WRI Summary of S. 1733, the Clean Energy Jobs and American Power Act (Kerry-Boxer)

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This summary provides a concise overview of the Chairman's Mark[3] of the Clean Energy Jobs and American Power Act (herein referred to as the CEJAPA), released by Senator Boxer on October 23, 2009.[4]

The CEJAPA consists of two divisions:

- Division A: Authorizes new greenhouse gas (GHG) emissions standards, creates new programs for energy, research and development (R&D), adaptation, transition assistance and other purposes
- Division B: Authorizes the establishment of GHG emission caps and directs the investment of allowance value to various programs including those established or revised in Division A.

This summary roughly follows the structure of the bill; it deviates from this structure where we believe grouping related components together facilitates understanding of the bill. The legislation contains some placeholders that are likely to be clarified in subsequent stages of the legislative process. For more information on specific components of the CEJAPA, please refer to the actual legislative language as referenced by section and page number in this document.[5]

CLEAN ENERGY

- **Low-Carbon Electricity and Natural Gas:**
  - Renewable Energy Grants: Requires EPA to establish a grant program for renewable energy deployment in states with renewable electricity standards and goals (Sec. 161, pg. 182).
  - Incentive Payments (Natural Gas): Requires EPA to establish a program to provide incentive payments for dispatchable low-emissions electric power generation, with priority given to the most cost-effective projects that integrate intermittent renewable power, provide energy storage or use carbon capture and storage (CCS) (Sec. 181, pg 236).
  - R&D Grants for Advanced Natural Gas Technologies: Requires EPA to provide grants for R&D, demonstration and early deployment for electricity generation and other technologies fueled by natural gas (Sec. 182, pg 239).
- **Clean Transportation:**
  - Vehicle Manufacturing and Infrastructure: Creates a Clean Vehicle Technology Fund to support an existing grant and revolving loan program for states to reduce diesel

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[2] The authors are grateful to Alex Grais for his substantial assistance in compiling this summary.
[3] The "Chairman's Mark" represents changes to the initial proposed legislation made by the Committee Chair, as part of an evolving legislative process
[4] This summary applies only to the Manager's Amendment to the Clean Energy Jobs and American Power Act and not previous or subsequent iterations.
[5] Page numbers apply to the Manager's Amendment to the Clean Energy Jobs and American Power Act. Copies of the bill can be found here: http://epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=ee5c67bb-a5a7-453d-a4e0-4c8f2908c0cf.

emissions, plus broad planning and demonstration of reduced GHG and other emissions from the transportation sector, including the development of electric drive vehicles and related infrastructure. A grant program is also established for retooling manufacturing facilities to build more efficient advanced technology vehicles, including plug-in electric and fuel cell vehicles (Sec. 201, pg 870).

  - Advanced Biofuel Grants: Requires EPA to establish a challenge grant program for research, development, planning and construction of commercial-scale facilities that produce advanced biofuels with lifecycle GHG emissions at least 60% less than conventional fossil fuels (Sec. 162, pg. 185).

- **State Allowances for Renewable Energy:**
  - Manufacturing, Deployment and Production: State funds may be used to support domestic manufacturing and deployment of smart grid and renewable energy technologies and energy storage facilities. At least 15 percent of the allowances allocated to states for energy efficiency and renewables must be used for production incentives for facilities with greater than 20 MW of generation capacity (Sec. 202, pg. 888).
  - Transmission Development: State funds may be used for transmission planning and smart-grid and grid security upgrades, plus grants to mitigate transmission-related impacts to lands and ecosystems (Sec. 202, pg. 889).
- **Nuclear:** Establishes nuclear worker training programs at DOE and Department of Labor. Also establishes DOE research and development programs regarding aging nuclear facilities and spent nuclear waste disposal (Sec. 131-133, pg 123-131).
- **Woodstoves:** A program is established for the EPA to assist in the replacement of wood-burning stoves that do not meet performance standards (Sec. 165, pg 225)
- **Research and Development:**
  - Energy Innovation Hubs: Gives DOE general authority to distribute allowances to consortia that advance commercialization of domestic alternatives to fossil energy sources (Sec. 204, pg, 895).
  - Advanced Research Projects A-E: To supplement annual appropriations for the same purpose, the ARPA-E Director is required to distribute allowances, as competitive grants, to entities engaged in novel energy technology research (Sec. 205, pg 895).
  - Clean Tech Business Competition Grant: The EPA Administrator is authorized to provide grants for competitions to support start-up companies helping to meet national environmental, clean energy and conservation goals (Sec. 152, pg 151).
- **Clean Coal:** See "Provisions for Coal" section of this summary.

ENERGY EFFICIENCY

- **Building Efficiency:** Requires the federal government to promulgate regulations establishing national energy efficiency building codes for residential and commercial buildings, including specific efficiency targets and provisions for state adoption (Sec. 163, pg. 200).
- **Establishes Retrofits for Energy and Environmental Performance (REEP)** program for residential and non-residential buildings and requires that a portion of state funding for efficiency be used for this program (Sec. 164, pg. 202).
- **Water Efficiency:** Establishes a WaterSense program in EPA to identify and promote water efficient products, buildings and landscapes. Also creates new water-efficiency purchase requirements and retrofit programs for Federal facilities, plus incentives to implement residential water conservation programs (Sec. 141-143, pg. 131).
- **Transportation Efficiency:**
  - Vehicle Performance Standards: Creates new performance standards for heavy-duty vehicles and other mobile emissions sources. Also allows states to adopt fuel economy and emissions standards for taxicabs. (See "Interaction with EPA Authority" section for more details).
  - National Emissions Reduction Goals: The EPA and DOT must establish regulations for states, Metropolitan Planning Organizations (MPOs) and air quality agencies to meet transportation-related GHG emissions reduction goals commensurate with the targets of

