

Comparison of the American Clean Energy and Security Act of 2009 (ACES, House-Passed Bill) and the Clean Energy Jobs and American Power Act of 2009 (CEJAPA, 9/30/09 version)

On September 30, 2009, Senators Kerry (D-MA) and Boxer (D-CA) introduced the Clean Energy Jobs and American Power Act of 2009 (CEJAPA), an initial draft of a comprehensive climate and energy bill. This bill is modeled after the American Clean Energy and Security Act of 2009 (ACES) that the U.S. House passed on June 26, 2009, but contains some notable differences. Also, details of some important provisions remain to be defined through the Senate committee process. In some cases, CEJAPA lacks provisions contained in ACES. However, some of those provisions were included in the American Clean Energy Leadership Act of 2009 (ACELA), a bill that the Senate Energy and Natural Resources Committee passed on July 16, 2009.

The chart that follows compares key provisions of the ACES bill to both the CEJAPA bill (as introduced) and the ACELA bill, and notes their similarities and differences. Please note that the Senate bills are subject to change as they move through the committee process.

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Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
I. CARBON MARKET PROVISIONS			
1. Start Year	2012	2012	None
2. GHG coverage	Carbon dioxide, Methane, Nitrous oxide, Sulfur hexafluoride, Perfluorocarbons, Nitrogen trifluoride and any other anthropogenic gas designated as a greenhouse gas by the EPA. Hydrofluorocarbons are covered via a separate cap, extending Title VI of the Clean Air Act.	Carbon dioxide, Methane, Nitrous oxide, Sulfur hexafluoride, Perfluorocarbons, Nitrogen trifluoride and any other anthropogenic gas designated as a greenhouse gas by the EPA. Hydrofluorocarbons are covered via a separate cap, extending Title VI of the Clean Air Act.	None
3. Sector Coverage	Phase 1: In 2012 the cap covers 66.2 percent of total U.S. emissions including: electric power generators, natural gas liquid-, petroleum-, and coal-based liquid fuel sources whose products when combusted emit over 25,000 tons annually, HFCs and geologic storage sites. Phase 2: In 2014 the cap expands to cover 75.7 percent of US emissions and adds industrial sources that annually emit 25,000 tons or more, not including emissions from petroleum and renewable biomass combustion, plus all sources such as cement, petroleum refining etc. Phase 3: In 2016 the cap expands to cover 84.5 percent of US emissions including natural gas Local Distribution Companies (LDCs) that deliver more than 460,000,000 cubic feet of gas annually to non-covered entities.	Phase 1: In 2012 the cap covers 66.2 percent of total U.S. emissions including: electric power generators, natural gas liquid-, petroleum-, and coal-based liquid fuel sources whose products when combusted emit over 25,000 tons annually, HFCs and geologic storage sites. Phase 2: In 2014 the cap expands to cover 75.7 percent of US emissions and adds industrial sources that annually emit 25,000 tons or more, not including emissions from petroleum and renewable biomass combustion, plus all sources such as cement, petroleum refining etc. Phase 3: In 2016 the cap expands to cover 84.5 percent of US emissions including natural gas Local Distribution Companies (LDCs) that deliver more than 460,000,000 cubic feet of gas annually to non-covered entities.	None

