program would prioritize rulemaking that affects activities with the fewest technological challenges and the greatest certainty of reducing net GHG emissions. The APA further requires the Administrator to establish a registry for issuing and recording approved offset credits. For those offset projects involving forestry and agriculture, the Secretary of Agriculture is charged with gathering inventory data and administering lead agency duties.

As appropriate, the Administrator and the Secretary of Agriculture are to establish, maintain, and modify a list of offset credit projects eligible to generate credits. Some eligible emission reduction activities will include: methane collection at mines, landfills, and natural gas systems; fugitive emissions from the oil and gas sector; afforestation or reforestation; forest management; projects that capture GHG emissions in geological formations; agricultural management practices; and land management change. Any person may petition the official to add or remove a project category from the list of eligible projects.

Once the list of eligible projects has been established, the Administrator to the Secretary of Agriculture must establish at least one approved methodology for each project type.

The Program would prioritize rulemaking that affects activities with the fewest technological challenges and the greatest certainty of reducing net GHG emissions.

The approved methodology must specify procedures to determine baseline performance of the project, determine the emissions reduction achieved, monitor uncertainty, and determine and mitigate any GHG leakage. Each methodology established must account for the

possibility of reversals using one of the mechanisms specified by the APA, which include the reservation of a portion of offset credits issued to a project. Under this option, if the project were to be reversed, the reserved credits could be canceled and the owner of the offset project could be compelled to replace them.

The Administrator or the Secretary is also responsible for establishing the crediting period for approved offset projects. In general, the crediting period should be 5 to 10 years. However, forestry projects may have crediting periods of up to 30 years.



Once an offset project is established, the project owner may petition the Administrator or Secretary of Agriculture to grant offsets. After a petition is submitted, the Administrator or Secretary of Agriculture has 30 days to approve or deny the petition and estimate expected emission reductions from approved petitions. The procedures to appeal for review from a denial will be established by the Administrator and Secretary. The official also has the option to establish a preapproval review procedure so that petitioners may receive preliminary eligibility review for a project.

For each approved offset project, the project owner would be required to submit independent third-party reports verifying the quantity of GHG emissions reductions or carbon sequestration achieved, the methodologies used in that project, and certifying that the project meets all requirements. One offset credit would be issued for each verified ton of CO_{2e} emissions avoided through either direct emission reductions or carbon sequestration.

The APA would also establish a program to issue early offset credits. Operators of offset projects may petition for approval of a qualified early offset project if the project commenced before January 1, 2009, has developed approved methodologies, and meets other criteria for registration and verification of offsets. Early offset credits are also to be issued for each ton CO_{2e} in emission reductions achieved after January 1, 2004, from qualified projects commenced before January 1, 2001. To avoid double payment, the APA prohibits the issuance of early offset credits to projects that already received awards under the carbon conservation program of section 4152 of the APA, discussed below.

The APA also requires periodic evaluations of the effectiveness of approved offset methodologies. If warranted, the Secretary of Agriculture has the authority to limit the registration of additional forestry projects. Finally, the Administrator may remove the project category from the list of eligible projects upon a determination that the environmental harms of an offset project outweigh the GHG reduction benefits.

International Offset Credit Program

The APA would create an independent International Offsets Integrity Advisory Committee (Committee) to advise the Administrator on offset methodologies and regulations for the international offset program. Some factors that inform which offset projects are eligible are: availability of a representative data set of the activity; potential for accurate quantification of GHG reduction, avoidance, or sequestration; potential scientific and measurement uncertainty; and the associated beneficial or adverse effects. Under this Part, the EPA Administrator would work with the Secretary of State and the Administrator of the United States Agency for International Development.

Within two years of enactment of the APA, regulations would be promulgated to establish a program to issue international offset credits for activities that reduce or avoid GHG emissions. A crediting period would be established for each offset project type. The offset credits would represent verifiable and permanent emission reductions or carbon sequestration. Included among the approved offset projects under the APA are projects that reduce GHGs by destroying methane or CFCs and projects that convert methane to carbon dioxide. However, because of the baseline requirements for offsets described below, offsets



would not be available for HFC destruction projects, which have been one of the most controversial aspects of the offset program under the Kyoto Protocol.

International offset credits would only be issued to projects in developing countries with which the U.S. has a bilateral or multilateral agreement. To be eligible to receive offset credits, the host developing country must have a low carbon development plan. Furthermore, the project representative for an eligible offset project must be able to receive service of process in the U.S. for civil and regulatory actions.

As with the domestic offsets program, the Administrator is to establish regulations to govern the offset programs, including approved project types and methodologies. The regulations must account for the possibility of reversals through an offsets reserve or insurance. In addition, the Administrator must work with the Secretary of State to ensure that offset projects are not issued credits under both the APA international offset program and another offset program established by a foreign country or multilateral agreement.

The three principal categories of approved international offset credits under the APA are sector-based credits, internationally issued credits, and offsets from reduced deforestation. Sector-based credits are credits that are awarded only for sector-wide emissions reductions over an established baseline. Sector-based credits should only be used in countries with relatively high GHG emissions or economic development, and only apply to sectors that would be subject to compliance obligation if located in the United States.

Offsets would also be available by exchanging internationally issued offset credits for offset credits under the APA. To be eligible for exchange, the initial offset credits must have been issued under the Framework Convention on Climate Change, the Kyoto Protocol, or any successor agreement.

Reduced deforestation credits will only be issued to projects whose activities comply with a large number of requirements, including emission-reduction requirements under the United Nations Framework Convention on Climate Change.

Supplemental international offset credits may be authorized by the EPA Administrator, who also has the authority to add or eliminate offset project types and approve or deny petitions to add or remove offset project types.

Projects receiving offset credits would be required to verify the quantity of resulting emissions reductions. The Administrator will also promulgate regulations to establish criteria for forestry or other land management related offset projects for ensuring that the offsets further environmental protection, sustainable practices, and protection of indigenous and forest-dependent communities.

There are several important differences between the APA's offset provisions and those approved by the House in ACESA. As discussed above, the APA includes a specific list of eligible projects, while ACESA left project eligibility solely to the regulatory discretion of the EPA. The APA contains stricter provisions regarding reversals and does not allow the



issuance of international offsets for the destruction of HFCs, which has been criticized by some groups.

Unlike the House bill, the APA does not provide for allowances to companies that offset their pollution by investing in tropical forest conservation. This is significant for covered entities because rainforest conservation represents one of the least expensive and most widely available sources of offsets.¹² Without credits for tropical forest conservation, the costs of compliance for covered entities are likely to increase substantially.

Disposition of Allowances

Under the APA, the EPA Administrator would allocate a percentage of the allowances enumerated under Section 721 (Program Rules — Emission allowances) to achieve three principal goals: (i) to protect consumers from energy price increases; (ii) to assist industry in the transition to a clean energy economy; and (iii) to spur energy efficiency and the deployment of clean energy technology. In light of these goals, the APA provides specific allowance schedules for groups, entities and purposes as described in the table below.