the national cap. Existing MPO transportation planning laws are amended, incorporating strategies such as new public transit, land use and zoning policies. Requires states and large MPOs to develop plans for meeting the national goals and to demonstrate progress toward this end. DOT and EPA review plans to ensure that they are meeting minimum requirements. MPOs that do not comply with requirements of this section are ineligible for competitive grants created by Sec. 113 (Sec. 112, [new Sec. 831 of CAA] pg. 31).
    - Transportation Program Grants: Creates a planning grant program for all states and a competitive grant program for eligible states and MPOs to help implement emissions reduction plans described in Sec. 112 (Sec. 113, [new Sec. 832 of CAA] pg. 71).
    - SmartWay Transport Efficiency Program: Measures and designates energy-efficient, low-GHG "SmartWay" technologies and strategies as part of EPA's current SmartWay program. Provides incentives for the adoption of SmartWay technologies (Sec. 114 [new Sec. 822 of CAA], pg. 69).
- **State Recycling Programs:** Establishes funding and requirements for GHG reduction through improved recycling programs at state and municipal levels (Sec. 154, pg 160).
- **State Allowances for Efficiency** (Sec. 202, pg 879)**:**
    - Buildings: Of the allowances allocated to states for energy efficiency and renewables, states must use at least 24 percent on building efficiency programs. States are required to use at least 21 percent of their efficiency and renewable energy funding to benefit low-income persons and at least 12 percent to support efficiency retrofits for subsidized housing.
    - Block Grants: 25 percent of allowances allocated to states for energy efficiency and renewables must be used for energy efficiency and conservation block grants.
    - Thermal Energy: Of the allowances allocated to states for energy efficiency and renewables, States must use at least 4 percent on thermal energy efficiency projects through district heating and combined heat and power projects.

GLOBAL WARMING POLLUTION REDUCTION TARGETS AND TIMETABLES[6]

- **Goals and caps:** Sets both a non-binding economy-wide GHG emission reduction goal (Sec. 702, pg. 425) and a mandatory cap on covered GHGs (Sec. 703, pg. 426; Sec. 721, pg. 474).
- The targets for both the economy-wide emission reduction goals and for the primary cap on covered sources are as follows:
    - 2012: 3 percent below 2005 emission levels (~12 percent above 1990 emission levels)
    - 2020: 20 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 primary cap brings in covered sources in four phases from 2012 through 2016 (see Point of Regulation).
- **A consumption[7] cap on all HFCs:** This cap is established by extending Title VI of the CAA to apply to HFCs and represents the maximum annual allowable amount of consumption. Reduction amounts are relative to average U.S. HFC consumption levels between 2004 and 2006 (Sec. 619, pg. 778) as follows:
    - 2012: 10 percent below
    - 2020: 33 percent below
    - 2030: 75 percent below
    - 2032 and onward: 85 percent below
- **Discretion to set standards for perfluorocarbons (PFCs) and other nonhydrofluorocarbon fluorinated substances:** If the administrator determines that PFCs and other nonhydrofluorocarbon fluorinated substances should be regulated separately from the broader cap-and-trade program, the EPA is authorized to set best-achievable performance standards for emissions of these substances that must be met by covered entities. Standards must be reviewed

[6] See WRI's forthcoming analysis of emission reductions under the CEJAPA, available here: http://www.wri.org/publication/usclimatetargets

[7] Consumption = Production + Imports – Exports

and their stringency increased over time. NF_3 and SF_6 are not eligible to be regulated under this section. (Sec. 714, pg. 468).

- **Scientific and programmatic review: Requires a periodic inter-agency review of climate science as well as domestic and global efforts to reduce** GHG emissions and report to the president. In addition, the National Academies of Science (NAS) are required to conduct a separate review of climate science, technology options, and U.S. progress toward meeting the economy-wide emission reduction goals set by the proposal. The president is authorized to exercise all statutory authority to act on recommendations made by the NAS and recommend to Congress additional actions that may be necessary to meet U.S. and global GHG reduction commitments (Sec. 705-707, pg. 428-443).

POINT OF REGULATION, EMISSIONS REPORTING AND COVERAGE

- **Covered gases:** 5 Kyoto gases (not HFCs, see above) plus NF_3 with EPA authorized to add additional GHGs in the future and to regulate PFCs and certain other substances under a separate program (Sec. 711, pg. 443, Sec. 714, pg.468).
- **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 are required to report (Sec. 713, pg. 455).
- **Point of regulation:** A hybrid approach is used with sources phased in over a 5-year time frame (see definitions Sec. 700, pg. 598 and Sec. 722, pg. 483).
    - Covered in 2012: The CEJAPA assumes the cap covers 66.2 percent of total U.S. emissions during this phase[8].
        - All electric power generators (downstream).
        - Natural gas liquid-, petroleum-, and coal-based liquid fuel producers/importers (upstream) whose products when combusted emit over 25,000 tons annually.
        - Producers and importers of fluorinated gases (upstream) except HFCs and potentially PFCs and certain other substances.
        - Certified geologic storage sites.
    - Added to coverage in 2014: The CEJAPA assumes the cap covers 75.7 percent of total U.S. emissions during this phase[8].
        - Industrial sources (downstream) that annually emit 25,000 tons or more, not including emissions from petroleum and renewable biomass combustion, plus all sources (regardless of size) in select sectors (e.g., cement, petroleum refining and silicon carbide production) except direct emissions from small business refiners..
    - Added to coverage in 2015:
        - Industrial sources (downstream) that are small business refiners (subject to the definitions contained in the bill)
    - Added to coverage in 2016: The CEJAPA assumes the cap covers 84.5 percent of total U.S. emissions during this phase[8].
        - 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.

CARBON MARKET ASSURANCE AND OVERSIGHT

- **Sense of the Senate:** A resolution calling for a single market oversight program. The resolution calls for effective oversight in order to maintain a liquid, transparent carbon market that minimizes systemic risk, facilitates price discovery and prevents excessive speculation through strong rules, enforcement and penalties (Sec. 131, pg. 846).

ALLOWANCE VALUE DISTRIBUTION

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

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 will be held beginning in March 2011 to sell allowances designated for auction. Auctions will be open to all individuals. A reserve price is established for all regular auctions initially set at $10/tonne increasing at 5 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 Market Stability Reserve. All entities in possession of allowances may request that the administrator sell their allowances on consignment (Sec. 778, pg. 708).
- **Distribution of value**: Distributes allowance value in a number of ways to support various federal and state programs (both existing and established under the act) and benefit energy consumers as well as distributing some value to regulated entities for free. The amount of value directed to various purposes changes over time. Allowances are first distributed to a select set of purposes including deficit reduction, the Market Stability Reserve and other programs with remaining allowances distributed to a broader set of programs (Part H Sec. 771-783, pg. 617-776).
- **Carryover:** If allowances allocated to certain purposes (including supplemental reductions, CCS deployment and allowances to industry) are not all distributed in a vintage year, the administrator 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. 780, pg. 682).

