WRI Summary of The American Power Act
(Kerry-Lieberman Discussion Draft)

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This summary provides a concise overview of the American Power Act (here in referred to as the APA[3]) released as a discussion draft by Senators John Kerry and Joseph Lieberman on May 12, 2010.[4] The APA is a comprehensive energy and greenhouse gas reduction bill consisting of seven titles:

- Title I, Domestic Clean Energy Development
- Title II, Greenhouse Gas Pollution Reduction
- Title III, Consumer Protection
- Title IV, Job Protection and Growth
- Title V, International Climate Change Activities
- Title VI, Community Protection from Global Warming Impacts
- Title VII, Budgetary Effects

This summary roughly follows the structure of the bill. In some cases this summary deviates from this structure and groups together related components to facilitate understanding. For a detailed review of allowance value distribution under the APA please see Appendix A. For more information on specific components of the APA, please refer to the actual legislative language as referenced by section and page number in this document.[5]

NUCLEAR

- **Expedite Nuclear Regulatory Process:**
    - Application: Nuclear Regulatory Commission (NRC) must establish an expedited application procedure combining construction and operation licensing for qualified new nuclear reactors of pre-approved designs, on sites of existing reactors, and with sufficient financial commitment (Sec. 1101, pg. 15).
    - Eliminates requirement for certain mandatory public hearings on uncontested issues and makes hearings optional and/or by-request-only for construction permits and combined construction and operating licenses for production and utilization facilities. For uranium enrichment facilities, removes 'on the record' requirement for hearings and requires a hearing only upon request. Applies these rules also to currently pending applications (Sec. 1105, pg. 28).
    - Restricts NRC's ability to review facilities before operation. Removes the requirement that the 'prescribed acceptance criteria' must be met prior to operation of a facility issued a combined license (Sec. 1108, pg 33).
    - Environmental impact statement: Amends the Atomic Energy Act of 1954 to require that a second environmental impact statement (EIS) for a combined license for a facility with an

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[3] References to the American Power Act in this summary should not be confused with the Administrative Procedure Act.

[4] This summary applies only to the APA as released and not subsequent iterations.

[5] Page numbers apply to the APA as released and available here: http://kerry.senate.gov/americanpoweract/intro.cfm

early site permit should supplement the EIS prepared for the early site permit with new and significant information (Sec. 1109, pg. 34).

- **Financial Support:**
  - Loan guarantees: Increases from $18.5 to $54 billion the amounts reserved for nuclear power facilities under current loan guarantee programs and collects loan guarantee retention fees from applicable nuclear plants (Sec. 1102, pg. 18).
  - Financial assistance for power plant delays: Expands eligibility for financial assistance in the event of nuclear power plant delays; expands the coverage (100 percent for all reactors) and adds a limit of $500 million per contract (Sec. 1103, pg. 22).
  - Suspends import tariffs on nuclear facility components, with a focus on components ordered in 2010 and entered before 2020 (Sec. 1111, pg. 35).
  - Tax benefits to nuclear power plants. Provides several tax benefits including accelerated cost recovery through a depreciation deduction (Sec. 1121, pg. 38). Investment tax credits for construction of nuclear power facilities operating before 2025, expanded eligibility for production tax credits and grants in lieu of tax credits, to public power providers or cooperative electric companies for new facilities (Sec. 1121-1124 and 1126, pg. 38-57).
- **Research and Reports:**
  - NRC must report to Congress on 1) developing technology-neutral guidelines for nuclear plant licensing; 2) recommending procedures that would enable the NRC to pursue fact-based, transparent, expeditious decisions (Sec. 1101, pg. 16) and 3) the status of nuclear facility licensing and recommendations to ensure expeditious review and processing of licensing applications (Sec. 1103, pg. 24).
  - Requires the Department of Energy's (DOE) Nuclear Energy Research Initiative to research methods to lower the cost of nuclear reactor systems (Sec. 1107, pg. 31)
  - Directs DOE to designate a spent fuel recycling R&D center of excellence. DOE to designate a national laboratory to lead R&D on nuclear fuel cycles and technologies to reduce waste and prevent proliferation (Sec. 1104, pg. 26).
- **NRC Commissioners:** Commissioners may continue in service until another is appointed or an entire session of Congress has passed (Sec. 1106, pg. 30).

OIL & GAS PRODUCTION AND REFINING

- **Environmental Protections and Revenues:**
  - Establishes a moratorium on new offshore drilling until the cause of the Deepwater Horizon explosion is known and the Department of Interior (DOI) determines that it is safe to continue proposed drilling plans (Sec. 1201, pg. 61).
  - A portion of drilling revenue will be invested in protection and restoration of oceans and coastlines. Requires liability mechanisms to ensure adequate funds for mitigating environmental and economic impacts of offshore drilling accidents; accelerates investments in response capacities (Sec. 1201, pg. 62). A conservation royalty of 12.5 percent of the federal revenue from all leased offshore lands will be paid to the land and water conservation fund (Sec. 1202, pg. 67).
  - Mandates new safety measures for workers and ocean ecosystems and new studies of mitigation procedure effectiveness (Sec. 1201, pg. 62).
  - States maintain authority to veto offshore drilling plans if they are at risk for significant adverse impacts from a spill or if the tract is within 75 miles of their coast (Sec. 1201, pg. 62, Sec. 1204, pg. 72, and Sec. 1205, pg. 75).
  - The Commerce Department must conduct an environmental impact assessment of oil spill risks for tracts that are eligible for state revenue sharing and are part of the five-year outer continental shelf oil and gas leasing program (Sec. 1205, pg. 74).
- **Sharing of Royalty Revenue Payments:**
  - Eligible coastal states closest to offshore leased tracts will receive 37.5 percent of rental and royalty payments, up to $500 million annually per state (Sec. 1202, pg. 67). Funds are to be used for coastal protections and accident response (Sec. 1201, pg. 62).
  - Half of federal royalties, after payments to states and conservation fund, are dedicated to deficit payments (Sec. 1202, pg. 68).

  - Royalties from the Alaskan adjacent zone will be integrated into this system five years after offshore drilling revenue sharing goes into effect, with significant percentages paid to Alaskan native tribes closest to the drilling sites (Sec. 1203, pg. 68).
- **Refinery Allocation:** Provides emission allowance rebates to petroleum refineries for each calendar year between 2013 and 2026. Rebates are distributed to individual refineries based on each facility's share of output and emissions intensity, relative to the sector average during the previous four calendar years, such that relatively more allowances would be distributed to larger and more greenhouse gas emissions-intensive (including less efficient) facilities (Sec. 4002 [new sec. 796 of the CAA[6]], pg. 823).

COAL

- **National Strategy for Carbon Capture and Sequestration (CCS):**
  - Directs federal agencies to establish and report on a unified strategy to address key legal, regulatory and other barriers to commercial-scale CCS deployment (Sec. 1401, pg. 76). Establishes an interagency and multi-stakeholder task force to study and report to Congress on existing laws that apply to carbon dioxide storage; models for assuming liability and financial responsibility and for managing risks from closed geological storage sites; and relevant mineral, water and property rights issues (Sec. 1402, pg. 78). Directs the Environmental Protection Agency (EPA) to study and report on environmental laws for which they are responsible that would apply to CO_2 injection and geological storage (Sec. 1402, pg. 79).
- **Special Funding Program for CCS Development and Deployment:** Contingent on the approval of at least 30 state regulatory authorities directs the DOE to establish a program to support development and deployment of CCS and carbon conversion technologies (Sec. 1412, pg. 83).
  - Program support for large-scale (>300 MW) projects to accelerate the commercial availability of CCS technologies and methods (Sec. 1414, pg. 96); ensures that funded projects demonstrate a variety of commercial-scale technologies that, among other requirements, could result in a capture of emissions from the generation of at least 10 gigawatts (Sec. 1414, pg. 97).
  - Revenue for the program to be generated by a charge assessed on all fossil fuel-based electricity sold by electric utilities to industrial and commercial customers. Charge to reflect the carbon intensity of electricity by each utility and adjusted to generate between $2 billion and $2.1 billion per year (Sec. 1415, pg. 101).
- **Incentives for Commercial Deployment of CCS:** Directs the EPA to promulgate regulations for distributing emissions allowances (see Appendix A) to support commercial deployment of CCS for electricity generation and industrial operations, during their first ten years of operation (Sec. 1431 [new sec. 794 of the CAA], pg. 111).
  - Eligible projects and facilities include electricity generating units (EGUs) fueled by coal or petroleum coke at least 50 percent annually with CCS technology applied to not less than 200MW of capacity and industrial sources that would otherwise emit more than 50,000 tons of CO_2 per year (Sec. 1431 [new sec. 794 of the CAA], pg. 112).
  - Eligible EGU or industrial projects must meet permitting requirements, be located in the US, geologically or otherwise permanently sequester the CO_2, and achieve at least 50% reduction in CO_2 emissions annually, or for EGU retrofits reduce emissions by 50% of the treated portion of flue gas (Sec. 1431 [new sec. 794 of the CAA] pg. 114).
- **Review of CCS Technology Deployment:** Directs the Comptroller General to study and report on the state of CCS technology and barriers to its deployment if allowances allocated for commercial CCS deployment are becoming insufficient and 72 GW of CCS-equipped capacity have not been installed, or by 2033. Based on the results of this study, the EPA may increase the quantity of allowances allocated to CCS deployment by up to 2.5 percent of the total quantity established for the year; Congress has 90 days to override or revise the allowance adjustment (Sec. 1432 [new sec. 789 of the CAA], pg. 168).