Beneficiary	%	Phase Implementation
Protection for Electricity Consumers	8.5% to 51%	2013-2015: 51% 2016-2025: 35% 2026: 32% 2027: 24% 2028: 16.5% 2029: 8.5%
Protection for Natural Gas Consumers	1.8% to 9%	2013-2025: 9% 2026: 7.2% 2027: 5.4% 2028: 3.6% 2029: 1.8%
Protection for Home Heating Oil and Propane Consumers	0.3% to 1.9%	2013-2015: 1.9% 2016-2025: 1.5% 2026: 1.2% 2027: 0.9% 2028: 0.60% 2029: 0.30%
Consumer Relief	10.6% to 12.5%	2013-2019: 12.3% 2020-2029: 10.6% 2030-2034: 11.5% 2035-2050: 12.5%

¹² Allison Winter, *Kerry-Lieberman Bill Puts Tropical Forest, Rain Forest Funding in Jeopardy*, E&E NEWS, May 17, 2010.

Beneficiary	%	Phase Implementation
Universal Trust Fund	8.1% to 77.8%	2026: 8.1% 2027: 21.5% 2028: 33.7% 2029: 47.1% 2030-2034: 54.50% 2035-2050: 77.8%
Trade-Exposed Industries	2% to 15%	2013-2015: 2% 2016-2025: 15% 2026: 12% 2027: 9% 2028: 6% 2029: 3%
Industrial Energy Efficiency	0.5%	2013-2015
Refiners	0.75% to 4.3%	2013-2015: 4.3% 2016-2025: 3.75% 2026: 3% 2027: 2.25% 2028: 1.5% 2029: 0.75%
Deployment of CCS	0.8% to 10%	2017-2018 ¹³ : 0.8% 2020: 4.5% 2021: 5% 2022-2025: 7.4% 2026-2029: 8% 2030-2034: 10%
Clean Vehicle Technology	0.5% to 1%	2013-2020: 1% 2021: 0.5%
Low Carbon Technology R&D	0.5% to 1%	2013-2020: 1% 2021: 0.5%
Clean Energy Technology Research	2%	2013-2021
Energy Efficiency and Renewable Energy	0.5% to 2.5%	2013-2015: 2.5% 2016-2018: 2% 2019-2020: 1% 2021: 0.5%
Rural Energy Savings Program	0.5%	2013-2015

¹³ Note that the bill does not list 2019 in the emission allowance table for CCS. Presumably, CCS will have an allowance allocation in 2019.

Beneficiary	%	Phase Implementation
Adaptation	1.5% to 6%	2019-2020: 1.5% 2021-2025: 3.2% 2026: 3.5% 2027: 4% 2028: 5% 2029: 5.5% 2030-2034: 6%
Early Action	1%	2013-2015
Transportation Infrastructure and Efficiency	5.8% to 12%	2013-2015: 12% 2016: 9.2% 2017-2018: 8.2% 2019: 7.6% 2020-2021: 6% 2022-2029: 5.8% 2030-2034: 6.7%
Cost Containment Reserve	1.5% to 5%	2013-2021: 1.5% 2022-2029: 2.5% 2030-2050: 5%
Deficit Reduction Fund	All unallocated allowances	2016-2050

The APA would permit individuals and entities in the U.S. to exchange state emission allowances from state or regional cap-and-trade programs for allowances established by the EPA Administrator on a one-for-one basis.

Beginning in 2013, the EPA Administrator would auction allowances and deposit the proceeds not otherwise allocated pursuant to other provisions of the APA in a deficit reduction reserve fund in the U.S. Treasury.

One-third of the early action allowances would be allocated to any individual or entity in the U.S. for offset credits issued before January 1, 2009, by state, local or voluntary offset programs. The remaining two-thirds of the early action allowances will be allocated to states determined by the EPA Administrator to have issued a limited number of tradable emission allowances by the date of enactment of the APA.

Auction Procedures

The EPA Administrator, the Secretary of the Treasury, and the heads of other relevant agencies would promulgate allowance auction regulations not later than one year after the date of enactment of the APA. Such regulations would include, among other things, the following requirements:



- (i) auctions to be conducted four times per year at regular intervals, with the first auction to occur no later than March 31, 2012;
- (ii) a portion of the auctioned allowances to apply to the same year in which the auction is conducted (except for auctions conducted in 2012) and a portion of the auctioned allowances will apply to the four years following the year in which the auction is conducted;
- (iii) only covered entities and regulated greenhouse gas market participants as defined in the Commodity Exchange Act would be permitted to participate in the auctions;
- (iv) purchase limitations to prevent manipulation of prices at the quarterly auction; and
- (v) timely publication of the identities of the winning bidders, quantity of allowances obtained by winning bidders, and the auction clearing price.

The EPA Administrator would have the discretion to include other auction requirements or, in consultation with the Secretary of the Treasury and the heads of other relevant agencies, determine an alternative auction design.

The reserve price (*i.e.*, minimum bid) for emission allowances offered for auctions during 2013 would be \$12 (in constant 2009 dollars), but would increase at a rate of 3 percent over the Consumer Price Index for every year thereafter. In contrast, the House bill would set the allowance reserve price for auctions starting in 2012 at \$10 (in 2009 dollars), with an increase of 5 percent of the Consumer Price Index for every year thereafter.

The EPA Administrator may borrow against allowances one year later than the calendar year in which payment for purchase of allowances is due by refined product providers on a limited basis to ensure an adequate supply of allowances for refined product providers; provided that it will make available a sufficient number of allowances for sale at auction each quarter, including the mandated allowances under other provisions of the APA, to ensure adequate market liquidity, price discovery, and allowance availability.

Every two years, starting no later than January 1, 2015, the Comptroller General of the United States would carry out a review of the programs administered by the federal government that distribute emission allowances or funds from any federal auction of emission allowances.

Fast Mitigation

The APA would require and encourage several actions and programs to quickly mitigate global warming. These programs focus on the reduction of emissions of hydrofluorocarbons, black carbon, and methane. Because of their high global warming potentials, the sponsors propose that reductions in these three sources of emissions would provide a source of significant, rapid GHG reductions.

Regulation of Hydrofluorocarbons

The bill would amend Title VI of the CAA — which currently regulates ozone depleting substances such as chlorfluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) in accordance with the Montreal Protocol on Substances that Deplete the Ozone Layer



(Montreal Protocol) — by adding a new section to regulate hydrofluorocarbons (HFCs). HFCs are not believed to deplete the ozone layer and, thus, have been widely adopted as substitutes for CFCs and HCFCs, which have been phased down domestically under the existing provisions of Title VI. HFCs, however, have a global warming potential per ton that is several thousand times that of CO₂. Therefore, the bill would utilize the existing regulatory architecture of Title VI to also phase down HFCs over time. The APA’s changes to Title VI are nearly identical to those in ACESA, except that the cap-and-trade program described below would begin one year later than specified in the House bill.