COST CONTAINMENT (OTHER THAN OFFSETS)

- **Trading:** Unlimited trading of allowances and offsets is permitted by any party (not restricted to owners and operators of covered entities). The administrator must receive notice of and record any transfers of compliance instruments. All allowances will be tracked in an allowance tracking system (Sec. 724, pg. 504 and Sec.7423, pg. 562).
- **Banking and borrowing:**
  - Banking: Banking of allowances is not limited (Sec. 725, pg. 505).
  - 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). There is no limit on this type of borrowing (Sec. 725, pg. 506).
  - 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 fee (Sec. 725, pg. 507).
- **Market Stability Reserve:** In addition to regular auctions, quarterly auctions will be held to auction Market Stability Reserve allowances. Only covered entities are eligible to purchase allowances from this auction (Sec. 726, pg. 508).
  - Filling the MSR**:** The reserve will be filled no later than two years of date of enactment with 2 percent of allowances from each year between 2012 and 2019 and 3 percent of allowances from each year between 2020 and 2050. (Sec. 726, pg. 508 and Sec. 721, pg. 638).
  - Minimum reserve price:
    - 2012: minimum reserve auction price will be $28 per tonne.
    - 2013-2017: the minimum reserve auction price shall be the previous year's reserve auction price, increased by 5 percent plus the rate of inflation.
    - 2018 on: the minimum reserve auction price shall be the previous year's reserve auction price, increased by 7 percent plus the rate of inflation.
  - Quantity of allowances sold at auction:
    - 2012-2016: not more than 15 percent of allowances established for that year can be sold (this limit does not apply to offsets sold on consignment).
    - 2017-2050: not more than 25 percent of allowances established for that year can be sold (this limit does not apply to offsets sold on consignment).

        - The administrator may adjust these limits under certain circumstances.
    - Purchase limits: Not more than 20 percent of a covered entity's compliance obligation may be purchased from the reserve annually. The administrator shall establish a separate purchase limit for new entrants, starting at a minimum of 20 percent.
    - Auction proceeds: Proceeds from auction will be placed in a Market Stability Reserve fund. Auction proceeds from the reserve will be used to purchase offset credits, including domestic offsets and international deforestation offsets generated through section 753 (the emission reductions from reduced deforestation set aside).The administrator will retire those credits and establish emissions allowances equal to the number of offset credits retired and place them into the Market Stability Reserve to fill it to its original size (Sec. 726, pg. 471).
    - Additional offset sales: Entities may auction on consignment offset credits above and beyond allowances sold at Market Stability Reserve auctions. These offsets are not subject to the purchase limits in place for Market Stability Reserve allowances or use limits in place for offsets (Sec. 726, pg. 473).
- **International emission allowances:** Entities may use an unlimited number of allowances from approved national and supranational emissions trading programs to meet compliance, although the administrator by rule may restrict their use (Sec. 728, pg. 523 and Sec. 722, pg 498).

OFFSETS

- **Program administration:** The president, in consultation with appropriate federal agencies, shall promulgate regulations establishing a program for the issuance of offset credits (Sec. 732, pg. 526).
    - Program Establishment: Not more than 2 years after the date of enactment the president shall promulgate regulations establishing a program for the issuance of offsets; regulations promulgated under sec. 732(a) must include provisions to address additionality and permanence and establish a process to accept and respond to comments from third parties. Directs president to establish an offset registry and fee schedule (Sec. 732, pg. 530).
    - Eligible project types: Not later than 1 year after date of enactment the president shall establish the initial list of eligible project types for which there are well developed methodologies. (Sec. 733, pg. 533) includes list of priority projects for consideration by the resident. The president shall add additional project types to the list not later than two years after date of enactment and may at any time add to or remove from the list a specific project type. Any person may petition to modify the list (Sec. 733, pg. 537).
    - Advisement: Establishes an independent "Offsets Integrity Advisory Board" to provide guidance to the president on project types, areas of scientific uncertainty and acceptable qualification and quantification methodologies. The board will also conduct a scientific review of offset program and deforestation reduction programs by 2017 and every five years thereafter (Sec. 731, pg. 526).
    - Program review: The program will be reviewed at least once every five years and revised if necessary (Sec. 739, pg. 556).
- **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. 722, pg. 491). The President may recommend to Congress whether the two billion ton limit should be increased or decreased (Sec. 722, pg. 494).
    - 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. 722, pg.492).
    - 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. However, if the administrator determines that less than 0.9 billion tons of domestic offsets at or below allowance prices are available, the administrator shall increase the percentage of international offsets allowed to a level that yields a system-

wide maximum of 1.25 billion tons, and shall decrease by a corresponding amount the domestic offset percentage limit for that year. (Sec. 722, pg. 493).
    - Compliance requirement: After 2018, regulated entities must surrender 1.25 international offsets in lieu of 1 allowance (Sec. 722, pg. 491 and 494).
- **Term offset credits:** Covered entities may use non-expired term offset credits instead of domestic offset credits for purposes of temporarily demonstrating compliance (Sec. 722, pg. 483).
    - Limitation: The combined quantity of term offset limits and domestic offset credits shall not exceed the quantity of domestic offset credits that a covered entity is entitled to use for that year (Sec. 722, pg. 494).
    - Compliance use: Once a term offset credit has expired, regulated entities must replace it with an allowance, a domestic offset credit or another non-expired term offset credit (Sec. 722, pg. 494).
    - Financial assurance: Term offset credits may only be used if the regulated entity can simultaneously show financial assurance that the term offset credit will be replaced upon its expiration. Requires retirement of allowances in the event that the replacement requirements and financial assurance provisions fail (Sec. 722, pg. 497).
- **General offset provisions**: Directs the president to develop provisions to address additionality, leakage, uncertainty, crediting periods (including term offset credits), adding project types, and permanence (Sec. 734, pg. 538)[9]
- **Offset approval, verification, issuance and auditing requirements:** Establishes approval process for offsets credits (Sec. 735, pg. 548) and verification guidelines requiring third-party verification of projects by verifiers accredited by the president, potentially to include American National Standards Institute and EPA accreditation (Sec. 736, pg. 550). The president shall conduct random audits of offset projects and credits. May delegate audit responsibility to states and develop methodologies for audit (Sec. 738, pg. 555).
- **Early offset supply:** One offset credit shall be issued for each ton of CO_2e registered under a government-established or administrator-approved program established before Jan 1, 2009 as long as certain requirements are met.
    - Retired and expired credits are not eligible.
    - Credits will only be issued for emission reductions (including destruction of CFCs) and sequestration that occur after Jan 1, 2009 and only for three years after the date of enactment of the act or the date that regulations are enacted.
    - Projects that were not established by state or tribal law or were established after Jan. 1, 2009 but otherwise meet all other criteria can apply to the administrator for consideration for early offset credit (Sec. 740, pg. 556).
- **Office of Offsets Integrity:** New department of offsets integrity created within office of Assistant Attorney General of Environment and Natural Resources division in Department of Justice to be headed by an appointed special counsel (Sec.743, pg. 562).