[6] CAA refers to the Clean Air Act

- **Retrofit or Replacement of Existing Coal-Fueled Power Plants** Offers incentives to existing coal-fueled power plants deriving at least [85] percent of annual heat input from coal or petroleum coke and not subject to the new performance standards with the objective of reducing greenhouse gas emissions and increasing efficiency (Sec. 1441 [new sec. 802 of the CAA], pg. 179).
- **Task-Force Study and Report**: Establishes an interagency, multi-stakeholder taskforce to study and report including any consensus recommendations on (Sec. 1441 [new sec. 802 of the CAA], pg. 182):
  - Existing environmental programs that may affect the transition or retirement of existing coal-fueled plants (Sec. 1441 [new sec. 802 of the CAA], pg. 182).
  - The effects of exempting units from current additional pollutant control (required by the CAA's existing unit performance standards, hazardous air pollutants standards, and from definition as major emitting facility) on the ability to significantly reduce greenhouse gas emissions operating after [xx] and committing to permanently cease operations before [xx], them (Sec. 1441 [new sec. 802 of the CAA], pg. 183).
  - The effect federal regulations being developed to control non-greenhouse gas air pollutants might have on power plant emissions, attainment of air quality standards, and transition of coal-fueled plants, and existing environmental programs (Sec. 1441 [new sec. 802 of the CAA], pg. 183).
  - Financial incentives, including tax incentives in addition to those authorized, award of additional allowances for retirement, for early closure and regulatory changes that would facilitate transition or retirement (Sec. 1441 [new sec. 802 of the CAA], pg. 184).
  - The effect on employment in the energy sectors and ameliorating actions (Sec. 1441 [new sec. 802 of the CAA], pg. 184).
  - Directs the EPA, DOE, and Treasury to respond to the study. Response can include implementation, by accelerated regulation, of one or more of the study's consensus recommendations (Sec. 1441 [new sec. 802 of the CAA], pg. 186).
- **Allowances to Incentivize Retiring or Repowering Merchant Coal-Fueled Power Plants:** EPA to provide incentives to improve efficiency and reduce carbon intensity of the merchant coal-fueled, electricity generator fleet. By 2014, owners/operators must notify the EPA of their intent to retire or repower merchant coal unit. After the permanent closure or repowering, the EPA shall issue emissions allowances equal to one half of the unit's annual base-period emissions, phased down based on time after closure. Incentives may be provided to no more than 35 GW of capacity (Sec. 2101 [new sec. 798 of the CAA], pg. 531).

RENEWABLE ENERGY AND ENERGY EFFICIENCY

- **Congressional Finding:** Congress finds that measures are needed to accelerate renewable energy deployment and energy efficiency, including a clean and renewable energy mandate, innovative mechanisms to fund renewable and clean energy deployment, electric transmission provisions to help connect renewable resources to load centers, improved building codes and improved appliance standards (Sec. 1601, pg. 188).
- **State Allowances for Renewable Energy and Energy Efficiency:** Allocates 2 percent of allowances for the years 2013-2018, declining to zero by 2022 to states for: improving energy efficiency (e.g., improvements to building codes and low-income building, retrofits of existing buildings); deploying renewable energy technologies for the generation of electricity or thermal energy; enabling smart-grid development (including distributed generation, demand response and demand-side management); not more than 10 percent to be spent on non-federal share of surface transportation capital projects, mostly for public transportation improvement and special needs access (Sec. 1603, pg. 200).
- **Rural Energy Savings Program**: USDA to administer federal loan program (funded by 1 percent of allowances for the years 2013-2015, up to $1 billion cumulatively) for qualified public utility districts and electric cooperatives providing 10-year loans and quick-start grants for customer investments in energy efficiency measures that reduce home energy use (includes auditing procedures to ensure effective implementation) (Sec. 1602, pg. 188).

- **Low-Carbon Industrial Technologies R&D:** Within 180 days of enactment, the Commerce Department will establish an R&D institute for immediate and long-term technologies (funded by 1 percent of allowances for the years 2013-2020, declining to zero by 2022) to help domestic manufacturing become more efficient, competitive, and reduce their emissions. The Commerce Department will manage intellectual property rules and partner with DOE to support industry collaboration, facilitate job creation, and promote rapid adoption of innovations arising from the R&D institute (Sec. 4161, pg. 889).
- **Voluntary Renewable Energy Markets:** Provides a statement of policy that nothing in the APA is intended to interfere with or prevent the growth of voluntary U.S. renewable energy markets. U.S. Comptroller General must report to Congress in two years on the efficacy of the voluntary renewable energy market at reducing domestic greenhouse gas emissions including recommendations (Sec. 1604, pg. 206).
- **Research and Development:** DOE must distribute 2 percent of allowances for the years 2013-2022 on a competitive basis to higher education, companies, research foundations, and similar entities to advance research, development and deployment of a broad range of clean energy technologies, taking into account the goals of Advanced Research Projects Administration - Energy (ARPA-E), and supplementing, not supplanting, other federal resources (Sec. 1801, pg. 258).
- **Renewable Biomass:** Exempts from coverage under the cap emissions from the combustion of renewable biomass or derived fuel (Sec. 2001 [new sec. 722 of the CAA], pg. 325), including a broad range of organic matter (plants, waste and wood residues sourced from any non-federal or Indian lands; some materials from federal lands such as pre-commercial thinning and invasive species, but not biomass sourced from roadless areas, wilderness study areas, national parks and other sensitive lands) (Sec. 2002 [new sec. 700 of the CAA], pg. 486).
  - <u>Review</u>: requires reports by National Academy of Sciences, and a joint scientific review (including respectively the EPA and USDA for non-Federal lands and EPA, USDA and DOI for federal lands) of contribution of renewable biomass to energy independence and greenhouse gas reduction with recommendations to Congress for possible legislative modifications (Sec. 2501 [new sec. 809 of the CAA], pg. 673).
  - <u>Studies</u>: EPA, in consultation with DOI and USDA, must conduct periodic studies and report to Congress on how biomass is used for fuel considering net greenhouse gas emissions and environmental and conservation factors and impacts on supply and cost of food and the agriculture industry, with policy recommendations concerning above exemption (Sec. 2501 [new sec. 808 of the CAA], pg. 671).

TRANSPORTATION

- **Transportation Efficiency:**
  - <u>Greenhouse gas emission reductions</u>: EPA, in consultation with DOT must set national transportation-related greenhouse gas emission reduction goals and support modeling, data collection methods and greenhouse gas baselines to measure and manage progress towards meeting these goals (Sec. 1711 [new sec. 803 of the CAA], pg. 211).
  - <u>Requires Metropolitan Planning Organizations (MPOs)</u> representing cities with greater than 200,000 population to engage in transportation planning process to address transportation-related greenhouse gas emissions by including emission reduction targets and plans to meet targets. Each plan shall demonstrate progress in reducing greenhouse gas emissions so as to achieve state reduction targets. Plans that meet DOT requirements will be eligible for grant funding to support greenhouse gas reduction efforts (Sec. 1711 [new sec. 803 of the CAA], pg. 219).
  - <u>Transportation </u>greenhouse gas<u> reduction efforts in states</u>: Establishes transportation greenhouse gas emission planning process, consistent with requirements for MPOs. State transportation plans must be developed in coordination with all MPOs required to produce greenhouse gas plans, state transportation and air quality agencies, representatives from local housing, economic development and land use agencies and Indian tribes (Sec. 1711 [new sec. 803 of the CAA], pg. 236).
  - <u>Investing in transportation greenhouse gas emissions reduction programs</u>: Annual allowances to states and MPOs support the development and updating of transportation

greenhouse gas reduction targets and strategies, provide financial assistance to implement approved plans (Sec. 1712, pg. 253).