The bill would create a new category of regulated substances under Title VI, mostly HFCs, which would be called “Class II, Group II substances.” The proposed gradual phase down of HFCs would force affected industries to identify and utilize alternative compounds that neither deplete the ozone layer nor have substantial global warming potentials for current HFC uses, including air conditioning, refrigeration, and other industrial applications.

The APA would achieve the gradual HFC phase down by establishing a HFC cap-and-trade program separate from the primary GHG cap-and-trade program that the bill proposes. Beginning on January 1, 2013, the bill would require any person who produces or imports a Class II, Group II substance, or who imports any product containing such a substance, to hold one “consumption allowance” or “destruction offset credit” for each carbon dioxide equivalent ton of the Class II, Group II substance produced or imported during that calendar year.

The total number of consumption allowances available each year are calculated as a percentage of a baseline amount, which itself is calculated based on the annual average consumption and importation of all Class II substances during calendar years 2004, 2005, and 2006. For the first compliance year, 2013, the total number of consumption allowances available will be 87.5 percent of the baseline, and the available number of consumption allowances will be steadily reduced each year until 2033, when only 15 percent of the baseline quantity will remain.

HFC consumption allowances would be distributed each year via two pools. Eighty percent of the allowances are to be put into a “producer-importer” pool that will be available, with limited exception, only to parties that produced or imported Class II substances during

The proposed gradual phase down of HFCs would force affected industries to identify and utilize alternative compounds that neither deplete the ozone layer nor have substantial global warming potentials for current HFC uses.

the baseline years. These allowances would be sold to eligible parties through an EPA-administered auction, and then post-auction sale. The remaining 20 percent of allowances would be placed into a “secondary” pool, which would be available

to other parties for post-auction purchase. For auction purchases, the minimum bid is set by statute beginning at \$1.20 in 2013 and increasing to \$2.00 by 2017. For non-auction purchases, prices are set by statute for 2013 and 2014 at \$1.20 and \$1.40, respectively. Thereafter, prices are determined based on the auction clearing price for that year’s auction.



EPA is also directed to adopt regulations for the issuance of destruction offset credits to be earned by destroying CFCs in 2012 or thereafter. The destroying entity will receive offset credits equal to 0.8 times the number of CO₂ equivalent tons of CFC destroyed.

Parties that purchase allowances or receive destruction offset credits may use them for compliance for the vintage year in which they are purchased or received, or they may be banked for use in any subsequent year. Allowances and destruction offset credits for Class II, Group II substances may be freely traded or sold, but they may not be converted into allowances for Class II, Group I substances.

The bill provides that EPA may impose a more accelerated phase down of Class II, Group II substances if EPA determines that such acceleration is practicable.

The APA also allows EPA to withhold a certain quantity of allowances each year to be reserved for and directed to critical applications, such as in medical devices, aviation and space vehicles, fire suppression, and national security.

Regulation of Black Carbon

The APA requires EPA to prepare and submit to Congress a three-phase report on black carbon emissions. Black carbon consists mostly of the soot particles produced by incomplete combustion. In the report, EPA must describe the sources of, methods for quantifying, impacts (climate and otherwise) of, research that needs to be done on, and potential methods and programs for reducing black carbon emissions.

The APA would also address black carbon emissions by requiring EPA, within two years of enactment, to propose new regulations under its existing CAA authority applicable to black carbon emissions or find that existing regulations adequately regulate black carbon emissions. These new regulations must be finalized within three years.

The bill would amend the EPA Act 2005 to allow grants designed to fund diesel emissions reductions to be used to fund diesel emission reductions mandated by federal state or local law. The bill would also require EPA to create and administer a new, voluntary federal grant program to provide funds for purchasing and installing diesel particulate filters for heavy duty diesel vehicles put into service prior to 2007.

The bill would also direct the Secretary of Agriculture to create and administer a federal grant program for research into biochar (charcoal) production technology for “sequestering carbon from the atmosphere.”

International Methane Programs and Study on Fast Mitigation Strategies

The APA expresses the sense of the Senate that international methane emissions are a significant contributor to global warming and that the U.S. should increase its efforts to participate in programs to control international methane emissions.

The bill also requires EPA, in consultation with the Department of State and the Department of Energy, to review existing and potential measures that could promote the “fast mitigation”



of greenhouse gas emissions, with specific focus on non-CO₂ GHGs, and report to Congress on recommended measures within two years.

Exemption from Other Federal Controls

The new GHG regulatory program in the bill would substantially but not completely displace other CAA and state regulatory programs applicable to GHGs. Specifically, the bill would prohibit EPA from (1) listing any GHG as a criteria air pollutant under Section 108 of the CAA on the basis of its effect on climate change; (2) specifying new source performance standards (NSPSs) under Section 111 of the CAA for GHGs emitted by sources that are subject to the new GHG regulatory program or, at least until 2020, sources that qualify as eligible offset projects; (3) listing any GHG as a hazardous air pollutant under Section 112 of the CAA unless there is a reason for so doing independent of its effects on climate change. EPA is not prohibited from establishing NSPS for GHGs at existing power plants, however, even though such sources are also subject to the GHG regulatory program. This authority would allow EPA to impose GHG NSPSs for existing power plants when they undergo major modifications.

Emissions of GHGs from facilities permitted or modified after January 1, 2009, would not trigger the “new source review” permit provisions of the CAA, but there is nothing in the bill that would exempt a facility’s GHG emissions from the new source review requirements if those requirements were triggered by other non-GHG emissions. The bill would also 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 operating permit under Title V of the CAA. However, the bill’s GHG requirements would have to be incorporated into the Title V permits for facilities required to have them for reasons other than their GHG emissions.

State Preemption

The bill preempts substantially more state-level GHG regulation than ACESA. All state or regional level GHG cap-and-trade programs (the Regional Greenhouse Gas Initiative (RGGI), the Western Climate Initiative, and the California Assembly Bill 32 program) are preempted to the extent that these programs affect sources subject to the federal regulatory program. Preemption would begin in the first year for which EPA allocates allowances under the federal program. The bill would not preempt state GHG emission performance standards that are not achieved through a cap-and-trade or allowance program, nor would it preempt low-carbon fuel standards. The states would also be free to adopt regulatory programs for sources whose GHG emissions are not capped at the federal level.

Regulation of Greenhouse Gas Markets

By amending the Commodity Exchange Act (CEA), the APA gives the Commodity Futures Trading Commission (CFTC) jurisdiction over the trading of greenhouse gas instruments. Greenhouse gas instruments, which are defined to mean greenhouse gas allowances or any other types of instruments designated as such by the EPA Administrator (e.g., offsets), could only be traded on an exchange and cleared through a greenhouse gas clearing organization.



The GHG clearing organizations would be derivatives clearing organizations that are approved to clear greenhouse gas instruments.

GHG instruments will be regulated in a manner similar to agricultural commodities under the CEA. In order to prevent excessive speculation in the nascent greenhouse gas instrument market, the CFTC will establish limits on the quantity of trading in greenhouse gas instruments as well as in the quantity of instruments that may be owned, held, or traded.