INTERNATIONAL OFFSETS

- **Administration:** The administrator, in consultation with the Secretary of State and Administrator of 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. 744, pg. 564).
    - Regulation: International offset credits may be issued only if: 1) the U.S. 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] and 3) the agreement ensures all requirements included in the CEJAPA apply, 4) provides for appropriate disposition of

[9] See WRI's detailed summary of S1733's offset provisions for additional information on these specific provisions.

[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.

offsets, and 5) ensures the offset project developer can receive disposition of legal service under U.S. law (Sec. 744, pg. 565).

- **Project sources:** Offset credits may be issued for projects identified by the administrator under Sec. 733 through an approved international body, sectoral crediting mechanisms or international reduced deforestation as outlined in the CEJAPA, additional offset project types may be approved by the president if certain conditions are met (Sec. 744, pg. 564).
    - 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. 744, pg. 564).
    - Recognition of other programs: The administrator 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 (Sec. 744, pg. 573).
    - Offsets from reduced deforestation: International offset credits are allowed only if the activity occurs in a country identified by the administrator pursuant to the country's capacity to participate in such a program according to specific criteria as established by this act. Offset credits can be issued relative to a national, sub-national or activity basis (in certain instances) (Sec. 744, pg. 574).

OTHER OFFSET-RELATED PROVISIONS

- **Supplemental Agriculture Forestry Greenhouse Gas Reduction and Renewable Energy program:** Established provisions for allowances to be set aside for the Secretary of Agriculture and the Interior to provide incentives for additional activities in the agriculture sector to reduce GHG emissions or sequester carbon. These must: 1) be GHG emission reduction or avoidance projects where there are limited recognized opportunities to achieve reductions, 2) not meet the criteria for offsets credits as established by the bill, 3) reward early actors or 4) be activities that prevent conversion of land in ways that would increase GHG emissions. Also establishes requirements related to technology development and monitoring, measurement, verification and reporting of emission reductions or sequestration achieved through this program (Sec. 155, pg. 170 and Sec. 771, pg 636).
- **Early action recognition:** Establishes provisions for to be set aside for the recognition of early action and credits issued by an administrator-approved offset program under the early offset provisions (Sec. 740) prior to January 1, 2009 may be exchanged for allowances. The exchange value will be determined by the average monetary value of the credits during the period of Jan 1, 2006 to Jan. 1, 2009. Only credits that have not been retired and were issued between Jan 1, 2001 and Jan 1, 2009 are eligible to receive allowances. Other types of non-offset documented early reductions are also eligible under this section. 75 percent of the allocated funds will be used to compensate offset credits, and 25 percent for other types of demonstrated reductions pursuant to this section (Sec. 782, pg. 773 and Sec. 771, pg 624).

INTERACTION WITH EXISTING EPA AUTHORITY UNDER THE CLEAN AIR ACT

- **Extension of CAA Title VI** (stratospheric ozone protection) to include HFCs (Sec. 619, pg. 778):
    - 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. No trading is permitted between programs (Sec. 619, pg. 778).
    - 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 (SEC. 740) program.
    - Imposes other requirements restricting the sale and importation of HFCs and HFC containing products (Sec. 619, pg. 802).
- **Standards:** Requires EPA to:
    - Regulate black carbon or decide that any regulations set under the CAA are adequate (Sec. 851, pg. 833).

  - Set emissions standards for certain mobile sources based on costs and available technology (Sec. 821, pg. 27). Covered sources include heavy-duty vehicles not covered under existing CAA authority, aircraft and other non-road vehicles (which may include marine vessels and other non-road vehicles and engines).
  - Set standards for geologic storage sites and new coal-fired power plants (see "Coal Provisions").
  - Allows but does not require EPA to regulate PFCs and other Non-CFC fluorocarbons by applying best achievable performance standards to all stationary sources of PFCs (Sec. 714, pg. 468).
- **Prohibits EPA from:** regulating emissions not capped under other provisions of CEJAPA that are also sources that qualify for offset project status through New Source Performance Standards (NSPS) until after Jan 1, 2020 (Sec. 811, p. 777).

INTERACTION WITH STATE PROGRAMS

- **Temporarily prohibits states from running their own cap-and-trade programs:** This prohibition expires after 2017. 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. 861, pg. 836).
  - Those who hold California, Regional Greenhouse Gas Initiative or Western Climate Initiative allowances can 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. 777, pg. 707).
  - States are permitted to require federal allowances for compliance with state air regulations that reduce GHGs (sec. 124, pg. 837).
- **States receive funds to support existing and new programs** (See "Clean Energy", "Efficiency" and "Adaptation")**:**
  - States receive federal allowances for renewable energy, energy efficiency, transmission improvement and smart grid development programs (Sec. 202, pg. 881).
  - Local governments receive federal allowances for energy conservation and efficiency (Sec. 202, pg. 881).States receive federal allowances for greenhouse gas reduction and adaptation with some of these allowances directed to local governments (Sec 210, pg. 900).
  - States receive federal allowances for natural resource adaptation activities (Sec 216, pg. 924).
  - States receive federal funds for transportation sector reductions (Sec 215, pg. 921).
  - Authorizes EPA to use CAA Sec. 105 grant money to support climate programs conducted by state air pollution control agencies (Sec. 862, pg. 837).
- **State fuel economy regulations for taxicabs:** Allows states to set fuel economy and emissions standards for taxicabs that are more stringent than federal fleet-wide standards (Sec. 172 & 173, pg 234-235).
- **Consultation with states:** In the development of any regulations required to implement the global warming pollution and reduction investment program pursuant to this title, and in the implementation of that program, the administrator shall consult with the states in the Regional Greenhouse Gas Initiative, the Western Climate Initiative, and the MidWest Governors Accord (sec. 708, pg. 443).

INTERNATIONAL ISSUES

- **Forestry:**
  - Supplemental emissions reductions from reduced deforestation: Creates a new program to achieve supplemental emissions reductions of at least 720 million tons in 2020 (cumulative amount of 6 billion tons by 2025) through reduced deforestation projects in developing nations. Also builds capacity for international forest credits and preservation of existing forest carbon stocks at risk of international leakage. Allowances are used to fund this program (Sec. 753 pg. 324 and Sec. 771, pg 634).