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<p>4. Emissions Cap</p>	<p>3% below 2005* levels in 2012 17% below 2005 levels in 2020, 42% below 2005 levels in 2030 and 83% below 2005 levels in 2050. Additional 10% from reducing emissions from tropical deforestation (or REDD, see below). (*2005 levels are 7,206 MTCO₂eq)</p>	<p>3% below 2005* levels in 2012 20% below 2005 levels in 2020 42% below 2005 levels in 2030 83% below 2005 levels in 2050. Additional 10% from reducing emissions from tropical deforestation (or REDD, see below). (*2005 levels are 7,206 MTCO₂eq)</p>	<p>The 2020 target has been strengthened (20% instead of 17% below 2005).</p>
<p>5. Reducing Emissions from Tropical Deforestation and Degradation in Developing Countries (REDD)</p>	<p>5% of allowance value set aside to reduce emissions from deforestation and degradation to achieve a supplemental reduction in global emissions of 720 MMtCO₂eq in 2020, which is equal to 10% of US emissions in 2005; cumulative goal of 6 GtCO₂eq by 2025.</p>	<p>Same supplemental reduction goals (720 MMtCO₂ annually in 2020, which is equal to 10% of US emissions in 2005; 6 GtCO₂eq cumulative by 2025).</p>	<p>Since reduction goal is the same, initial set-aside funding in CEJAPA is likely to be the same 5% of allowance value as in ACES.</p>

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<p>6. Scientific Review and Response</p>	<p>Sec 705-707: EPA is required to produce a report assessing current science and levels of emissions reductions every four years. NAS is required to assess technological progress every four years and submit a report and policy recommendations to the Administration. Agencies can use extant regulatory authority to implement actions identified by the reports. The President is also required to submit suggested legislative adjustments to Congress if the NAS report finds the US will not achieve necessary reductions or that global actions will not maintain safe global average temperatures. Congress is not required to respond to these recommendations.</p>	<p>Sec 705-707: Identical language as in House bill</p>	<p>None</p>
<p>7. Allowance Auction and Reserve Auction Price</p>	<p>Single round, sealed bid, uniform price auction. Reserve price in 2012 is \$10/ton (2009 dollars). After 2012, it will be the minimum reserve auction price for the previous year increased by 5 percent plus the rate of inflation.</p>	<p>Single round, sealed bid, uniform price auction. Reserve price in 2012 is \$10/ton (2005 dollars). After 2012, it will be the minimum reserve auction price for the previous year increased by 5 percent plus the rate of inflation.</p>	<p>None. \$10/ton functions as the “price floor” for allowances. For context, EIA’s analysis of ACES shows allowance prices of \$18/ton in 2012, \$32/ton in 2020 and \$65/ton in 2030 (2007 dollars).</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>8. Offsets: Maximum Allowable and Oversight Jurisdiction</p>	<p>Maximum of 2 billion metric tons annually, 50% from domestic and 50% from international sources. If the Administrator determines that domestic offsets sources cannot supply the full limit, then international offsets can be expanded up to 1.5 billion tons. Also the strategic allowance reserve pool allows a further mechanism for increasing the amount of offsets available. After 2018, 1.25 international offsets are required in lieu of one allowance.</p> <p>In the final bill, USDA was given oversight of the agricultural and forestry offset program and EPA was given oversight of industrial offsets.</p> <p>Congressman Waxman (Chairman of the Energy and Commerce Committee) and Congressman Peterson (Chairman of the Agriculture Committee) sent a letter to the President asking for him to weigh in on the jurisdiction decision between EPA and USDA.</p>	<p>Maximum of 2 billion metric tons annually. The ability to use these offsets is divided pro rata among all covered entities. Of the two billion tons of offset credits, $\frac{3}{4}$ may be derived from domestic offsets and $\frac{1}{4}$ from international offsets. If the Administrator determines that domestic offsets sources cannot supply the full limit, then international offsets can be increased by 750 MMT, to 1.25 billion metric tons. Also, the market stability reserve allows a further mechanism for increasing the amount of offsets available. After 2018, 1.25 international offsets are required in lieu of one allowance.</p> <p>The oversight authority over the offsets program lies with the President.</p>	<p>CEJAPA differs from ACES in the following ways:</p> <ul style="list-style-type: none"> -A 50% increase in the proportion of offsets coming from domestic sources. - A change in the maximum amount of international offsets that could come in through this mechanism. It has been lowered from 1.5 to 1.25 billion tons (additional amounts could come in via the strategic reserve). -Oversight authority rests with the President.