In addition to subjecting GHG instruments to the same anti-fraud and market manipulation standards that are applied to other instruments regulated by the CEA, the APA institutes strict requirements on anyone who participates in the greenhouse gas trading market. Subject to a few exceptions, in order to trade in GHG instruments, a person must:

- (i) be a regulated GHG market participant or a compliance entity;
- (ii) be registered with the CFTC;
- (iii) only trade GHG instruments on an approved exchange;
- (iv) be subject to short sale restrictions promulgated by the CFTC; and
- (v) clear trades through a greenhouse gas clearing organization.

A compliance entity is an entity that is subject to Section 722 of the Clean Air Act or a designated affiliate.

A regulated GHG market participant is an entity, other than a compliance entity, whose participation in the greenhouse gas trading market (as determined by the CFTC in conjunction with the EPA Administrator and the Secretary of the Treasury) is necessary for a liquid and well-functioning market.

Title III - Consumer Protection

Subtitle A of Title III of the APA modifies the Clean Air Act to provide emissions allowances to “electricity local distribution companies,” coal-fired power plants, and certain other “long-term contract generators.” Electricity local distribution companies are traditional distribution utilities that deliver electricity to retail consumers and have rates regulated by a state regulatory body, an agency, or an Indian tribe. The allocations seek to benefit retail ratepayers by offsetting price increases due to compliance with the APA. Up to 14.3 percent of the emissions allowances would be reserved for merchant coal generators and long-term contract generators.

Seventy-five percent of the emissions allowances allocated to distribution utilities would be distributed pro rata based on the average annual CO₂ emissions attributable to the electricity delivered by each utility over a three-year base period. To determine the respective allocations, the APA directs the Administrator, in consultation with the Energy Information Administration, to take into account: the owned generation; electricity purchases; electricity sales of each distribution utility; the type of fossil fuel used for generation; and the “emission factor” for each relevant type of generation. For purchased power with a contract term remaining through at least 2023, the calculation would be for the particular generation



source; otherwise, the emission factor for the relevant North American Electric Reliability Council region calculated by the Administrator will be used. The APA gives the Administrator authority to collect the data necessary to make these calculations.

The remaining 25 percent of the emissions allowances for distribution utilities are to be distributed pro rata based on average annual retail electricity deliveries for 2006 through 2008, or a utility-selected three-year period between 1999 and 2008. The average annual deliveries would be calculated based on average annual deliveries per retail customer and number of customers. It should be noted that this is a significant departure from the House bill, which divides emissions allowances 50-50 on the basis of historic emissions and retail deliveries.

These emissions allowances may only be used to benefit retail ratepayers and cannot be used to pay income or profits to shareholders. The APA further directs utilities to distribute allowances pro rata among ratepayer classes equitably based on deliveries.

A distribution utility cannot receive the emissions allowances until it has undertaken a

Allocation among long-term contract generators would be based on emissions resulting from the qualifying sales agreement and the incremental emissions resulting from the qualifying thermal sales agreement.

rate proceeding through its state regulator to implement the allocation to retail ratepayers and received approval of a report describing how it is implementing the requirements. The Administrator must also promulgate regulations to

ensure that the retail ratepayers receive their allocated share of the value of the allowances. The APA includes additional reporting and auditing requirements as well to ensure the proper allocation of emissions allowances to ratepayers.

Of the 14.3 percent of the overall pool of emissions allowances not allocated to distribution utilities, 10 percent would go to merchant coal-fired power plants and 4.3 percent would go to long-term contract generators. “Long-term contract generators” are qualifying small power production facilities, qualifying cogeneration facilities, independent power production facilities, or production facilities owned by a cooperative that meet certain additional requirements.

Allocation among merchant coal units would be based on megawatt hours of sales multiplied by average emissions per megawatt hour during a three-year base period, with a downward adjustment to megawatt hours for carbon sequestration or biomass combustion. The quantity of emissions allowances allocated to merchant coal units will decrease each year from 2013 to 2029. The Administrator and Federal Energy Regulatory Commission are directed to periodically analyze and adjust the allocation to merchant coal units to ensure they are not receiving a windfall. Allocation among long-term contract generators would be based on emissions resulting from the qualifying sales agreement and the incremental emissions resulting from the qualifying thermal sales agreement. Long-term contract generators must certify eligibility to receive emissions allowances annually.



Subtitle B of Title III of the APA modifies the CAA to provide emissions allowances to natural gas local distribution companies (LDCs) to be used for the benefit of retail ratepayers. Initially, allowances would be distributed to LDCs on a pro rata basis based on the annual average retail natural gas deliveries of each LDC over a three-year period; in 2019 and every three years thereafter, the distribution formula would be updated to reflect a pro rata distribution based on the LDC's average annual natural gas deliveries per customer and the number of customers in the LDC's service territory. These emissions allowances could only be used to benefit retail ratepayers, and not to support sales of natural gas to other entities, and cannot be used to pay income or profits to shareholders. LDCs must distribute allowances pro rata among ratepayer classes, and equitably among ratepayers within each class. An LDC may not give ratepayers a rebate based on the quantity of natural gas delivered to the ratepayer, but only with respect to a fixed portion of the ratepayer's bill or a fixed credit or rebate on a ratepayer's bill. Additionally, at least 20 percent of the value of the allowances distributed to LDCs during any calendar year must be used for cost-effective energy efficiency programs for natural gas consumers.

In order for an LDC to receive emission allowances under Subtitle B of Title III, the state regulatory authority or other body with regulatory authority over the LDC must either establish regulations or hold a rate proceeding providing for full implementation of the distribution requirements set forth in Subtitle B. The regulatory authority must provide a report on how the distribution requirements would be implemented, and must update the regulations or rate proceeding implementing the requirements at least once every five years. In addition, starting in 2015 and every five years thereafter, each LDC must submit a plan, approved by the body with regulatory authority over the rates charged by the LDC, describing how the LDC will dispose of the value of the allowances to be received. Each calendar year, a representative sample of LDCs will be audited for compliance with distribution requirements; in selecting LDCs for audit, the Administrator will take into account any credible evidence of noncompliance.

Subtitle B of Title III of the APA would also modify the CAA to provide emissions allowances to states and Indian tribes pro rata based on relative carbon content of home heating oil and propane sold to consumers within that state or as established by regulation for Indian tribes. These allowances must be used for the benefit of consumers of home heating oil and propane for residential and commercial purposes, including through energy efficiency programs or direct financial assistance programs for residential or commercial consumers. At least 50 percent of the value of such allowances must be used for energy efficiency programs. States and Indian tribes must report the use of allowances distributed, describe the programs supported by the allowances, and demonstrate cost-effective and energy savings of those programs; failure to comply with distribution and reporting requirements will result in the withholding and redistribution of a state's or tribe's allowances.