- **Clean technology transfer:**
  - The Board: Establishes a "Strategic Interagency Board on International Climate Investment," including heads from State, AID, DOE, Treasury, DOC, USDA and EPA to monitor and review U.S. government support for international climate change activities (Sec. 321, pg. 321).
  - International Clean Energy Deployment Program: Establishes a State Department program to financially assist developing countries with low-carbon technology deployment through bilateral and multilateral programs. This program will be funded by an unspecified amount of allowances (Sec. 323, pg. 325).
- **Competitiveness/leakage:**
  - Rebates: Follows Inslee-Doyle Output Based Rebating (OBR) model of providing rebates to carbon-intensive manufacturers to offset their cost of compliance. Sectors are presumed eligible if they meet a 5 percent energy or GHG intensity threshold and 15 percent trade intensity, or just a 20 percent energy or GHG intensity threshold. Each sector is rebated at 100 percent of sector average direct and indirect emissions cost. Rebates are phased out beginning in 2025 unless presidential review determines that other countries have not yet taken substantial action and leakage concerns persist (Sec. 141 [new sections 761-764 of CAA], pg. 846).
  - International Trade: A placeholder section states that it is the Sense of the Senate that this act will include "border measures" to work in conjunction with the above rebate provisions (Sec. 141 [new section 765 of CAA], pg. 870).
- **International adaptation:** Establishes an international climate change adaptation and global security program under State, USAID, Treasury and EPA. Funding is to be distributed through bilateral assistance and/or through multilateral funds pursuant to an international agreement (Sec. 324, pg. 327). This program is funded through allowance distribution (Sec. 771, pg. 627).

PROVISIONS FOR COAL

- **Legal and regulatory issues around carbon capture and storage (CCS):**
  - Requires interagency national strategy report on legal and regulatory barriers to commercial CCS deployment. The report is due in one year and must provide recommendations to the president and Congress for new legislation and regulations that would address these barriers (Sec. 121, pg. 83). A task force study to design a legal framework for geologic storage sites is also established with a report due within 18 months after enactment (Sec. 123, pg. 89).
  - CO_2 geologic storage site regulations: Amends the CAA and the Safe Drinking Water Act (SDWA) to establish standards within two years after enactment (Sec. 813, pg. 85). Standards must include rules on financial responsibility of injected CO_2, monitoring, record keeping, public participation and certification rules, among other things. Rules must minimize redundancy between CAA and SDWA authority. Certified geologic storage sites are covered entities under the cap-and-trade program (see "Point of Regulation" above).
- **R&D and early deployment of CCS:**
  - Carbon Storage Research Corporation: Established to oversee and direct R&D of CCS technologies by issuing grants and financial assistance (Sec. 125, pg. 100).
  - Funding: Secured through assessments on utility sales of electricity from fossil fuels with annual nationwide limit of $1 billion to $1.1 billion per year for no more than 10 years unless the period is extended by an act of Congress (Sec. 125, pg. 103 and113).
  - Financial assistance eligibility: Commercial-scale projects undertaken by private, public, academic and non-profit organizations are eligible, with an emphasis on supporting a diversity of technologies and fuels. (Sec. 125, pg. 100). Funding will go towards at least 5 commercial-scale integrated CCS projects, with 50% of funds to utilities that have already committed resources towards such projects (Sec. 125, pg. 107).
  - Other provisions deal with governance, government oversight, sharing of information and intellectual property.
- **Incentives and standards for commercial deployment of CCS:**
  - Incentives: Provides fixed payments to facilities for tons of CO_2 captured and sequestered. Amount per tonne is set on a sliding scale based on percent captured and the amount of

commercial CCS already deployed. Initial amounts are as high as $96/tonne for the highest capture rates. After 20 gigawatts of capacity treated with CCS technology is deployed, bonus allowances are awarded through a reverse auction process. Separate reverse auctions may be held for projects with different characteristics (e.g., coal type, type of applied technology, etc.). Incentive payments last for ten years. The program is expected to cover the first 72 gigawatts deployed on new or retrofit units. Conditions for eligibility and advanced distribution of emissions allowances for these projects are specified with required repayment of allowances if CO_2 is not sequestered (Sec. 780, pg. 716).

- o Performance standards: Amends the CAA to require new coal-fired power plants to meet emission performance standards (Sec. 812, pg.92). The administrator must review standards and may tighten them depending on the performance of commercially available technology. Details include:
  - Standards apply to all plants initially permitted after Jan 1, 2009 where 30 percent or more of their fuel is coal and/or petroleum coke. Standards vary based on the year in which the plant is permitted along with other factors.
  - Plants initially permitted from 2009 through 2019 shall achieve a 50 percent reduction in CO_2 emissions on an annual basis by 2020
  - Plants initially permitted from 2020 onward shall achieve a 65 percent reduction in CO_2 emissions
  - Standards may be applied before 2020 if a threshold of 10 GW of commercial CCS deployment is achieved. The applicable date may be extended to 2022, if the Secretary of Energy and administrator find insufficient commercial deployment in 2017 and Congress approves this finding.
  - The administrator may strengthen the standards but may not relax them.

DOMESTIC ADAPTATION

- **Funding:** Establishes a National Climate Change Adaptation Account with allowances allocated to states and federal agencies to fund adaptation programs (Sec. 370, pg. 379).
- **State Programs:** Requires **State-level Natural Resource Adaptation Plans** detailing each state's current and projected efforts to address the potential impacts of climate change on natural resources and coastal areas (Sec. 369, pg. 368).
- **Federal programs:**
  - o Establishes a National Climate Change Adaptation Panel that will include the heads of 10 federal agencies (Sec. 365, pg. 350). Requires the development of climate change adaptation plans by each federal agency on the Climate Change Adaptation Panel (Sec. 368, pg. 361). Establishes a National Climate Change Adaptation Strategy that will develop reports and provide advice to key federal agencies (Sec. 366, pg. 352).
  - o Establishes a National Climate Service within NOAA to develop climate information and forecasts at national and regional scales. This service will also distribute information regarding climate impacts to state, local, and tribal governments (Sec. 342, pg. 331).
  - o Public health and climate change: Requires establishment of national strategic action plan to assist health professionals in preparing for and responding to the impacts of public health and climate change in the United States and other nations, particularly developing nations (Sec. 351, pg. 332). Establishes climate change health protection and promotion program funded through allowance distribution (Sec. 212, pg. 920).
- **Additional Climate Change Adaptation Programs:** Funds programs and partnerships to address climate change impacts on U.S. water systems, impacts on coastal and Great Lakes states as well as to mitigate and adapt to impacts from wildfires and floods (Sec. 381-384, pg 399-416).