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>9. Offset Types: Domestic</p>	<p>Initial list includes: afforestation and reforestation, forest management, tillage practices, cropping practices, reduced nitrogen use, reduced flooding of rice paddies, reduced CO2 emissions from soils, reduced GHGs from animal wastes, animal management practices, reduction in nitrogen fertilizer use, reduction in carbon emissions from organic soils, wetlands restoration, grasslands management, agroforestry etc.</p>	<p>Preliminary list includes: Methane from coal mines, landfill methane, fugitive emissions from oil and gas systems, non-landfill methane from manure management, biogas etc, afforestation and reforestation, forest management, tillage practices, cropping practices, reduced nitrogen use, reduced flooding of rice paddies, reduced CO2 emissions from soils, reduced GHGs from animal wastes, animal management practices, tree cropping practices, greenhouse gas emission reductions from improvements and upgrades to mobile or stationary equipment (including engines), wetlands restoration, grasslands management, agroforestry etc.</p>	<p>CEJAPA includes additional language on (non-Ag) methane collection and combustion- e.g. coal, landfills, fugitive emissions from oil and gas systems. It also contains additional reference to no-till as well as adding "avoided abandonment of such practices" (i.e. payments to keep up business as usual)</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
10. Offset Types: International Forest Protection (“REDD+”)	Establishes strong quality principles for forest offsets to be accepted in the U.S. offset market -- additionality, reduction of leakage and reversals, etc. Requires foreign national-level plans to reduce deforestation to zero. Uses national baselines as the fundamental accounting structure for offset credits, but allows project-based accounting during transitional periods to national baselines in countries with low percentages of global emissions. Allows accounting using state- and province-level baselines within countries with high percentages of global emissions, but only for a transitional 5-year period. Requires environmental and social safeguards, including protections for indigenous peoples.	Similar in most respects to ACES. Adds requirement for national plans to include spatially explicit information on primary forest preservation. Adds requirements for involvement of stakeholders in planning and distribution of benefits, including indigenous peoples. Extends the transitional period for project-based accounting in countries with low percentages of global emissions by 3 years. Changes criteria for eligibility to use state- and province-level baselines within countries with high percentages of global emissions for the same transitional 5-year period. Adds protection against afforestation of diverse native ecosystems of all kinds (e.g. grasslands, wetlands), not just for forests as in the House bill.	Fundamental structure and major elements are similar in the two bills. CEJAPA adds protection against afforestation of diverse native ecosystems of all kinds (e.g. grasslands, wetlands), not just for forests as in ACES.
11. Offset Types: International non-forest	GHG mitigation and sequestration activities in developing countries. Could include sector-based credits. CDM credits could count, though after 2016 they would have to meet strict quality criteria. Destruction of HCFCs excluded.	GHG mitigation and sequestration activities in developing countries. Could include sector-based credits. CDM credits could count, though after 2016 they would have to meet strict quality criteria. Destruction of HCFCs excluded.	None.