- **Augmenting the Highway Trust Fund (HTF):** HTF receives funding through the distribution of allowances to promote the safety, effectiveness and efficiency of transportation in the United States through measures that are consistent with transportation efficiency planning under section 803 of the CAA and other relevant provisions of the law (Sec. 1721 [new sec. 785 of the CAA], pg. 258).
- **Transportation Technology:**
  - Investing in clean vehicles: Allocates allowances to "Clean Vehicle Technology Fund", an EPA/DOT managed grant program to reequip or expand idle domestic manufacturing facilities located in areas with experienced automotive workforce to produce advanced technology vehicles and components. Minimum amounts of grant funding are directed towards plug-in vehicle technologies, alternative technology vehicles, plug-in vehicles, hybrids, medium- and heavy-duty vehicles, and public transit (Sec. 4111, pg. 846).
  - Powering vehicles with natural gas: Ten-year tax incentives for qualified natural gas vehicles, including converted vehicles. Amends Internal Revenue Code for natural gas vehicle bonds for governmental bodies, subject to a national limitation of $3 billion. Provides incentives for qualified natural gas vehicle manufacturing facilities (Sec. 4121-4124, pg. 850-870).
- **Electric Vehicle Infrastructure:**
  - National Transportation Low Emissions Energy Plan (NTLEEP): DOT must develop a plan that: projects near- and long-term needs for electric vehicle infrastructure; establishes a goal of achieving strategic deployment of such infrastructure by 2020, prioritizes development of standardized charge ports (Sec. 1701, pg. 208).
  - Pilot projects: follow plan with pilots in different regions (including at least one rural and one freight project to determine regional readiness (Sec. 1701, pg. 209).

CLIMATE CHANGE POLLUTION REDUCTION TARGETS AND TIMETABLES[7]

- **Goals and Caps:** Sets both a non-binding economy-wide greenhouse gas emissions reduction goal (Sec. 2001 [new sec. 702 of the CAA], pg. 265) and a mandatory cap on covered greenhouse gases (Sec. 2001 [new sec. 703 of the CAA], pg. 266, [new sec. 721 of the CAA], pg. 310). The targets for both the economy-wide emission reduction goals and for the primary cap on covered sources are as follows:
  - 2013: 4.75 percent below 2005 emission levels (~11 percent above 1990 emissions levels)
  - 2020: 17 percent below 2005 (~7 percent below 1990)
  - 2030: 42 percent below 2005 (~33 percent below 1990)
  - 2050: 83 percent below 2005 (~80 percent below 1990)

  The cap brings in covered sources in two phases from 2013 through 2016 (see Point of Regulation).
- **A Consumption[8] Cap on All HFCs:** Title VI of the CAA is extended to apply to HFCs by setting a maximum annual allowable amount of consumption. Reduction amounts are relative to average U.S. HFC consumption levels between 2004 and 2006 (Sec. 2201 [new sec. 619 of the CAA], pg. 533) as follows:
  - 2013: 12.5 percent below
  - 2020: 33 percent below
  - 2030: 75 percent below
  - 2033 and onward: 85 percent below
- **Ongoing Review:** Requires a periodic inter-agency review of climate science, domestic and global emission reductions, technology development and deployment and monitoring, verification and reporting of emission reduction actions (Sec. 2001 [new sec. 705 of the CAA], pg. 267).

[7] See WRI's forthcoming analysis of emission reductions under the APA, available here: http://www.wri.org/publication/usclimatetargets
[8] Consumption = Production + Imports - Exports

- **Study of Non-CO_2 gases:** Interagency process will review existing and potential policies to promote fast mitigation of non CO_2 greenhouse gases, reporting to Congress in not later than two years and providing recommendations on further steps on fast mitigation strategies (Sec. 2231, pg. 617).

POINT OF REGULATION, EMISSIONS REPORTING AND COVERAGE

- **Covered Gases:** Five Kyoto gases (not HFCs, see above) plus NF_3 with the EPA authorized to add additional greenhouse gases in the future and to regulate PFCs and certain other substances under a separate program (Sec. 2001 [new sec. 711 of the CAA], pg. 280, [new sec. 714 of the CAA], pg. 306).
- **Mandatory Reporting:** Required by 2011 for all prior years through 2007. Quarterly reporting is required beginning in 2011. All covered entities plus other types of entities specified in the APA are required to report (Sec. 2001 [new sec. 713 of the CAA], pg. 291).
- **Point of Regulation:** Uses hybrid approach with sources phased in over a 4-year time frame (see definitions Sec. 2002 [new sec. 700 of the CAA], pg. 469, Sec. 2001 [new sec. 722 of the CAA], pg. 324).
  - Covered in 2013: The APA assumes the cap covers 66.2 percent of total U.S. emissions during this phase[9].
    - All electric power generators (downstream) not including emissions from renewable biomass (for details: see "Clean Energy" section of this summary).
    - Natural gas liquid-, petroleum-, and coal-based refined product providers not including products sold to electric power and industrial sources.
    - Producers and importers of fluorinated gases (upstream) and other manufactured greenhouse gases except HFCs and potentially PFCs and certain other substances if regulated under other provisions.
    - Certified geologic storage sites.
  - Added to coverage in 2016: The APA assumes the cap covers 84.5 percent of total U.S. emissions during this phase[9].
    - Industrial sources (downstream) that annually emit 25,000 tons or more, not including renewable biomass combustion emissions, plus all sources (regardless of size) in select sectors (e.g., cement, petroleum refining and silicon carbide production).
    - Natural gas local distribution companies (LDCs) (midstream) that deliver more than 460,000,000 cubic feet of gas annually to non-covered entities. Emissions that result from sales are regulated with measures to prevent double counting.
- **Compliance Obligation:** All regulated entities must hold compliance instruments (e.g. allowances) in an amount equal to their covered emissions in each compliance year:
  - Provisions for refined product producers: Producers of refined products must purchase allowances set aside by the EPA at a fixed price set by the quarterly auction clearing price. Refined product producers may not any compliance instrument (including offsets) other than allowances purchased through this provision and such allowances may not be sold, banked or traded (Sec. 2001 [new sec. 729 of the CAA], pg. 361).
  - Provisions for all other entities: All other entities may use allowances, international allowances, offsets or cost containment reserve allowances for compliance (Sec. 2001 [new sec. 722 of the CAA], pg. 324).

CARBON MARKET ASSURANCE AND OVERSIGHT

- **Commodities Futures Trading Commission (CFTC):** The CFTC has regulatory authority over allowance and offset markets and allowance derivative markets. CFTC must set rules and requirements to achieve the following with regards to markets for greenhouse gas instruments (such as allowances, offsets and derivatives) (Sec. 2402, pg. 631):

[9] Legislative assumptions of emissions coverage are consistent with WRI estimates.

- Regulate greenhouse gas instruments in the same manner as agricultural commodities (Sec. 2403, pg. 632).
- Prevent excessive market speculation by establishing position limits (Sec. 2404, pg. 632).
- Prohibit fraud and market manipulation (Sec. 2405, 2407, pg. 636).
- Restrict the trading of greenhouse gas instruments to designated exchanges cleared through approved clearing organizations. Restricts participation to covered entities and registered market participants. Free trading is permitted for any contracts that do not provide for physical delivery of greenhouse gas instruments (Sec. 2408, pg. 637).
- Use new emergency and market suspension authorities to protect the public interest in the event of a market emergency (Sec. 2413, pg. 655).

ALLOWANCE VALUE DISTRIBUTION

For a detailed review of allowance value distribution both by distribution method (auction or allocation) and purpose please see Appendix A of this summary.