Subtitle C of Title III of the APA would modify the CAA to provide a tax credit (working families relief program) or tax refund (energy refund program) for eligible taxpayers whose household income for the taxable year is below a specified percentage of the federal poverty level; the tax credit and tax refund provisions would be effective from taxable years 2013



through 2029. The tax credits are intended to be revenue neutral with the total amount of such credits to be determined by a specified percentage of the annual proceeds from auctioning emission allowances, with prospective adjustments to compensate for estimation errors. A total of 15 percent of the proceeds from auctioning emission allowances will be used to fund the working families relief program (2.5 percent) and energy refund program (12.5 percent). The energy refund program is structured to permit states to co-administer the program in conjunction with existing social benefit programs (e.g., the Food Stamps program). Beginning in calendar year 2026, a Universal Trust Fund would be established in which proceeds from the auction of allowances will be deposited, and 25 percent of the proceeds would be used for deficit reduction while the remaining 75 percent would be used for tax credits for lower income taxpayers.

Finally, Subtitle D of Title III of the APA establishes the Office of Consumer Advocacy (Office) to “serve as an advocate for the public interest.” The Office would have broad powers and will be headed by a Director appointed by the President, by and with the advice and consent of the Senate. The Office may represent, and appeal on behalf of, energy customers on matters concerning rates or service of “public utilities” and “natural gas companies” under the jurisdiction of the Federal Energy Regulatory Commission (FERC), as those entities are defined in Section 201(e) of the Federal Power Act and Section 2 of the Natural Gas Act, respectively. An “energy customer” is defined as a residential customer or a small commercial customer (commercial customer having a peak demand of not more than 1,000 kilowatts per hour) that receives products or services from a public utility or natural gas company under FERC’s jurisdiction.

Importantly, the Office of Consumer Advocacy may also: (i) “monitor and review energy customer complaints and grievances on matters concerning rates or service of public utilities and natural gas companies,” (ii) “investigate independently, or within the context of formal proceedings, the service provided by, the rates charged by, and the valuation of the properties of, public utilities and natural gas companies,” (iii) develop means to ensure the interests of energy consumers are adequately represented in judicial proceedings, FERC hearings, and hearings or proceedings of other federal regulatory agencies and commissions; (iv) collect data concerning rates or service of public utilities and natural gas companies; and (v) prepare and issue reports and recommendations. The Director of the Office is required to establish a Consumer Advocacy Advisory Committee consisting of five members who will review public utility and natural gas company rates, services, and disputes, and make recommendations to the Director. The Office will not affect the rights or obligations of any state’s utility consumer advocates.

Title IV - Job Protection and Growth

Protecting American Manufacturing Jobs and Preventing Carbon Leakage

Subtitle A of Title IV would create a program designed to protect the American manufacturing sector and to prevent carbon leakage due to the increased costs of manufacturing imposed by the APA. Under Subtitle A, carbon leakage is defined as a substantial increase in GHG emissions in foreign countries due to increased production

costs in the United States. Subtitle A would provide rebates to owners and operators of domestic manufacturing plants for the twin purposes of offsetting production increases and creating financial inducements to avoid movement of businesses offshore and to prevent carbon leakage.

The first part of Subtitle A creates an allowance rebate program for participants in eligible industrial sectors. Eligible industrial sectors are to be determined by the Administrator, but sectors are presumptively eligible if energy intensity or greenhouse gas intensity for the sector is greater than 5 percent and trade intensity is greater than 15 percent.¹⁴ Once an industry sector is declared eligible under EPA regulations, it may receive allowance rebates to offset the increased costs of production resulting from domestic GHG regulations. Under the APA, the petroleum refining sector is explicitly excluded from eligibility to receive rebate allowances. The APA would make 2 percent of all allowances available for rebates in 2013 to 2015. This number increases to 15 percent of all allowances from 2016 to 2025. The allowances allocated to rebates then decrease until the program ends in 2029.

EPA is to establish regulations governing the distribution of rebate allowances. From 2013 to 2015, rebate allowances would be distributed based on the sector’s indirect carbon factor, a measure of the sector’s output, and the type and amount of electricity consumed in manufacturing. Between 2015 and 2026, allowance rebates to covered entities would

The program would seek to protect manufacturers from a potential competitive disadvantage resulting from carbon regulation by distributing allowances that manufacturers may sell to offset the increased costs associated with manufacturing under the constraints of GHG regulation.

be based on the sum of the direct and indirect carbon factors. The direct carbon factor is the product of the entity’s output over the previous two years and the direct greenhouse gas emissions for each unit of output. For new entities that do not have two years of operating

history, EPA is to set the allowance rebate by regulation. After 2026, all entities would receive allowance rebates based on the sum of direct and indirect carbon factors. The APA contains provisions providing the EPA Administrator specific guidance on the treatment of the iron and steel and metal, soda ash, and phosphate sectors for the calculation of allowance rebates.

Under the allowance rebate program, the EPA would distribute emission allowances to eligible sectors using the direct and indirect carbon factors described above. The program is designed to promote improvements in manufacturing efficiency by mandating gradual decreases in the direct carbon factor. At the same time, the program would seek to protect manufacturers from a potential competitive disadvantage resulting from carbon regulation by distributing allowances that manufacturers may sell to offset the increased costs associated with manufacturing under the constraints of GHG regulation.

¹⁴ Under the Act, energy intensity is the cost of purchased power divided by the value of shipments; GHG intensity is $20 \times (\text{GHG emissions}) / (\text{value of shipments})$; and trade intensity is $(\text{value of imports}) / (\text{value of imports} + \text{value of shipments})$.



To further protect domestic manufacturing and encourage other countries to adopt GHG regulations, Subtitle A also calls for the establishment of an international reserve allowance system. Under the proposed international system, countries would be required to surrender allowances for goods entering the U.S. customs zone. Exporters to the U.S. would be exempted from the requirement to submit allowances if the exporting country or sector is party to an agreement with the U.S. to limit GHG emissions or the annual energy or GHG intensity in the exporting country or sector is less than that in the U.S. Exports from the least developed countries and from countries representing less than 0.5 percent of global GHG emissions and less than 5 percent of global production in the sector would also be exempted from the requirement to submit allowances.

These allowances could be purchased from the international reserve allowance system. Under Subtitle A, the EPA is to promulgate regulations to establish the international reserve allowance system and ensure that the price of allowances in the reserve is equal to the auction clearing price for allowances at the most recent auction of allowances to domestic stationary sources. The international reserve allowance system would also allow for the sale, exchange, purchase, transfer, and banking of allowances for covered goods.

While the international reserve allowance program has been designed to provide important protections to the domestic manufacturing industry, its legality under the WTO may be questioned. In order to comply with the Article XX exemption to the GATT, the reserve allowance program must be designed to ensure environmental protection, not to benefit domestic industries. However, even if the APA becomes law, it would be some time before any potential WTO challenge may arise because the international reserve allowance program must actually be applied to an exporting country before it is subject to challenge in the WTO.