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>12. Offset Quality and Program Design</p>	<p>Regulations will ensure offsets are verifiable, additional, and permanent.</p> <p>Some projects established as early as January 2001 may be considered “additional.”</p> <p>The Administrator shall establish, and may periodically revise, a list of eligible project types and give priority to offset project types that are recommended by the Advisory Board and for which there are well developed methodologies.</p> <p>Specifies practices that shall be considered in developing the initial list.</p> <p>For method development, project types on the initial list will receive priority.</p> <p>Establishes an offset registry. For verification, project developers must submit reports prepared by accredited third-party verifiers.</p>	<p>The President, in consultation with other federal agencies shall promulgate regulations to establish a program to issue offsets. The program must address additionality and permanence. In year one of the program the President shall establish a list of eligible project types for which there are well-developed accounting methodologies.</p> <p>Some projects established as early as January 2001 may be considered “additional.”</p> <p>Establishes an offset registry. For verification, project developers must submit reports prepared by accredited third-party verifiers.</p> <p>Appears to retain the early adopter provision for no-till, though the language in the offsets list is somewhat unclear.</p>	<p>ACES emphasizes priority on advisory board recommendations to a greater extent than CEJAPA.</p> <p>CEJAPA includes additional references to no-till as well as adding "avoided abandonment of such practices" (i.e., payments to keep up business as usual).</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>13. Offsets Integrity Advisory Board</p>	<p>This board will provide guidance to EPA on project types, areas of scientific uncertainty, and acceptable qualification and quantification methodologies (for all project types other than domestic forestry and agriculture projects). The Board will also conduct a scientific review of offset program and deforestation reduction programs by 2017, and every 5 years thereafter. There is a parallel USDA Greenhouse Gas Emission Reduction and Sequestration Advisory Committee where 9 members qualified by education or training and appointed by the Secretary will make recommendations on domestic agriculture and forestry offset projects.</p>	<p>CEJAPA combines both advisory boards in ACES and one board advises 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 5 years thereafter.</p>	<p>None</p>
<p>14. Banking and Borrowing of Allowances</p>	<p>Unlimited banking. Borrowing without interest from one year in the future. Borrowing with interest for up to 15% of a firm's emissions from 1 to 5 years in the future. Interest equal to 0.08 multiplied by the number of years between the calendar year in which the allowance is being used to satisfy a compliance obligation and the vintage year of the allowance. System-level borrowing via the strategic reserve (see below)</p>	<p>Unlimited banking. Borrowing without interest from one year in the future. Borrowing with interest for up to 15% of a firm's emissions from 1 to 5 years in the future. Interest equal to 0.08 multiplied by the number of years between the calendar year in which the allowance is being used to satisfy a compliance obligation and the vintage year of the allowance. System-level borrowing via the strategic reserve (see below)</p>	<p>None</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>15. Strategic Allowance Reserve in ACES (Market Stability Reserve in CEJAPA)</p>	<ul style="list-style-type: none"> -Initially filled with: 1% of allowances from 2012-2019, 2% of allowances from 2020-2029, 3% of allowances from 2030-2050. -Supplemented by: any unsold allowances at the end of a year - Refilled by purchase and retirement of REDD offset credits (see below) -Minimum strategic reserve auction price in 2012 is \$28/ton (2009 dollars), for 2013-2014 will be increased by 5% plus the rate of inflation. From 2015 onwards, the minimum strategic reserve auction price shall be 60 percent above a rolling 36-month average of the daily closing price for that year's emissions allowance vintage, calculated using constant dollars. -Annual sale limit from 2012-2016 is 5% of emission allowances for that year. After 2017, limit is 10%. Limits do not apply to international offset credits sold on consignment. -Annual purchase limit is 20% of entity's emissions. -Proceeds from the strategic reserve auction to be invested in REDD offsets. Those offsets would be retired, and allowances equal to 80% of these offsets would be created and deposited in the strategic reserve. 	<ul style="list-style-type: none"> - CEJAPA does not specify how the reserve will be filled initially. -Supplemented by: any unsold allowances at the end of a year - Refilled by purchase and retirement of domestic and international offset credits -Minimum strategic reserve auction price in 2012 is \$28/ton (2009 dollars), for 2013-2017 will be increased by 5% plus the rate of inflation, from 2018 onwards, 7% plus rate of inflation -Annual sale limit from 2012-2016 is 15% of emission allowances for that year, after 2017, limit is 25%. Limits do not apply to offset credits sold on consignment. Administrator can adjust limits -Annual purchase limit is 20% of entity's emissions. -Proceeds from the strategic reserve auction to be invested in domestic and REDD offsets. Those offsets would be retired, and allowances equal to these offsets would be created and deposited in the strategic reserve. 	<p>The strategic reserve price functions as a "price ceiling." For context, EIA's analysis of ACES shows allowance prices of \$18/ton in 2012, \$32/ton in 2020 and \$65/ton in 2030 (2007 dollars).</p> <p>Key differences:</p> <ul style="list-style-type: none"> -For reserve price, CEJAPA drops the rolling 36-month average language in ACES. This gives more certainty about what the reserve price will be. -Strategic reserve in CEJAPA can be supplemented by purchase and retirement of both domestic and international offsets and there is no discounting in the number of corresponding allowances so created. -CEJAPA increases the annual sale limit so more can come in from the reserve in a given year.