- **Auction Procedure:** Quarterly auctions beginning no later than March 2012 for designated allowances. Auctions open only to covered entities and regulated greenhouse gas market participants. A reserve price is established for all regular auctions initially set at $12/tonne increasing at 3 percent above inflation in each subsequent year. Any allowances not sold at auction at the end of each calendar year shall be deposited in the Cost Containment Reserve. All entities in possession of allowances may request that the EPA sell their allowances on consignment (Sec. 2102 [new sec. 790 of the CAA], pg. 518).
- **Distribution of Value**: Distributes allowance value in a number of ways to support various existing and newly established federal and state programs; benefit energy consumers; and distribute value to regulated entities for free. The amount of value directed to various purposes changes over time. (Sec. 2102 [new sec. 781-798 of the CAA, pg. 492-531).
- **Carryover:** If allowances allocated to certain purposes (including CCS deployment and allowances to industry) are not all distributed in a vintage year, the EPA shall use the undistributed allowances to increase, for the same vintage year, the allocation of allowances to be auctioned. In the following vintage year, the allocations to these programs are decreased by the same amount as they were increased the previous year, and those allowances are allocated for the purpose for which the undistributed allowances were originally allocated (Sec. 2102 [new sec. 781 of the CAA], pg. 507).
- **Allowance Value Distribution Limits:** Allowances distributed for certain purposes (such as the industrial energy efficiency program and the HTF) may be subject to an annual or cumulative upper dollar limit based on the market value of allowances. If the limit is reached before all allowances intended for that purpose are distributed, the remaining allowances are auctioned with the proceeds directed towards deficit reduction (Sec. 2102 [new sec. 781of the CAA], pg. 509).

COST CONTAINMENT (OTHER THAN OFFSETS)

- **Trading:** Trading of allowances and offsets is permitted only between compliance entities and/or regulated greenhouse gas market participants. No other entities may hold or trade allowances. The EPA must receive notice of and record any transfers of compliance instruments. All allowances will be tracked in an allowance tracking system (Sec. 2001 [new sec. 724 of the CAA], pg. 343).
- **Banking and Borrowing:**
  - Banking: Unlimited banking of allowances (Sec. 2001 [new sec. 725 of the CAA], pg. 344).
  - Borrowing without interest: Allowances can be used for compliance for emissions in the calendar year preceding the vintage year (e.g., for compliance in 2015 a covered entity could use an allowance from 2016), without limitation (Sec. 2001 [new sec. 725 of the CAA], pg. 346).
  - Borrowing with interest: Up to 15 percent of an entity's compliance obligation can be met through submission of allowances with a vintage year 1-5 years later than that calendar year. For each borrowed allowance, at the time of borrowing the borrower needs to submit additional allowances in advance to meet an 8 percent annual interest requirement (Sec. 2001 [new sec. 725 of the CAA], pg. 346).

- **Cost Containment Reserve:** Within 90 days of each annual compliance date, covered entities that are not refined product providers are eligible to purchase allowances from the cost containment reserve at a set price (Sec. 2001 [new sec. 726 of the CAA], pg. 347).
    - Filling the reserve**:** The reserve will be filled no later than two years of date of enactment with 1.5 percent of allowances from each year from 2013 through 2021, 2.5 percent of allowances from each year from 2022 and 2029 and 5 percent of allowances from each year from 2030 through 2050 (Sec. 2001 [new sec. 726 of the CAA], pg. 348).
    - Cost containment reserve price:
        - 2013: The reserve price will be $25 per tonne.
        - 2014-2050: the minimum reserve auction price shall be the previous year's reserve price, increased by 5 percent plus the rate of inflation.
    - Replenishing the reserve: The reserve will be replenished to its original size with any unsold allowances from reserve sales or from regular allowance auctions as well as with allowances converted by the EPA from offsets purchased using the proceeds from cost containment reserve allowance sales.
    - Purchase limits: A covered entity may not purchase more than 15 percent of its compliance obligation from the reserve annually.
    - Purchase restrictions: No entity shall purchase allowances from the reserve within 90 days of selling an allowance or offset; or if the entity adds to its cumulative bank of allowances during the compliance period.
    - Restrictions on use: Any allowance purchased from the reserve may only be used for compliance in the year it is sold.
    - Proceeds from allowance sales: Proceeds from auction will be used to purchase offset credits from international reduced deforestation. The EPA will retire those credits and establish emissions allowances equal to 80 percent of the number of offset credits retired and place them into the Cost Containment Reserve to fill it to its original size. If international offsets from reduced deforestation are unavailable, the EPA shall purchase domestic offsets and convert them into allowances at a one for one ratio (Sec. 2001 [new sec. 726 of the CAA], pg. 350).
- **International Emission Allowances:** Entities may use an unlimited number of allowances from approved national and supranational emissions trading programs to meet compliance, although the EPA by rule may restrict their use (Sec. 2001 [new sec. 728 of the CAA], pg. 358).

OFFSETS

- **Program Administration:** The Department of Agriculture (USDA) and EPA, in consultation with appropriate federal agencies, shall promulgate regulations establishing a program for the issuance of offset credits (Sec. 2001 [new sec. 733 of the CAA], pg. 378). The USDA is designated lead agency to determine eligible offset project types (Sec. 2001 [new sec. 734 of the CAA], pg. 383), requirements for offset projects (Sec. 2001 [new sec. 735 of the CAA], pg. 391), approval (Sec. 2001 [new sec. 736 of the CAA], pg. 404), and audits and review (Sec. 2001 [new sec. 739 of the CAA], pg. 412) for domestic agriculture and forestry projects.
    - Program establishment: Not more than 18 months after enactment the EPA and USDA shall promulgate regulations establishing a program for the issuance of offsets. The EPA must establish an offset registry (Sec. 2001 [new sec. 733 of the CAA], pg. 378).
    - Eligible project types: Not later than one year after enactment, the USDA shall establish the initial list of eligible project types for which there are well developed methodologies for domestic agriculture and forestry projects, including a list of projects expressly eligible under the APA (Sec. 2001 [new sec. 734 of the CAA], pg. 383). The EPA is responsible for all other domestic offset project types (Sec. 2001 [new sec. 733 of the CAA], pg. 382).
    - Advisement: Establishes an independent "Greenhouse Gas Emission Reduction and Sequestration Advisory Committee" to provide guidance to the USDA and EPA on a range of topics including project types, areas of scientific uncertainty and acceptable qualification and quantification methodologies. Committee will conduct a scientific review of offset program by 2017 and every five years thereafter (Sec. 2001 [new sec. 732 of the CAA], pg. 367).

  - Program review: The program will be reviewed at least once every five years by the EPA in consultation with the USDA and revised if necessary (Sec. 2001 [new sec. 741 of the CAA], pg. 421).
- **Requirements for Offset Projects:** Requires EPA and USDA to promulgate standardized methodologies within 18 months of a project type being added to list. The methodology must include provisions for addressing: additionality, baseline establishment, and leakage; and must ensure that offset credits provide for a reduction in net concentrations of greenhouse gases s (Sec. 2001 [new sec. 735 of the CAA], pg. 391).
- **Limits on Offset Use:**
  - System-level offset limit: No more than two billion tons of offsets annually may be used for compliance by covered entities (Sec. 2001 [new sec. 722 of the CAA], pg. 331). The president may recommend to Congress whether the two billion ton limit should be increased or decreased (Sec. 2001 [new sec. 722 of the CAA], pg. 336).
  - Entity-level offset limits: Covered entities may satisfy a percentage of their compliance obligation with offsets each year. This number is determined by the ratio of an entity's compliance emissions to system-wide compliance emissions in the year two years before the current compliance year multiplied by two billion (Sec. 2001 [new sec. 722 of the CAA], pg. 332).
  - Domestic/International offset limits: Of the total offsets allowed, not more than 75 percent can come from domestic or term offsets, and not more than 25 percent can come from international offsets. If the EPA determines that less than 1.5 billion tons of domestic offsets at or below allowance prices are available, the EPA shall increase the percentage of international offsets allowed up to a maximum of one billion tons. (Sec. 2001 [new sec. 722 of the CAA], pg. 335).
  - International offset discount: After 2018, regulated entities must surrender 1.25 international offsets in lieu of one allowance (Sec. 2001 [new sec. 722 of the CAA, pg. 332, 336).
- **Offset Approval, Verification, Issuance and Auditing Requirements:** Establishes approval process for offsets credits (Sec. 2001 [new sec. 736 of the CAA], pg. 404) and verification guidelines requiring third party verification of projects by verifiers accredited by the EPA and USDA (Sec. 2001 [new sec. 737 of the CAA], pg. 407). The USDA and EPA shall conduct random audits of offset projects and credits. May delegate audit responsibility to states and develop methodologies for audit (Sec. 2001 [new sec. 739 of the CAA], pg. 412).
- **Early Action Recognition:** Establishes a program to recognize early offsets and early on-site reductions. Approximately 33 percent of the allowance set aside is for offsets and early reductions, with the remaining 66 percent allocated to eligible state cap-and-trade programs. Credits issued by an EPA-approved offset program under the early offset provisions (Sec. 2001 [new sec. 740 of the CAA], pg. 414) may be exchanged for allowances (Sec. 2101 [new sec. 788 of the CAA], pg. 512).
- **Early Offset Supply:** Voluntary and regulatory offset program administrators may apply to the EPA and USDA for approval as an early offset provider. Programs shall be approved as long as they have met several requirements included in the APA (Sec. 2001 [new sec. 740 of the CAA], pg. 414).