Rather than being included in the provisions described above, refineries would receive special allocations under a new section 796 of the CAA. This section would distribute allowances to petroleum refiners to promote increased energy efficiency and decreased GHG emissions. The refining industry is initially allocated 4.3 percent of all emission allowances in 2013, with a gradually decreasing allocation through 2029. After 2029, the refinery sector would not receive emissions allowances. The emissions allowances allocated to petroleum refiners would be distributed to refiners based on a pro rata share determined by the product of the refinery's production and emissions intensity. The Administrator of the EPA is to promulgate regulations for the distribution of allowances for new refineries or major expansions of refinery capacity.

To encourage the development of new energy projects, Subtitle A expands the Advanced Energy Project Tax Credit. The APA would provide an additional \$5 billion allocation for the 30 percent investment credit for new manufacturing facilities that produce advanced energy property (e.g., wind turbines, solar panels, fuel cells, plug-in electric vehicles), and would extend the application period for one year. The time to place facilities in service after receiving a credit allocation would be increased from three years to five years.

The House bill also allocated allowances to trade-vulnerable industries. Under ACESA, trade-vulnerable industries initially receive 2 percent of emission allowances in 2013, and



would receive up to 15 percent of allowances by 2015. After 2015, the House bill would use a formula to calculate the number of emission allowances allocated to trade-vulnerable industries with the total number of allowances gradually decreasing through 2050. ACESA also contains similar provisions establishing an international reserve allowance system. In addition, refiners are granted more allowances — initially 4.3 percent as opposed to 2 percent under ACESA — under the APA.

Clean Energy Career Development

Subtitle B contains a variety of measures designed to promote career training for new clean energy jobs. These programs focus on the development of new curricula, publicizing training opportunities, and promoting apprenticeships in clean energy construction.

Under the Clean Energy Curriculum Development Grants Program, the Secretary of Education would be empowered to give grants to partnerships of universities, local agencies, and community representatives to develop training programs. These training programs would focus on emerging careers in clean energy, renewable energy, energy efficiency, climate change mitigation, and climate change adaptation. The APA also calls upon the Secretary of Labor in collaboration with the Secretaries of Energy and Education to develop a web-based information clearinghouse to aid in career training in the renewable and clean energy sectors. These provisions are the same as those found in ACESA.

The Clean Energy Construction Careers Demonstration Project (Project) aims to promote middle class careers in clean energy construction through the use of apprenticeships. Under the Project, contractors who participate in federally-funded projects under the APA, such as efficiency retrofits, must participate in qualified apprenticeship or pre-apprenticeship programs, offering training opportunities in clean energy construction. In contrast, ACESA would set aside funds under the Workforce Investment Act for green energy jobs training.

Clean Energy Technology for Transportation

The APA contains several significant provisions designed to support investment in, and deployment of, “clean vehicles,” generally considered to be electric, hybrid, and fuel cell vehicles. First, the bill designates that revenue from the auction of a certain percentage of emission allowances (between 0.5 percent and 1.0 percent, depending on the year) must be deposited into a “Clean Vehicle Technology Fund” (CVTF). In turn, the EPA Administrator, at the direction of the Secretary of Transportation, would distribute money from the CVTF to vehicle and vehicle component manufacturers to pay for the re-equipping or expanding of manufacturing facilities to produce clean vehicles or qualifying components. The bill’s emphasis on plug-in electric vehicles is evident, in that no less than 25 percent of CVTF funds, must be used to support the manufacture of plug-in electric drive vehicles or their components. In a nod to the beleaguered domestic auto industry, any manufacturing facility receiving money from the CVTF must be located in the U.S., with older and/or idle plants to receive priority in the grant process. The bill also requires that no less than 20 percent of CVTFs go towards the deployment, integration, and use of clean vehicles. CVTFs would



also support the development of electric vehicle infrastructure programs, with a minimum of 5 percent going towards various pilot projects.

Tax Incentives for Natural Gas-Powered Motor Vehicles

The APA provides several incentives for the manufacture and purchase of natural gas-powered motor vehicles. The Alternative Fuel Motor Vehicle Tax Credit provides a tax credit to taxpayers who purchase natural gas-powered vehicles. New or newly converted natural gas-powered vehicles placed in service for the 10-year period after enactment of the bill would become eligible for the alternative motor vehicle tax credit. The amount of the credit would generally equal 50 percent of the incremental cost of the vehicle over the cost of a conventional vehicle. The credit would generally be available if the vehicle operates only on natural gas or can travel more than 175 miles on one fueling of compressed or liquefied natural gas. Vehicles other than heavy duty vehicles would be eligible for the credit only if they are part of a fleet of 10 or more vehicles used in a trade or business. The credit would be transferable by the vehicle buyer to the seller, manufacturer, or lessee of the vehicle. In addition, the credit may offset minimum tax liability.

The APA also provides for the issuance of Natural Gas Vehicle Bonds to promote governmental use of natural gas vehicles. The bill would authorize a new class of tax credit bonds for certain natural gas vehicle projects placed in service by governmental bodies for governmental or public use. Eligible projects would include the acquisition of natural gas vehicles and the construction of refueling property used to store or dispense compressed or liquefied natural gas. If bond proceeds are not spent within five years of issuance, the bonds must be redeemed. The maximum amount of Natural Gas Vehicle Bonds would be limited to \$3 billion nationwide.

Finally, the APA creates new tax incentives for natural gas vehicle manufacturing facilities. The bill would permit a taxpayer to elect to expense 100 percent of a new natural gas vehicle manufacturing facility placed in service before January 1, 2015. For facilities placed in service after December 31, 2014 and before January 1, 2020, 50 percent of the cost may be expensed. Facilities would not be eligible if the taxpayer had a binding written contract to construct the facility before enactment of the bill. Alternatively, a taxpayer may elect to increase its minimum tax credit for a taxable year in which it places in service natural gas vehicle manufacturing property. The increase would equal 35 percent of the property's cost for property placed in service before January 1, 2015, and 17.5 percent for property placed in service after December 31, 2014 and before January 1, 2020.

Community Information on Hydraulic Fracturing

Subtitle B amends the Emergency Planning and Community Right to Know Act (EPCRA) to require well operators to publish on the internet a listing of all chemical constituents used in their hydraulic fracturing operations, so that the information is publicly available. It should be noted that this provision is similar to public disclosure requirements in the FRAC Act, which is currently pending before Congress. The FRAC Act would amend the Safe Drinking Water Act to require disclosure of the chemical constituents of fracking solutions to state



regulators, who would then make the information available to the public. The FRAC Act also specifically requires the disclosure of proprietary formulas of fracking solutions. In contrast, Subtitle B's amendments to EPRCA only require fracking operators to "provide adequate information" for public, state, and local authorities.