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>16. States' Rights to Regulate Global Warming Emissions</p>	<p>No state cap-and-trade programs allowed between 2012 through 2017. Does not preempt states' rights to set GHG targets or enforce other standards, regulations, or GHG reductions programs. If there is no federal auction in 2012, then state programs aren't pre-empted until 9 months before the first federal auction occurs.</p>	<p>No state cap-and-trade programs allowed between 2012 and 2017. Does not preempt states' rights to set GHG targets or enforce other standards, regulations, or GHG reductions programs. If there is no federal auction in 2012, then state programs aren't pre-empted until 9 months before the first federal auction occurs.</p>	<p>None</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
17. International Linkages in the Carbon Market	International credits can be used if programs are linked. Also international offsets can be used for compliance (see above).	International credits can be used if programs are linked. Also international offsets can be used for compliance (see above).	None, with the exception of the quantity of international offsets allowed.
18. Carbon Market Oversight	<p>ACES provides for strong federal oversight and regulation of carbon trading. FERC has regulatory authority over allowance, derivatives and offsets markets.</p> <p>A key requirement is that trading of emissions allowance derivatives must be done through an exchange, to help increase market transparency, establish standardized practices and bolster trust. The Commodities Futures Trading Commission has authority to regulate the derivatives market.</p> <p>Regulators have the tools they need (such as setting position limits and margin requirements) to monitor the market, as well as the authority and the resources to punish violators.</p>	<p>Carbon Market Assurance placeholder language: States the sense of the Senate that there shall be a carbon market oversight program to provide for effective and comprehensive market oversight and enforcement that lowers systemic risk and protects consumers.</p>	Comparison not yet possible because the details of this provision in CEJAPA will be determined through the committee process
II. AGRICULTURE PROVISIONS			

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>19. Agriculture Allocation Set-Aside</p>	<p>Provides resources through a portion of allowances (0.3 until 2025) to USDA and DOE for projects that fall into one of 3 categories: (A) actions that reduce or avoid greenhouse gas emissions, or sequester greenhouse gases, but do not meet the criteria for offset credits; (B) actions to adapt to climate change; or (C) actions that prevent conversion of land that would increase greenhouse gas emissions. The program also includes incentives for research on new/additional techniques for reducing emissions and enhancing GHG sequestration.</p> <p>The program will support activities where there are limited opportunities to reduce GHG emissions or sequester carbon, but have environmental co-benefits (e.g., water or air quality improvement).</p>	<p>An unspecified amount of allowances are set aside 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</p> <p>Like ACES, the program also includes incentives for research on new/additional techniques for reducing emissions and enhancing GHG sequestration.</p> <p>Provides recognition for early action (actions occurring from 2001-2009) by allowing credits issued by an Administrator-approved offset program under the early offset provisions to be exchanged for allowances. Other types of non-offset documented early reductions are also eligible under this section.</p> <p>Projects will not be prohibited from participating in the program due to participation in other Federal or State conservation or agricultural assistance programs.</p> <p>The Department of Agriculture will quantify emissions benefits and report to EPA. Applies to private lands and to public lands used for grazing. Applies to “owners and operators of agricultural land ... and forest land...”</p>	<p>CEJAPA again emphasizes rewarding the no-till early adopters. (Eligible projects include those that: “reward early adopters, including producers that practice no-till agriculture,...”) No-till early adoption also appears to have been retained under offsets in CEJAPA, whereas most other early adopter provisions were shifted to the incentives program.</p> <p>Where ACES places priority on projects that have environmental co-benefits, CEJAPA grants special consideration to owners/operators in jurisdictions with more stringent environmental laws that preclude participation in an offset market.</p> <p>Where CEJAPA specifies that project eligibility will not be affected by participation in other federal or state conservation or agriculture assistance programs, ACES is silent on this matter.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
III. INTERNATIONAL PROVISIONS			
20. International Adaptation and Clean Technology Transfer	2% of allowances from 2012-2021, then up to 4% from 2022-2026, 8% after 2026. Half for international adaptation, half for international adaptation	Allowance allocations are not yet specified in CEJAPA, and will be added in during the EPW committee process. Establishes a Strategic Interagency Board on International Climate Investment, and an International Climate Change Adaptation and Global Security Program	Comparison not possible yet because the details of this provision in CEJAPA will be determined through the committee process
21. Competitiveness-related provisions	Allowance set-aside for energy-intensive, trade-exposed entities. Allowance rebates to mitigate carbon leakage in eligible industrial sectors. The President can also establish an international reserve allowance program for eligible industries if deemed necessary.	Details will be worked out in the committee process. Placeholder language: It is the sense of the Senate that this Act will contain a trade title that will include a border measure that is consistent with our international obligations and designed to work in conjunction with provisions that allocate allowances to energy-intensive and trade-exposed industries.	Comparison not possible yet because the details of this provision in CEJAPA will be determined through the committee process
IV. RENEWABLE ENERGY AND EFFICIENCY			