ASSISTANCE DURING THE TRANSITION TO A LOW-CARBON ECONOMY

- **Consumer assistance:**
  - o Electric and natural gas LDC rate payer assistance: Emission allowances distributed to an electricity or natural gas local distribution company (LDC) shall be used exclusively for the benefit of retail rate payers. The LDC shall ensure that the ratepayer benefit is distributed

among ratepayer classes ratably based on deliveries to each class and equally within each class. State utility regulators are required to construct rate cases or other regulations to implement these requirements (Sec. 772, pg. 664 and Sec. 773, pg. 690).

- Home heating oil and propane consumer assistance: Emission allowances are distributed to states that shall use them 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. 774, pg. 669).
- Additional consumer assistance:
  - *Energy Refund Program*: The president shall provide tax refunds to low- and moderate-income households to offset energy cost impacts from the GHG reduction program (Sec. 776, pg. 706).
  - *Consumer rebate fund*: Beginning in 2026 the president will distribute allowance value to provide relief to consumers and others affected by the CEJAPA (Sec. 776, pg. 706).

- **Green jobs and worker transition:**
  - Competitive grants program: Establishes a competitive grant program within the Department of Education for the development of programs of study in the fields of clean energy, renewable energy, energy efficiency, climate change mitigation and climate change adaptation (Sec. 301, pg. 254).
  - Information and resources clearinghouse: The Secretary of Labor in conjunction with the Secretary of Energy and Education will develop an Internet-based information and resources clearinghouse to aid career, technical education and job training programs for the renewable energy sector (Sec. 302, pg 258).
  - Establishes an Energy Efficiency and Worker Training Fund that will provide climate change adjustment assistance for workers in adversely affected sectors (Sec. 312, pg. 277).

Table 1. Allowance Distribution Under S.1733 (Chairman's Mark) the Clean Energy Jobs and American Power Act by Section (Total allowances and percentage share of the allowance pool in selected years).

Category	Distribution	Use	2012		2014		2016		2025		2030		2050	
			%[1]	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes
Deficit Reduction[2]	**Auction** with proceeds going to the Treasury (Sec. 771(d)2, pg 635)	To prevent the legislation from contributing to the Federal deficit (Sec.783, pg. 776)	10.3	477	10.0	507	10.1	552	10.1	424	22.0	777	25.0	259
Supplemental Agriculture and Renewable Energy	**Allocation and Auction with proceeds to USDA.** If not all allowances are distributed in a given year the value is carried over to the next vintage year (Sec. 771(b)9 and (d)3 pg 632 and 636)	Allowances must be used to fund farm incentive programs for carbon sequestration and renewable energy deployment. (Div.A, Sec.155 and Div.B, Sec. 214)	1.84	85	1.24	62	1.24	68	1.00	42	1.00	35	1.00	10
Transportation Greenhouse Gas Reduction	**Allocation and Auction proceeds to EPA and DOT**. (Sec.771(b)10 and (d)4, pg 633 and 636)	Allowances and funds must be awarded to states and Metropolitan Planning Organizations for transportation efficiency planning (Sec.831-832 and Div. B, Sec.215, pg. 921)	2.8	132	2.1	108	1.9	103	1.8	75	2.6	91	2.5	26

[1] Percentages and amounts of allowances reflect the share of the total allowance pool directed to each category. All values account for the initial reservations required under Section 771(d). Percentages may not sum to exactly 100 percent due to rounding.

[2] Any remaining allowances not allocated in all categories through 2025, with the exception of those subject to carryover provisions, will be auctioned with proceeds going to deficit reduction. This analysis assumes all allowances are disposed of for their initial purposes. With this assumption in mind, the amounts directed towards deficit reduction shown here should be considered minimum estimates.

Table 1. Allowance Distribution Under S.1733 (Chairman's Mark) the Clean Energy Jobs and American Power Act by Section (Total allowances and percentage share of the allowance pool in selected years).

Category	Distribution	Use	2012		2014		2016		2025		2030		2050	
			%[1]	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes
Real Reductions in Industrial Emissions (maximum amount)[3]	**Allocation to industrial sources** meeting certain eligibility requirements based on carbon intensity of production and trade exposure. Final distribution to eligible facilities is based on output. If not all allowances are distributed in a given year the value is carried over to the next vintage year (Sec. 771(a)5 and (d)5 , pg 621 and 636) Part F, pg 836)	No restriction after distribution	3.9	179	13.1	664	11.8	648	11.7	491	5.3	189	0.5	5
Investment in Energy Efficiency and Renewable Energy	**Allocation to states** based on three equally weighted factors: 1) equally among states 2) population 3) energy consumption (Sec.771(a)9A-B and (d)6, pg. 625 and 637)	Allowances must fund state implementation of various energy programs, incentives and rebates for energy efficient and renewable energy technologies. States must report on the use of allowances (Div. B Sec. 202, pg 881)	9.2	427	7.7	389	5.4	298	1.3	53	3.4	121	3.3	34
Electricity Consumers served by small LDCs	**Allocation to electric local distribution companies with annual deliveries of less than 4 million MWH** based on emissions resulting from retail deliveries (Sec. 771 (a) 1) and Sec. 771(d)7, pg 618 and pg 637)	Must fund cost-effective energy efficiency programs, renewable energy deployment programs and to assist low-income residential ratepayers (772 (e), pg 673)	0.9	43	0.9	47	0.9	51	0.9	39	0.0	0	0.0	0

[3] The legislative language that describes the formula for calculating allowances for this program apparently yields amounts that cause total allowance distribution to exceed 100 percent. Environment and Public Works Committee staff have clarified that the intent of this language is to generate percentage values that mirror those of H.R.2454. For this analysis WRI has applied the H.R.2454 percentage values to the remaining allowance pool after the initial reservation of allowances. The values shown here represent the maximum annual amount that may be allocated to the entities in a given year.

Table 1. Allowance Distribution Under S.1733 (Chairman's Mark) the Clean Energy Jobs and American Power Act by Section (Total allowances and percentage share of the allowance pool in selected years).