INTERNATIONAL OFFSETS

- **Administration:** The EPA, in consultation with the Secretary of State and the U.S. Administration for International Development (USAID), may issue international offset credits based on projects that avoid, reduce or sequester emissions in developing countries. Regulations must be promulgated within two years from date of enactment (Sec. 2001 [new sec. 753 of the CAA], pg. 427).
  - Advisement: Establishes an independent "International Offsets Integrity Advisory Committee" to provide guidance to the EPA on project types and program environmental integrity (Sec. 2001 [new sec. 752 of the CAA], pg. 423).

- Regulation: International offset credits may be issued only if: 1) the United States is a party to a bilateral or multilateral agreement that includes the country in which the project has occurred; 2) such a country is a developing country[10]; 3) the agreement ensures all relevant requirements included in APA apply, and 4) the offset project representative is eligible to receive service of process in the United States (Sec. 2001 [new sec. 753 of the CAA], pg. 427).

- **Project Sources:** Offset credits may be issued for projects identified by the EPA under new Sec. 733 of the CAA through an approved international body, sectoral crediting mechanisms or international reduced deforestation as set out below (Sec. 753, pg. 430).
    - Recognition of other programs: The EPA can issue credits in exchange for credits issued by an international body established by the UNFCCC, a protocol to such convention or a treaty that succeeds such a convention as long as those credits were generated through a program that creates equal or greater assurance of the environmental integrity of the U.S. program. Beginning Jan. 1, 2016, no credits shall be issued from sectors identified by the EPA as eligible to produce sector based credits (Sec. 2001 [new sec. 756 of the CAA], pg. 447).
    - Sector-based credits: Approves the issuance of offset credits based on sectoral crediting mechanisms targeted at sectors in any country that: 1) has comparatively high emissions or greater levels of economic development or 2) would be subject to a compliance obligation under Section 722 if it were located in the United States (Sec. 2001 [new sec. 756 of the CAA], pg. 442).
    - Offsets from reduced deforestation: International offset credits are allowed only if the activity occurs in a country identified by the EPA pursuant to the country's capacity to participate in such a program according to specific criteria as established by the APA. Offset credits can be issued relative to a national or sub-national deforestation baseline. Sub-national credits can only be issued for first five years of program. Project-based credits may be included at the discretion of the EPA. (Sec. 2001 [new sec. 756 of the CAA], pg. 449).

DOMESTIC AGRICULTURE AND FORESTRY POLICIES AND PROGRAMS

- **Annual Greenhouse Gas Accounting for the Forestry Sector:** EPA, in consultation with the USDA and DOI, must provide an annual accounting of forests and forest products sequestration and emissions from federal, private and tribal lands larger than 5000 acres that are regularly used for forestry, based on information available from existing sources (Sec. 2501 [new sec. 807 of the CAA], pg. 669).
- **Carbon Conservation Fund:** An unspecified amount of allowances administered by the Secretaries of Agriculture and Interior are set aside to create incentives for additional activities (other than those qualified under the offset program) in the agriculture sector to reduce greenhouse gas emissions or sequester carbon. Compensation will be based on the amount of emissions reductions obtained and the duration of the reductions. Requires reporting of results to EPA and reviews every five years (Sec. 4152, pg. 878).
- **Productivity Study:** The USDA must conduct an annual assessment of the amount of agricultural land that has been removed from agricultural production due to participation of landowners in afforestation offset projects and evaluate the impact of the offset program on a range of other issues (Sec. 2001 [new sec. 741 of the CAA], pg. 419).

INTERACTION WITH EXISTING EPA AUTHORITY UNDER THE CLEAN AIR ACT

- **Standards:** EPA must:
    - Regulate black carbon with consideration to public health and environmental impacts (including global and regional warming impacts) within three years; or decide, through a

[10] The term 'developing country' means a country eligible to receive official development assistance according to the income guidelines of the Development Assistance Committee of the Organization for Economic Cooperation and Development.

public finding, that current CAA regulations are adequate (Sec. 2212 [new sec. 805 of the CAA], pg. 605).
  - Set emissions standards for heavy-duty vehicles which must reflect the greatest emissions reductions achievable giving consideration to cost, energy and safety factors (Sec. 4141 [new sec. 804 of the CAA], pg. 872).
  - Set emission standards for non-road vehicles and engines after EPA identifies which non-road vehicles and engines contribute significantly to total emissions from that category and provide the greatest potential for significant and cost-effective reductions (Sec. 4141 [new sec. 804 of the CAA], pg. 873).
  - Set passenger vehicle emissions standards for 2017 and beyond in consultation with DOT and other agencies that reflect the greatest emissions reductions achievable for each vehicle year, as determined by the EPA, giving consideration to cost, energy and safety factors (Sec. 4141 [new sec. 804 of the CAA], pg. 877).
  - Set standards for geologic storage sites and new coal-fired power plants (see "Coal Provisions").
- **Performance Standards for New Coal-Fired Power Plants.** Coal fired electric generating units (EGU) must meet performance standards based on their initial permitting date (Sec. 1441 [new sec. 801 of the CAA], pg. 172).
  - EGUs initially permitted during or after 2020 must achieve at least a 65 percent reduction in CO_2 emissions annually, or a more stringent standard as set by the EPA (Sec. 1441 [new sec. 801 of the CAA], pg. 173).
  - EGUs initially permitted between 2009 and 2019 (inclusive) must achieve at least a 50 percent reduction in CO_2 emissions annually by the earlier of two compliance dates (either four years after the EPA reports that there is at least the equivalent of 10 GW of CCS-applied capacity in the US), or Jan. 1, 2020. The date may be extended to 2022 if the EPA and DOE jointly find, and Congress approves, that it would be technically infeasible to meet the standard in this timeframe. If the fallback date is used, individual EGUs may apply for specific extensions (Sec. 1441 [new sec. 801 of the CAA], pg. 177).
  - The EPA must review these standards at least every five years after the compliance date and reduce the maximum CO_2 emissions rate reflecting achievable emission limitations through the "application of the best system of emission reduction" taking into account cost and non-air quality health and environmental impact and energy requirements. (Sec. 1441 [new sec. 801 of the CAA], pg. 178)
- **Extension of CAA Title VI** (stratospheric ozone protection) to include HFCs (Sec. 2201 [new sec. 619 of the CAA], pg. 533):
  - Sets a cap on consumption of HFCs with most allowances auctioned and the rest sold at fixed prices to producers, importers and consumers of HFCs (see targets and timetables section above). This cap is separate from the broader cap-and-trade program. (Sec. 2201 [new sec. 619 of the CAA], pg. 533).
  - Offsets from the destruction of chlorofluorocarbons (CFCs) may be used for compliance in this program and may also potentially qualify as eligible offset types under the primary cap-and-trade and early offset program (Sec. 2201 [new sec. 619 of the CAA], pg. 567).
  - Imposes other requirements restricting the sale and importation of HFCs and HFC containing products (Sec. 2201 [new sec. 619 of the CAA], pg. 536).
- **EPA is Given Discretion to Set Standards for Perfluorocarbons (PFCs)** and other nonhydrofluorocarbon fluorinated substances: The EPA may determine that PFCs and other nonhydrofluorocarbon fluorinated substances should be regulated separately from the broader cap-and-trade program and set best-achievable performance standards for covered entities. Standards must be reviewed and their stringency increased over time. NF_3 and SF_6 are not eligible to be regulated under this section (Sec. 2001 [new sec. 714 of the CAA], pg. 306).
- **Prohibits EPA From:**
  - Setting emission performance standards for sources of capped emissions except coal fired electric generating units. In addition, no standards of performance shall be set for sources of uncapped emissions that are also sources that qualify for offset project status until after Jan. 1, 2020 (Sec. 2302, pg. 619).