Emission Standards for Mobile Sources

The APA would require the Administrator to promulgate GHG emission standards for mobile sources, specifically: (1) new motor vehicles (after model year 2016); (2) new heavy duty motor engines and vehicles; and (3) certain non-road engines and vehicles that are significant sources of GHG emissions. Generally speaking, the bill requires that any such standards "reflect the greatest degree of emission reduction achievable" through technology available either for the model year which the standards apply (for motor vehicles and heavy duty engines/vehicles) or available at the time the standards take effect (for non-road engines/vehicles). However, in establishing such GHG emission standards, the Administrator must give "appropriate consideration" to the cost, energy, and safety factors associated with the application of the technology. A GHG emission standard promulgated by the State of California in 2009 stoked intense debate among environmental groups, industry, and the general public, and thus, any rules adopted by EPA in furtherance of this provision would likely invite similar scrutiny.

Agriculture

Subtitle B also creates the Carbon Conservation Program for agriculture. This program is to be administered by the Secretaries of Agriculture and Interior along with the Chief of the Forest Service to promote projects that take actions to permanently sequester greenhouse gases but do not receive offsets. Examples of the types of projects contemplated by the Carbon Conservation Program include conservation easements, carbon sequestration contracts, and incentives in timber harvesting and grazing contracts to manage land in a manner that reduces GHG emissions. The Secretaries are to use the newly established Carbon Conservation Fund to establish incentives for carbon conservation projects, with at least 30 percent of the funds dedicated to the purchase of conservation easements. The Carbon Conservation Fund would not be allocated allowances, and would rely on appropriations for funding.

This program stands in contrast to ACESA, which would create an agricultural offset program under the USDA.

Title V - International Climate Change Activities

The international provisions of the APA call for the United States to continue to work towards a binding, multilateral agreement to cap greenhouse gas emissions. The substantive provisions of Title V focus on preventing carbon leakage by combating deforestation and providing assistance to developing countries to cope with the impacts of climate change. The Act also establishes a Strategic Interagency Board on International Climate Investment to assess, monitor, and evaluate the progress and contribution of relevant agencies in



supporting financing for international climate change activities. Members of the Board are to include the Secretaries of State, Energy, Treasury, Commerce, and Agriculture, as well as the EPA Administrator.

The Act calls on EPA to establish a program to combat deforestation in developing countries and thereby decrease GHG emissions. The program aims to achieve emissions reductions of 720 thousand tons CO_{2e} by 2020 and 6 billion tons CO_{2e} by 2025 by reducing emissions from deforestation. The program’s goals also include building capacity for monitoring changes to increase adaptive capacity, preparation of countries to participate in offset markets, and preservation of existing forest stock, particularly in largely intact forests.

Under the program to reduce deforestation, the Administrator of United States Agency for International Development (USAID) could use appropriated funds to prevent the importation of illegally harvested timber into the U.S. and provide aid to developing countries that are experiencing or are at risk of experiencing deforestation who have the legal structure to combat it. The Administrator is to issue regulations requiring that all countries receiving aid establish a national deforestation baseline with a trajectory to zero net deforestation within

The Act calls on EPA to establish a program to combat deforestation in developing countries and thereby decrease GHG emissions.

20 years. The program then provides eight years of assistance for approved activities including deforestation reduction; monitoring, reporting, and verification activities; activities to improve governance and promote policy reforms; pilot

projects; and actions to address the drivers of land use emissions. The Administrator is also directed to create regulations to address the risk of leakage, which can include withholding portions of aid as insurance against reversals. When the initial eight year assistance period has concluded, the Administrator can either extend national programs an additional five years or determine that a transition to funding subnational activities is appropriate.

The remainder to Title V’s provisions are primarily focused on the provision of development aid for adaptation. The APA calls for a combination of bilateral and multilateral assistance to help the most vulnerable developing countries to prepare national adaptation plans and carry out adaptation activities to reduce the destabilizing impacts of climate change.

Title V also directs the Strategic Interagency Board on International Climate Investment to issue a report every five years on the actions of the five largest greenhouse gas emitters that are not members of the OECD. This report is to explain the policies and programs that each country has implemented to reduce greenhouse gas emissions.

An important difference from ACESA is that the APA does not contain provisions for the international diffusion of clean technologies. In contrast, ACESA allocated 1 percent to 4 percent of emissions allowances to support activities to reduce, sequester, and avoid greenhouse gas emissions in developing countries.



Title VI - Community Protection From Climate Change Impacts

Title VI focuses on national adaptation activities, directing the chair of the Council on Environmental Quality to advise the President on the development and implementation of a national adaptation strategy, federal natural resource adaptation plans, and coordinating federal agency strategies, plans, and programs to promote natural resource resilience. To facilitate interagency coordination in climate change adaptation activities, the APA establishes a National Climate Change Adaptation Panel whose members are the Administrator of NOAA; the Chiefs of the Forest Service and Engineers; the Directors of the National Park Service, Fish and Wildlife Service, Bureau of Land Management, United States Geological Survey, and Bureau of Indian Affairs; the Commissioner of Reclamation; and the Administrators of EPA and FEMA.

The APA calls for Federal Natural Resource Agency adaptation plans, which are to be approved by the President and submitted to Congress. These plans must include written guidance on implementation for resource managers. States are also required to submit adaptation plans. In order to be eligible for adaptation funds, states must have an adaptation plan that has been approved by the Secretaries of Interior and Commerce.

Finally, the APA contains guidance on the allocation of allowances for wildlife and habitat conservation through states and various federal agencies. Adaptation activities are to receive 1.5 percent of allowances starting in 2019, with the total allocation of allowances increasing to 6 percent by 2034 when the program ends.

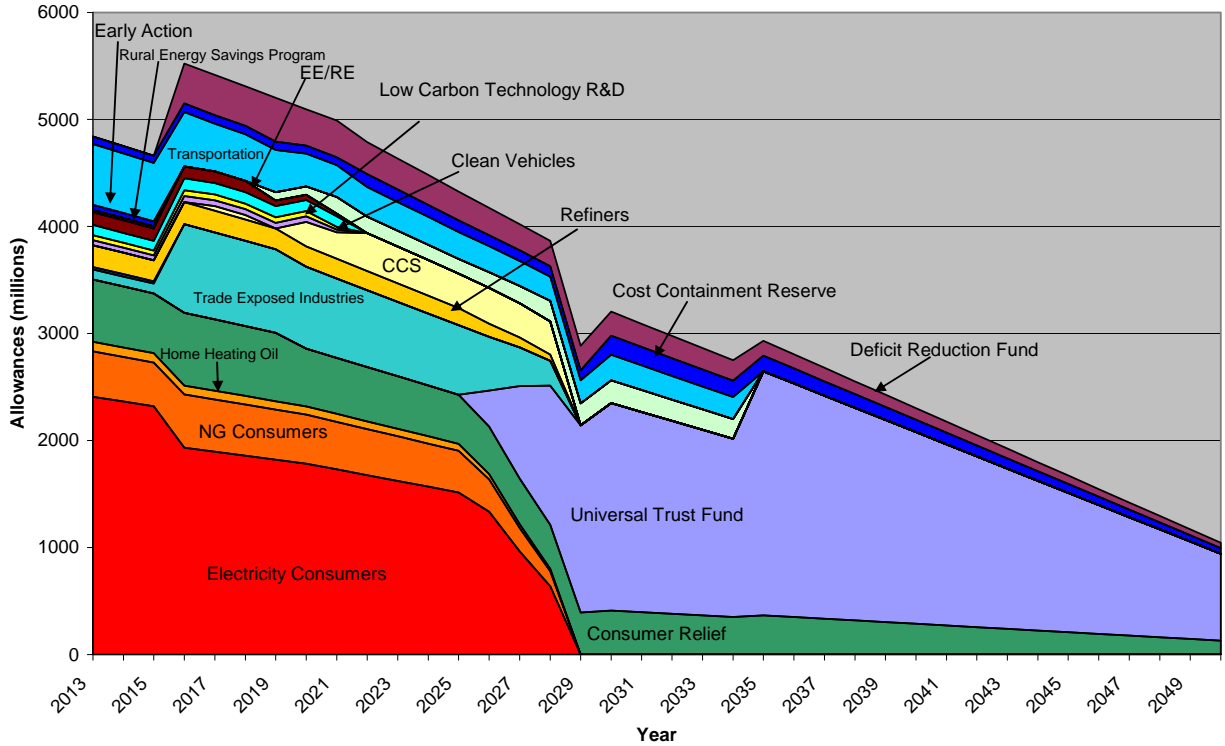
Under ACESA, allowances for adaptation would be distributed earlier, but the portion of allowances allocated to adaptation never exceeds 6 percent. In general, the adaptation provisions under ACESA are far broader than those under APA, providing a more robust climate change science program and calling for the consideration of the impacts of climate change on public health as well as natural resources.