Category	Distribution	Use	2012		2014		2016		2025		2030		2050	
			%[1]	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes
International Adaptation and Global Security Program	**Allocation to eligible countries, multilateral funds and international institutions** based on certain requirements and restrictions (Sec. 771(d)8, and Sec. 771(a)14, pg 637 and 627)	Bilateral and multilateral assistance to countries to increase resilience to climate change impacts. Recipient countries and administering agencies must report on program effectiveness (Div. A Sec. 324, Div. B Sec. 207; pg. 327 and 899)	1.1	51	1.1	55	1.1	60	1.9	80	3.6	127	3.5	36
Market Stability Reserve Fund	**Allocation to Market Stability Fund** (Sec. 771(d)9, pg 638)	Auctioned for cost containment purposes with proceeds used to purchase offsets to refill the Market Stability Reserve (Sec. 726, pg. 508)	2.0	93	2.0	101	2.0	110	3.0	126	3.0	106	3.0	31
Electricity Consumers through LDCs	**Allocation to all electric local distribution companies** (Sec. 772(b-d)) based on total emissions resulting from retail deliveries and total retail deliveries weighted equally. No LDC may receive allowance value that exceeds the costs incurred by the cap-and-trade program (Sec. 772 (b-d), pg.636 and 653 - 678).	Solely for the benefit of ratepayers distributed equitably across all rate classes (e.g. fixed amount rebates). State regulators must submit plans and reports on use of allowances. Allowance value to industrial rate payers may be distributed based on deliveries. (Sec. 772(b-d) pg 653-678),	31.6	1,462	28.1	1,419	25.3	1,385	25.0	1,050	0.0	0	0.0	0
Merchant Coal Generators (maximum amount)[4]	**Allocation to merchant coal generators** equal to 50% of qualifying emissions. (Sec. 772 (b-d), pg 653 - 678)	No restriction after distribution	3.7	171	3.3	166	3.0	162	2.9	122	0.0	0	0.0	0

[4] 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 into the Electricity Consumers pool.

Table 1. Allowance Distribution Under S.1733 (Chairman's Mark) the Clean Energy Jobs and American Power Act by Section (Total allowances and percentage share of the allowance pool in selected years).

Category	Distribution	Use	2012		2014		2016		2025		2030		2050	
			%[1]	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes
Electric generators with long-term contracts (maximum amount)[2]	**Allowances are allocated to** generators with long term power contracts (Sec. 772 (b-d) pg 653 - 678)	No restriction after distribution	1.6	73	1.4	71	1.3	70	1.3	53	0.0	0	0.0	0
Natural Gas Consumers	**Allocation to natural gas local distribution companies** (Sec. 771 (a)2, pg 619) based on total retail deliveries of natural gas	Solely for the benefit of ratepayers equitably distributed across all rate classes (e.g. fixed amount rebates). 1/3 of allowances must be used to fund cost effective energy efficiency projects. Allowance value to industrial rate payers may be distributed based on deliveries. State regulators must submit plans and reports on use of allowances (Sec. 773, pg. 688)	0.0	0	0.0	0	7.6	416	7.5	315	0.0	0	0.0	0
Home Heating Oil and Propane Consumers	**Allocation to states** based on carbon content weighted sales of home heating oil and propane (Sec. 771 (a)3, pg.619)	Solely for the benefit of heating oil and propane consumers. At least 50% must be used to fund cost effective energy efficiency projects (Sec. 774, pg. 697)	1.6	73	1.4	71	1.3	69	1.3	52	0.0	0	0.0	0
Domestic Fuel Production (All Refiners)	**Allocation to all petroleum refiners** based largely on emissions, (Sec. 771(a)4A. Sec. 775, pg. 620)	No restriction after distribution	0.0	0	0.6	32	0.6	35	0.6	26	0.0	0	0.0	0
Domestic Fuel Production (Mid Size Refiners)	**Additional allocation to mid-size petroleum refiners** based largely on emissions (Sec. 771(a)4B, pg 620, Sec. 775, pg. 702)	No restriction after distribution	0	0	0.4	21	0.4	23	0.4	17	0	0	0	0

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Category	Distribution	Use	2012		2014		2016		2025		2030		2050	
			%[1]	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes
Domestic Fuel Production (Small Refiners)	**Additional allocation to small petroleum refiners** based largely on emissions (Sec. 771(a)4C, Sec. 775, pg. 620)	No restriction after distribution	0	0	0.8	43	0.8	46	0.8	35	0	0	0	0
Deployment of CCS Technology	**Allocation to electric generators and industrial sources** that achieve specified amounts of CO_2 capture and storage. Allocation to eligible entities based on amount of CO_2 sequestered. If not all allowances are distributed in a given year the value is carried over to the next vintage year (Sec.771(a)6A pg. 623) (Sec. 780 pg 716)	No restriction after distribution	0.0	0	1.5	75	1.5	81	4.2	175	3.6	127	3.5	36
Compensation for Early Actors	**Allocation to EPA** which in turn must distribute allowances to entities that purchased approved offsets or achieved documented early emission reductions (Sec. 771(a)7, pg 624)	No restriction after distribution	1.7	78	0	0	0	0	0	0	0	0	0	0
Investment in Clean Vehicle Technology	**Allocation and auction with proceeds to EPA** which in turn must award allowances and incentive payments to auto manufacturers and component suppliers (Sec. 771(a) 8, and (b)3 pg. 624 and 630)	Financial assistance to manufacturers for retooling factories, deploying vehicle electrification infrastructure and plug-in hybrids. (Div. B Sec. 201, pg 872)	2.5	117	2.5	128	2.5	139	0.8	35	0.0	0.0	0.0	0

Table 1. Allowance Distribution Under S.1733 (Chairman's Mark) the Clean Energy Jobs and American Power Act by Section (Total allowances and percentage share of the allowance pool in selected years).