- Establishing National Ambient Air Quality Standards (NAAQS) for greenhouse gases and designating greenhouse gases as hazardous air pollutants (HAPs) (Sec. 2301, 2303; pg. 619, 621).
- Applying New Source Review requirements on the basis of greenhouse gas emissions for sources initially permitted or modified after Jan. 1, 2009 (Sec. 2306, pg. 623).

INTERACTION WITH STATE PROGRAMS

- **Permanently Prohibits States from Running Their Own Cap-and-Trade Programs:** The prohibition does not apply to state low-carbon fuel standards, vehicle fleet standards such as California cars or most other areas of state authority (Sec. 2501 [new sec. 806 of the CAA], pg. 667).
  - Those who hold California, Regional Greenhouse Gas Initiative or Western Climate Initiative allowances may be compensated with allowances from the federal program. Compensation is based on the cost of obtaining and holding allowances, not on a ton-for-ton basis (Sec. 2101 [new sec. 786 of the CAA], pg. 510).
  - States may require federal allowances for compliance with state air regulations that reduce greenhouse gasess (Sec. 2305, pg. 622).
  - Early action allowances: States that have issued allowances under their own cap-and-trade programs are eligible (Sec. 2102 [new sec. 788 of the CAA], pg. 516)
- **States Receive Allowances to Support New and Existing Programs and Requirements** (See "Renewable Energy and Energy Efficiency" and "Transportation" sections)

ASSISTANCE DURING THE TRANSITION TO A LOW-CARBON ECONOMY

- **Consumer Assistance:**
  - Electric and natural gas LDC ratepayer assistance: Emission allowances distributed to an electricity or natural gas local distribution company (LDC) must be used exclusively for the benefit of retail ratepayers. The LDC shall ensure that the ratepayer benefit is distributed among ratepayer classes (i.e., residential, industrial and commercial) ratably based on deliveries to each class and equally within each class. State utility regulators must implement these requirements using regulation or rate proceedings (Sec. 3001 [new sec. 782 of CAA], pg. 680; Sec. 3101 [new sec. 783 of CAA], pg. 728).
  - Home heating oil and propane consumer assistance: Emission allowances are distributed to states exclusively for the benefit of consumers of oil heat fuel, propane or kerosene for residential or commercial purposes by using the proceeds for cost-effective energy efficiency programs, rebates or other direct financial assistance programs (Sec. 3102 [new sec. 784 of CAA], pg. 742).
- **Consumer and Low-income Family Payments, Tax Credits and Protection:**
  - Establishes a Universal Trust Fund by 2026 funded with auction proceeds, 25 percent of which will go towards deficit reduction and 75 percent for a universal refund program distributed to all taxpayers in the form of a tax credit. Refund amounts will be equal to the total revenue from allowance auctions for this purpose divided by the number of eligible Americans adjusted for family size (Sec. 3207, pg. 772).
  - 2.5 percent of allowances reserved for annual tax credit for low-income tax payers beginning in 2013, adjusted to reflect family size and incomes, with reduced credits for income that is above 250 percent of the poverty line (Sec. 3201, pg. 746).
  - Energy Refund Program provides monthly payments to low income families earning up to 150 percent of the poverty line or that are participating in supplemental nutrition programs, funded by 12.5 percent of allowances (Sec. 3204, pg.753).
  - Establishes an Office of Consumer Advocacy to investigate consumer complaints and represent consumer interests at Federal Energy Regulatory Commission and other regulatory hearings (Sec. 3301, pg. 778).
- **Worker Training, Clean Energy Career Development**
  - Clean energy curriculum development. Department of Education (DOEd), with the Department of Labor (DOL) and DOE, to review and award competitive grants to eligible educational partnerships to develop programs of study focused on emerging careers and jobs in the fields of clean and renewable energy, energy efficiency, and climate change mitigation and adaptation (Sec. 4101, pg. 829).

- Clearinghouse for information and resource on vocational education and job training in the renewable energy sector. Directs the DOL, with the DOE and DOEd, to develop an internet-based clearing house to aid career and technical education and job training programs for the renewable energy sector, especially high-demand, middle-skill trades and careers (Sec. 4102, pg. 833).
- Clean energy construction careers demonstration project. Directs the DOL, with the DOE, to establish demonstration project(s) to promote middle class careers and quality employment practices in the green construction sector among targeted (generally lower-income, disadvantaged) workers (Sec. 4103, pg. 839).

DOMESTIC ADAPTATION

- **Funding:** Establishes a Natural Resources Climate Change Adaptation Account that allocates assistance to state and federal agencies to fund adaptation activities (Sec. 6008, pg. 966).
- **State Programs:** Requires state-level Natural Resource Adaptation Plans detailing each state's current and projected efforts to address the ongoing and expected impacts of climate change on natural resources and coastal areas. To be eligible for Federal funding under the title, the plans must be consistent with the Natural Resources Climate Change Adaptation Strategy and are subject to approval by the DOI (Sec. 6007, pg. 955).
- **Federal Programs:**
  - Establishes a Natural Resources Climate Change Adaptation Panel including heads of 12 specified federal agencies with possible additional members with jurisdiction over natural resources (Sec. 6003, pg. 937). The panel shall develop a Natural Resources Climate Change Adaptation Strategy that assesses vulnerability and includes specific protocols on natural resource management and conservation for federal agencies (Sec. 6004, pg. 939). Directs each agency on the panel to complete individual adaption plans that implement the strategy (Sec. 6006, pg. 948).
  - Establishes a National Climate Change and Wildlife Science Center to monitor the impacts of climate change. Requires the National Oceanic and Atmospheric Administration (NOAA) and the Director of the U.S. Geological Survey to establish procedures to address the impacts of climate change on natural resources, and to provide technical assistance to other federal agencies, state and local governments, Indian tribes and interested private landowners (Sec. 6005, pg. 942).
  - Establishes a National Fish and Wildlife Habitat and Corridors Information Program in cooperation with states and Indian tribes to support the development of geographical information system databases of fish and wildlife habitats and corridors (Sec. 6009, pg. 979).
- **Additional Climate Change Adaptation Programs:** Permits NOAA to establish additional adaptation programs that address water systems, flood control and prevention, wildland fire awareness and training, and coastal state economic protection (Sec. 6011, pg. 986).

INTERNATIONAL ISSUES

- **Competitiveness/Leakage:**
  - Allowance rebates: Allowances are allocated on the basis of production output, providing rebates to energy-intensive trade-exposed (EITE) manufacturers to offset their costs of compliance. Sectors are presumed eligible if they meet a five percent energy or greenhouse gas -intensity threshold and 15 percent trade intensity or a 20 percent energy- or greenhouse gas -intensity threshold. Each eligible sector is rebated at 100 percent of sector average direct and indirect compliance costs. Up to 15 percent of total allowances are available for rebates during the years 2016 – 2025. For any year in which the available allowance pool exceeds the number of rebates, excess allowances will be credited, carried over, and made available in later years (See "allowance values distribution" section of this summary). Allowances are phased out between the years 2026 and 2029 but the president may continue providing rebates, if necessary to prevent carbon leakage (Sec. 4001 [new sections 771-774 of CAA], pg. 782).
  - U.S. policy for international negotiations and reports:

Recognizes that carbon leakage can be best addressed through internationally negotiated agreements; states U.S. policy to work proactively toward such agreements. Starting in 2019, the president must submit regular reports to Congress on the effectiveness of the allowance rebates and to notify other countries if imports to the United States from their country may be subject to the international reserve allowance program (Sec. 4001 [new sections 775-776 of CAA], pg. 812).

- International reserve allowance program: If, by 2020, the president determines that a multilateral agreement consistent with U.S. policy (see above) has not entered into force, an international reserve allowance program must be established for certain sectors, requiring a border adjustment (i.e., the purchase of international reserve allowances) for imports from certain countries. Products subject to the border measure include those that are eligible for rebates (see above) as well as manufactured goods that are primarily composed of the products from those sectors. Exemptions to this provision would apply to countries and sectors if the president determines that certain criteria have been met. The level of the border adjustment must account for free allowance rebates and will not take effect as long as such rebates fully offset domestic EITE industry's costs (Sec. 4001 [new sec. 777 of CAA], pg. 819).