The following Vinson & Elkins attorneys contributed to the production of this report: *Chris Amandes, Mansoor Bharmal, Becky Diffen, Debbie Duncan, Katy Gottsponer, Casey Hopkins, Patrick Lee, Stefanie Lepore, Damien Lyster, Tom Meriwether, Larry Nettles, Dan Nossa, Margaret Peloso, Sjajd Sharif, John So, Mark Spradling, Chris Terhune, and Chris Vaughn*

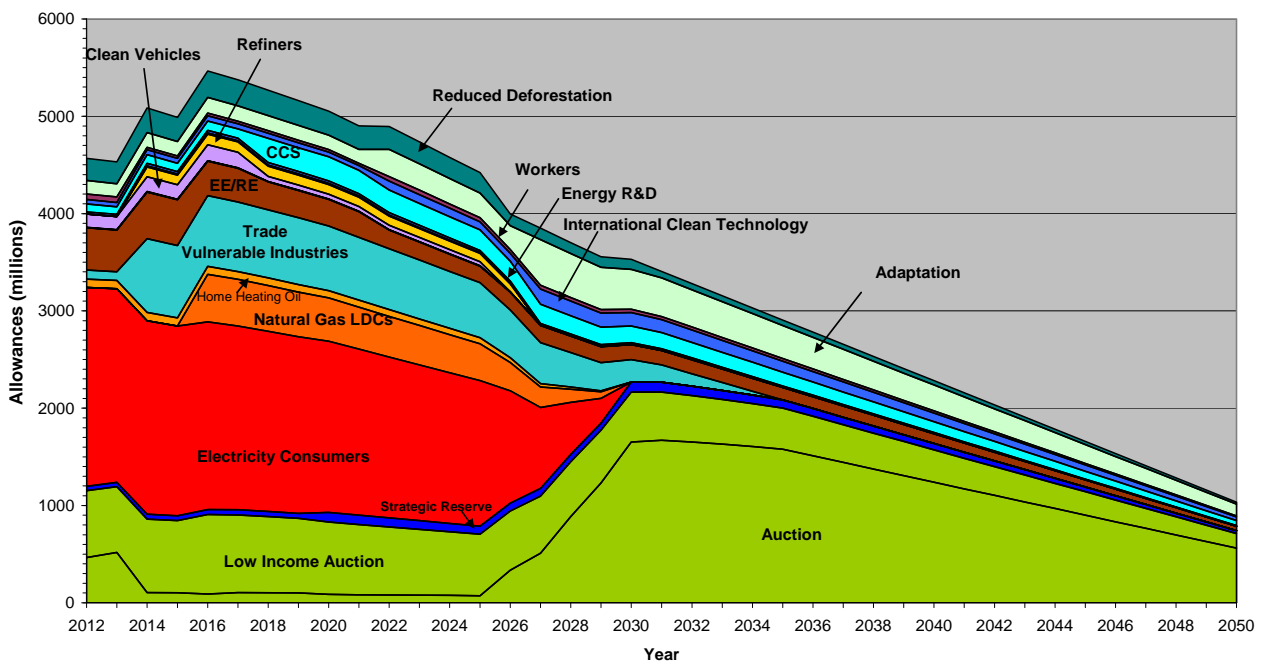
For more information regarding this analysis or the APA, please contact Vinson & Elkins lawyers [Larry Nettles](#), [Chris Amandes](#), or [Casey Hopkins](#). Visit our website to learn more about V&E's [Climate Change practice](#), or e-mail one of the [practice contacts](#).

Appendix 1: Comparison of Allowance Allocations Under House and Senate Bills

APA Allowance Allocations



ACESA (House Bill) Allowance Allocations



Glossary of Terms and Abbreviations

ACESA = American Clean Energy and Security Act
AEA = Atomic Energy Act
APA = American Power Act
CAA = Clean Air Act
CCS = Carbon Capture and Geologic Sequestration
CEA = Commodity Exchange Act
CFC = Chlorofluorocarbons
CFTC = Commodity Futures Trading Commission
COL = Combined Construction and Operating License
CVTF = Clean Vehicle Technology Fund
DOE = Department of Energy
EIS = Environmental Impact Statement
EGU = Electric Generating Unit
EHR = Enhanced Hydrocarbon Recovery
EPA = Environmental Protection Agency
EPAct 2005 = Energy Policy Act of 2005
EPRCA = Emergency Planning and Community Right to Know Act
ERCOT = Energy Reliability Council of Texas
FEMA = Federal Emergency Management Agency
FERC = Federal Energy Regulatory Commission
FRAC = Fracturing Responsibility and Awareness of Chemicals Act
GATT = General Agreement on Tariffs and Trade
GHG = Greenhouse Gas
GW = Gigawatt
HCFC = Hydrochlorofluorocarbons
HFC = Hydrofluorocarbons
ISs = Industrial Sources
ITC = Investment Tax Credit
LDC = Local Distribution Company
Montreal Protocol = Montreal Protocol on Substances that Deplete the Ozone Layer
MPO = Metropolitan Planning Organization
MW = Megawatt
NRC = Nuclear Regulatory Commission
NSPS = New Source Performance Standards
NOAA = National Oceanic and Atmospheric Administration
OECD = Organization for Economic Cooperation and Development
PTC = Production Tax Credit
SEIS = Supplemental Environmental Impact Assessment
USAID = United States Agency for International Development
WTO = World Trade Organization