Category	Distribution	Use	2012		2014		2016		2025		2030		2050	
			%[1]	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes
Greater Efficiency in Building Codes	**Allocation to states** that adopt, implement and enforce new building codes. Distribution based on several variables. (Sec. 771 (a) 10, pg. 625)	Assist in adoption, implementation and enforcement of new high efficiency building codes. States must report on progress and use of allowances (Div. A Sec. 163, Div. B Sec. 203 pg. 896)	0.4	19	0.4	21	0.4	23	0.4	17	0.4	13	0.4	4
Clean Energy Innovation Hubs	**Allocation to DOE** which in turn must award allowances to research centers on a competitive basis (Sec. 771(a)11, pg. 626)	Research in clean technologies, centers must report on use of allowances (Div. B Sec. 204, pg 897)	0.6	29	0.6	32	0.4	21	0.4	16	0.3	11	0.3	3
Advanced Energy Research	**Allocation to the Advanced Research Project Agency-Energy (ARPA-E)** which in turn must award allowances to public and private research organizations on a competitive basis (Sec.771(a)12, pg. 626)	Accelerate research in energy technologies. ARPA-E most report on use of allowances (Div. B Sec. 205, pg 897)	2.7	127	1.1	53	1.1	58	1.0	44	0.9	32	0.9	9
International Clean Technology Deployment	**Allocation to eligible countries, multilateral funds and international institutions** based on certain requirements and restrictions (Sec. 771 (a)13, pg.626)	Bilateral and multilateral assistance to countries to accelerate deployment of low and zero emitting technologies. Recipient countries and administering agencies must report on program effectiveness (Div. A Sec. 323, Div. B Sec. 206 pg 325 and 833)	0.8	39	0.8	43	0.8	46	1.7	70	2.2	76	2.1	21

Table 1. Allowance Distribution Under S.1733 (Chairman's Mark) the Clean Energy Jobs and American Power Act by Section (Total allowances and percentage share of the allowance pool in selected years).

Category	Distribution	Use	2012		2014		2016		2025		2030		2050	
			%[1]	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes
State Greenhouse Gas Reductions and Adaptation	**Allocation to states** based on population and per capita income (Sec. 771(a)15, pg. 628)	The proceeds from the sale of allocated allowances must be used for programs that build resilience against anticipated climate change impacts. States must construct adaptation plans for use of allowances and report on progress (Div. B Sec. 210(d), pg. 903)	1.1	41	0.4	45	0.4	49	0.9	80	1.6	134	1.5	39
State Natural Resource Adaptation Programs	**Allocation to states** based on existing frameworks in the Coastal Management Act and the Pittman-Robertson Act (Sec. 771(a)16, pg 628)	The proceeds from the sale of allocated allowances must be used for programs that protect wildlife and natural resources from climate change impacts. States must construct adaptation plans for use of allowances and report on progress (Div. A Sec. 370(a)1, Div. B Sec. 216, pg 379)	0.3	18	0.3	19	0.3	21	0.6	32	1.1	53	1.1	15
Low-middle Income Consumer Assistance and Energy Refund[5]	**Auction** with proceeds going to U.S. citizens through financial assistance and Energy Refunds (Sec.771(b)2, pg. 629)	Secretary of the Treasury will distributes funds to offset increases in energy costs(Sec. 776, pg. 706)	12.6	585	12.6	639	12.6	693	12.5	525	44.3	1,566	47.8	495

[5] Any remaining allowances not allocated in all categories after 2025, with the exception of those subject to carryover provisions, will be auctioned with proceeds going to fund Low-middle Income Consumer Assistance and Energy Refunds. This analysis assumes all allowances are disposed of for their initial purposes. With this assumption in mind, the amounts directed to the climate change refund program shown here should be considered minimum estimates.

Table 1. Allowance Distribution Under S.1733 (Chairman's Mark) the Clean Energy Jobs and American Power Act by Section (Total allowances and percentage share of the allowance pool in selected years).

Category	Distribution	Use	2012		2014		2016		2025		2030		2050	
			%[1]	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes
Energy Efficiency and Renewable Energy Worker Training	**Auction** with proceeds directed to Department of Labor(Sec.771(b)4,pg 630)	Secretary of Labor will use funds to run training and education programs for energy efficiency and renewable energy technicians (Div. B Sec. 208, pg. 899)	0.8	39	0.04	2	0.0	0	0	0	0	0	0	0
Worker Transition Assistance	**Auction** with the proceeds going to the Department of Labor (Sec.771 (b)5, pg. 631)	Must fund programs for displaced worker assistance and training as well as additional programs to train new workers for renewable energy and energy efficiency jobs (Div. A, Title 3, Subtitle A, Part 2; Div B Sec. 209, pg. 200)	0.4	19	0.4	21	0.4	23	0.8	37	0.7	55	0.7	16
Climate Change Health Protection and Promotion Fund	**Auction** with proceeds directed to the Department of Health and Human Services (Sec. 771(b)6, pg 631).	Provide funding for federal, state and tribal public health programs above and beyond existing funding sources (Div. A, Title 3, Subtitle C, Part 1, Subpart b; Div B Sec. 211, pg. 918)	0.08	4	0.08	4	0.08	5	0.08	3	0.07	3	0.07	1
Natural Resources Climate Change Adaptation Fund	**Auction** with the proceeds directed to federal agencies (Sec. 771(b)7, pg 631)	Auction revenues must be used by federal agencies for programs that protect and restore natural resources from climate change impacts (Div. A, Sec. 370(a)2; Div B Sec. 212, pg 379 and 924)	0.5	24	0.5	26	0.5	29	1.0	43	1.8	63	1.7	18
Nuclear Worker Training	**Auction** with the proceeds directed to DOE and Department of Labor (Sec.771(b)8, pg 632)	Increase the number of U.S. nuclear scientists and technicians through training and education programs. (Div. A, Sec. 132; Div B Sec. 213, pg. 127 and 920)	0.4	19	0.04	2	0	0	0	0	0	0	0	0

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Category	Distribution	Use	2012		2014		2016		2025		2030		2050	
			%[1]	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes	%	Million tonnes
Supplemental Forest GHG reduction program	**Allocation to U.S.A.I.D.** which in turn may transfer allowance to other countries that meet certain requirements. If not all allowances are distributed in a given year the value is carried over to the next vintage year (Sec. 771(c), pg. 634)	To reward countries that achieve certain amounts of GHG reductions in their forest sectors, meet supplemental GHG reduction goals and to cover program costs (Sec. 753, pg. 324)	4.2	195	4.2	213	4.2	231	4.2	175	2.2	76	1.4	14
Exchange for State Allowances[6]	**Allocation to holders of state issued allowances** distributed under programs that will end in 2012 based on the cost of allowances. Exchange must happen before a deadline set by the administrator (Sec. 777, pg. 707)	No restriction after distribution	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

[6] Amount allocated to the state exchange program is not specified thus the "term to be decided" (TBD) is used in this summary. The actual allowance amount is most certainly more than zero and would be allocated before allowances are directed to the deficit reduction auction.