- **Advisement:** Establishes a "Strategic Interagency Board on International Climate Investment," including the Department of State, UDAID, DOE, Treasury, the Commerce Department, USDA and EPA, to monitor and review U.S. government support for international climate change activities. The board must monitor and evaluate the progress and contributions of relevant departments and agencies in supporting financing for international climate change activities (Sec. 5003, pg. 902).
- **Supplemental emissions reductions from reduced deforestation:** Creates a new program to achieve supplemental forestry projects emissions reductions of at least 720 million tons in 2020 (cumulative amount of 6 billion tons by 2025). Participating developing nations must have entered into a bilateral and multilateral agreement supported by the United States. Also builds capacity for international forest credits and preservation of existing forest carbon stocks at risk of international leakage. Requires EPA to establish a publicly accessible registry of emissions reductions achieved through support provided under this title with appropriate discounts (Sec. 5004, pg. 903).
- **International Climate Change Adaptation and Global Security Program**: Establishes a State Department bilateral and multilateral program to financially assist developing countries with adaptation and a range of ecosystem protection, sustainable infrastructure development, and disaster risk management activities. This program will be funded by half of the allowances allocated for adaptation between 2013 and 2034 (Sec. 5005, pg. 917, Sec. 2101 [new sec. 781 of the CAA], pg. 504).
- **Major Economies Climate Actions:** Requires Secretary of State, with the Strategic Interagency Board, to prepare a biannual report on climate change and energy policy evaluating the climate change actions of the five highest greenhouse gas emitting countries that are not members of the Organization for Economic Cooperation and Development. (Sec. 5007, pg. 930).
- **Black Carbon and Methane:**
  - EPA must report on actual and potential foreign aid and assistance – plus opportunities for cooperation – to reduce black carbon emissions in other countries (Sec. 2211, pg. 600).
  - Sense of the Senate on Methane: Methane is a potent greenhouse gas; cost effective opportunities for methane destruction and capture for energy use exist; the US should maximize cost effective efforts to prevent and recover anthropogenic methane emissions (Sec. 2221, pg. 613). Supports expanding international involvement in EPA's Methane to Markets program (Sec. 2221, pg. 615).

Appendix A

Table 1. Summary of Distribution of Allowance Value Under the American Power Act (APA), 2013-2025 (percentage of total annual allowance pool)

Recipient (regulated / non-regulated)[1]	Distribution Method[2]	Allowance Distribution Section Reference[3]	Allowance Use Section Reference[3]	Program(s)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Cost Containment																	
N/A	fixed price sale	Sec. 2001 [new sec. 726(a)(2) of the CAA]	Sec. 2001 [new sec 726(b) of the CAA]	Cost containment reserve	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5
Deficit																	
N/A	auction	Sec. 2101 [new sec. 781(h) and 781(a)(5) of the CAA]	Sec. 2101 [new sec. 787 of the CAA], Sec. 3206(b)	Deficit reduction (minimum amounts)[4]	5.7	5.8	5.8	5.0	4.6	4.6	5.2	2.3	2.5	1.8	1.9	1.8	1.9
Consumers																	
regulated	allocation	Sec. 2101 [new sec. 781(a)(1) of the CAA]	Sec. 3001 [new sec. 782(b) of the CAA]	Electric Local Distribution Companies (LDCs)[5]	43.7	43.7	43.7	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
N/A	auction	Sec. 2101 [new sec. 781(a)(4) of the CAA], Sec. 3203	Sec. 3204	Energy refunds[6]	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
N/A	auction	Sec. 2101 [new sec. 781(a)(4) of the CAA], Sec. 3201	Sec. 3202(a)	Working Family Refundable Tax Credits[6]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
non-regulated	allocation	Sec. 2101 [new sec. 781(a)(3) of the CAA]	Sec. 3102 [new sec. 784 of the CAA]	Home heating oil and propane consumers	1.9	1.9	1.9	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
regulated	allocation	Sec. 2101 [new sec. 781(a)(2) of the CAA]	Sec. 3101 [new sec. 783(b) of the CAA]	Natural gas LDCs (maximum rebates)	0.0	0.0	0.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
regulated	allocation	Sec. 2101 [new sec. 781(a)(2) of the CAA]	Sec. 3101 [new sec. 783(c)(4) of the CAA]	Natural gas LDCs (minimum for EE)	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
N/A	auction	Sec. 2101 [new sec. 781(a)(5) of the CAA]	Sec. 3206	Universal Trust Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
International																	
non-regulated	allocation	Sec. 2101 [new sec. 781(d)(1)(b) of the CAA]	Sec. 5005	International adaptation[7]	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.1	1.6	1.6	1.6	1.6
Investment																	
N/A	auction	Sec. 2101 [new sec. 781(f)(1) of the CAA]	Sec. 1721 [new sec. 785 of the CAA]	Highway Trust Fund (up to $2.5 billion per year)[8]	4.0	4.0	4.0	3.1	2.7	2.7	2.5	2.0	2.0	1.9	1.9	1.9	1.9
non-regulated	allocation	Sec. 2101 [new sec. 781(f)(2) of the CAA]	Title XII Div. A of the American Recovery and Reinvestment Act	Supplemental Surface Transportation Grants (up to $1.875 billion per year)[8]	3.3	3.3	3.2	2.6	2.6	2.5	2.5	2.0	2.0	1.9	1.9	1.9	1.9
non-regulated	allocation	Sec. 2101 [new sec. 781(f)(3) of the CAA]	Sec. 1712	State and local transportation planning (up to $1.875 billion per year)[8]	3.3	3.3	3.2	2.6	2.6	2.5	2.5	2.0	2.0	1.9	1.9	1.9	1.9
non-regulated	allocation	Sec. 2101 [new sec. 781(c)(4) of the CAA]	Sec. 1801	Clean energy R&D	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(c)(5)(c) of the CAA]	Sec. 1603(b)	State renewable energy and energy efficiency programs	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	0.5	0.0	0.0	0.0	0.0
N/A	auction	Sec. 2101 [new sec. 781(c)(2) of the CAA]	Sec. 4111	Clean vehicle technology	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.0	0.0	0.0	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(c)(3) of the CAA]	Sec. 4143	Industrial innovation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.0	0.0	0.0	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(e) of the CAA]	Sec. 2101 [new sec. 788 of the CAA]	Early action	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(c)(5)(b) of the CAA]	Sec. 1602	Rural energy savings (up to $1 billion cumulative)[9]	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
regulated	allocation	Sec. 2101 [new sec. 781(c)(1) of the CAA]	Sec. 1431 [new sec. 794 of the CAA]	Carbon capture and sequestration[10]	0.0	0.0	0.0	0.0	0.8	0.8	0.0	4.5	5.0	7.4	7.4	7.4	7.4
non-regulated	allocation	Sec. 2101 [new sec. 781(d)(1)(a) of the CAA]	Title VI	U.S. adaptation[7]	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.1	1.6	1.6	1.6	1.6
Business																	
regulated	allocation	Sec. 2101 [new sec. 781(a)(1) of the CAA]	Sec. 782(c) of the CAA]	Merchant coal (up to)[11]	5.1	5.1	5.1	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
regulated	allocation	Sec. 2101 [new sec. 781(b)(3) of the CAA]	Sec. 4002 [new sec. 796 of the CAA]	Refineries	4.3	4.3	4.3	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
regulated	allocation	Sec. 2101 [new sec. 781(a)(1) of the CAA]	Sec. 3001 [new sec. 782(d) of the CAA]	Long-term contract generators (up to)[11]	2.2	2.2	2.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
regulated	allocation	Sec. 2101 [new sec. 781(b)(1) of the CAA]	Sec. 4001 [new sec. 774 of the CAA]	Energy intensive trade exposed industries (up to)[10]	2.0	2.0	2.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
regulated	allocation	Sec. 2101 [new sec. 781(b)(2) of the CAA]	Sec. 451(a), 452, 453 of the Energy Independence and Security Act and Sec. 25 of the National Institute of Standards and Technology Act	Industrial energy efficiency (up to $1.55 billion cumulative)[4]	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Table 2. Summary of Distribution of Allowance Value Under the American Power Act (APA), 2026-2035 & Beyond (percentage of total annual allowance pool)

Recipient (regulated / non-regulated)[1]	Distribution Method[2]	Allowance Distribution Section Reference[3]	Allowance Use Section Reference[3]	Program(s)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035 & Beyond
Cost Containment														
N/A	fixed price sale	Sec. 2001 [new sec. 726(a)(2) of the CAA]	Sec. 2001 [new sec 726(b) of the CAA]	Cost containment reserve	2.5	2.5	2.5	2.5	5.0	5.0	5.0	5.0	5.0	5.0
Deficit														
N/A	auction	Sec. 2101 [new sec. 781(h) and 781(a)(5) of the CAA]	Sec. 2101 [new sec. 787 of the CAA], Sec. 3206(b)	Deficit reduction (minimum amounts)[4]	3.7	7.0	10.2	13.5	18.9	18.9	18.9	18.9	18.9	24.2
Consumers														
regulated	allocation	Sec. 2101 [new sec. 781(a)(1) of the CAA]	Sec. 3001 [new sec. 782(b) of the CAA]	Electric Local Distribution Companies (LDCs)[5]	27.4	20.6	14.1	7.3	0.0	0.0	0.0	0.0	0.0	0.0
N/A	auction	Sec. 2101 [new sec. 781(a)(4) of the CAA], Sec. 3203	Sec. 3204	Energy refunds[6]	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
N/A	auction	Sec. 2101 [new sec. 781(a)(4) of the CAA], Sec. 3201	Sec. 3202(a)	Working Family Refundable Tax Credits[6]	2.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(a)(3) of the CAA]	Sec. 3102 [new sec. 784 of the CAA]	Home heating oil and propane consumers	1.2	0.9	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
regulated	allocation	Sec. 2101 [new sec. 781(a)(2) of the CAA]	Sec. 3101 [new sec. 783(b) of the CAA]	Natural gas LDCs (maximum rebates)	5.8	4.3	2.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0
regulated	allocation	Sec. 2101 [new sec. 781(a)(2) of the CAA]	Sec. 3101 [new sec. 783(c)(4) of the CAA]	Natural gas LDCs (minimum for EE)	1.4	1.1	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0
N/A	auction	Sec. 2101 [new sec. 781(a)(5) of the CAA]	Sec. 3206	Universal Trust Fund	6.1	16.1	25.3	35.3	40.9	40.9	40.9	40.9	40.9	58.4
International														
non-regulated	allocation	Sec. 2101 [new sec. 781(d)(1)(b) of the CAA]	Sec. 5005	International adaptation[7]	1.8	2.0	2.5	2.8	3.0	3.0	3.0	3.0	3.0	0.0
Investment														
N/A	auction	Sec. 2101 [new sec. 781(f)(1) of the CAA]	Sec. 1721 [new sec. 785 of the CAA]	Highway Trust Fund (up to $2.5 billion per year)[8]	1.9	1.9	1.9	1.9	2.2	2.2	2.2	2.2	2.2	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(f)(2) of the CAA]	Title XII Div. A of the American Recovery and Reinvestment Act	Supplemental Surface Transportation Grants (up to $1.875 billion per year)[8]	1.9	1.9	1.9	1.9	2.2	2.2	2.2	2.2	2.2	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(f)(3) of the CAA]	Sec. 1712	State and local transportation planning (up to $1.875 billion per year)[8]	1.9	1.9	1.9	1.9	2.2	2.2	2.2	2.2	2.2	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(c)(4) of the CAA]	Sec. 1801	Clean energy R&D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(c)(5)(c) of the CAA]	Sec. 1603(b)	State renewable energy and energy efficiency programs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N/A	auction	Sec. 2101 [new sec. 781(c)(2) of the CAA]	Sec. 4111	Clean vehicle technology	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(c)(3) of the CAA]	Sec. 4143	Industrial innovation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(e) of the CAA]	Sec. 2101 [new sec. 788 of the CAA]	Early action	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(c)(5)(b) of the CAA]	Sec. 1602	Rural energy savings (up to $1 billion cumulative)[9]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
regulated	allocation	Sec. 2101 [new sec. 781(c)(1) of the CAA]	Sec. 1431 [new sec. 794 of the CAA]	Carbon capture and sequestration[10]	8.0	8.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	0.0
non-regulated	allocation	Sec. 2101 [new sec. 781(d)(1)(a) of the CAA]	Title VI	U.S. adaptation[7]	1.8	2.0	2.5	2.8	3.0	3.0	3.0	3.0	3.0	0.0
Business														
regulated	allocation	Sec. 2101 [new sec. 781(a)(1) of the CAA]	Sec. 782(c) of the CAA]	Merchant coal (up to)[11]	3.2	2.4	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
regulated	allocation	Sec. 2101 [new sec. 781(b)(3) of the CAA]	Sec. 4002 [new sec. 796 of the CAA]	Refineries	3.0	2.3	1.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0
regulated	allocation	Sec. 2101 [new sec. 781(a)(1) of the CAA]	Sec. 3001 [new sec. 782(d) of the CAA]	Long-term contract generators (up to)[11]	1.4	1.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0
regulated	allocation	Sec. 2101 [new sec. 781(b)(1) of the CAA]	Sec. 4001 [new sec. 774 of the CAA]	Energy intensive trade exposed industries (up to)[10]	12.0	9.0	6.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
regulated	allocation	Sec. 2101 [new sec. 781(b)(2) of the CAA]	Sec. 451(a), 452, 453 of the Energy Independence and Security Act and Sec. 25 of the National Institute of Standards and Technology Act	Industrial energy efficiency (up to $1.55 billion cumulative)[4]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Footnotes to Tables 1 & 2

1. The terms "regulated" and "non-regulated" differentiate between entities that have a compliance obligation under the pollution reduction program established by the APA and those that do not (such as government programs).
2. "Allocation" means free distribution of allowances to the specified recipient, "auction" means allowances sold to the highest bidder or sold to refined product producers at a set price derived from the auction price based on rules established under the APA, "fixed price sale" means allowances sold under certain circumstances at the cost containment reserve price established by the APA. Auction amounts in this table represent minimums due to the ability for any holder of an allowance to request that EPA auction that allowance on consignment.
3. References are to sections of the American Power Act (APA) and new sections of the Clean Air Act (CAA) where appropriate. Other statutes are referenced as needed.
4. In general, any allowances not allocated for other purposes or allocated but not distributed (with a few exceptions) are to be auctioned with the proceeds directed to deficit reduction. With this in mind, amounts in this table represent the minimum percentage of total allowances that could be auctioned with the proceeds directed to deficit reduction. The APA contains several provisions independent of the GHG reduction program that could contribute to the federal deficit (such as subsidies for nuclear technology or revenue sharing for offshore drilling), allowance value directed to deficit reduction could be used to offset these costs.
5. Any allowances not distributed to LDCs in a calendar year are withheld and distributed the following calendar year.
6. Sec. 2101 [new sec. 781(a)(4) of the CAA] initially directs 12.3 percent of total allowances to both energy refunds and tax credits; however, sections 3201 and 3203 direct different amounts to these same purposes. Discussions with bill authors have clarified that sections 3201 and 3203 should be followed in this instance.
7. These amounts could be adjusted to change the relative share of allowance value directed towards domestic and international adaptation if the president determines that its in the national interest to do so.
8. These programs are subject to an annual or cumulative dollar limit on the total allowance value they may receive (indicated in parentheses). If these limits are met based on the market value of allowances, any additional value is directed to deficit reduction. These percentages reflect the maximum amount of the allowance pool each program would receive given that the floor price for allowances established under the APA would generate allowance value that would exceed some of these limits.
9. This program is subject to a cumulative dollar limit on the total allowance value it may receive (indicated in parentheses). If the limit is met based on the market value of allowances, the remaining allowances would be directed to state renewable energy and energy efficiency programs. These percentages represent the maximum amount of the allowance pool this program would receive subject to these limits.
10. The values shown here reflect the maximum annual amount that may be allocated to these entities in a given year. The value of allowances not allocated to this purpose is carried over to the next year.
11. The values shown here reflect the maximum annual amount that may be allocated to these entities in a given year. Any allowances not allocated to these entities are directed towards electric LDCs to benefit consumers.