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>22. Renewable Electricity Standard (RES)</p>	<p>20% of covered sales by 2020:</p> <ul style="list-style-type: none"> - Efficiency eligible to meet up to 25% of the annual requirement (5% by 2020). If a governor so petitions, a utility can use electricity savings to meet up to 40% of its annual requirement, reducing the renewable target to 12% by 2020. - Small utilities (less than 4 million MWh/year sales) excluded - New nuclear, CCS, and existing/non-RES eligible hydro excluded from baseline. - FERC administers and enforces RES. - Alternative compliance payment (ACP) initially set at \$25/MWh, and adjusted for inflation. ACP payments must be made to the state or states served by the retail electric supplier, and funds must be used to deploy renewable energy or implement cost-effective energy efficiency programs. - Allows states with standards higher than the federal to sell excess credits to other states for federal compliance. - Non-compliance penalty equal to twice the value of the ACP. 	<p>ACELA</p> <p>15% of covered sales by 2021:</p> <ul style="list-style-type: none"> - Efficiency eligible to meet up to 26.67% of the annual requirement (4% by 2020) if a Governor (or TVA Board for the TVA) so petitions, reducing renewable target to 11%. - Small utilities (less than 4 million MWh/year sales) and Hawaii excluded - New nuclear, upgrades of existing nuclear plants, CCS, MSW, and existing/non-RES eligible hydro excluded from baseline. - DOE administers and enforces RES. - ACP initially set at 2.1 cents/kWh, and adjusted for inflation. ACP payments must be made to the state or states served by the retail electric supplier, and funds must be used within the state to (1) deploy renewable energy, (2) implement energy efficiency programs, (3) deploy nuclear and advanced CCS technologies, (4) promote electric drive vehicles, or (5) cycle funds directly back to electric consumers. - Allows states with standards higher than the federal to sell excess credits to other states for federal compliance. - Non-compliance penalty equal to twice the value of the ACP. DOE may waive or mitigate the penalty, or waive the requirement for up to 5 years, if the utility is unable to comply due to reasons outside its reasonable control. Utilities may petition DOE to waive all or part of the requirements to limit the annual rate impact on retail customers. Upon petition, DOE may suspend or reduce a requirement for one or more years based on transmission constraints. 	<ul style="list-style-type: none"> - The effective renewable target with exclusions and exemptions is higher in ACES (8.3-11.5% of total electricity sales by 2020) than the Senate bill (7.4-10.2% of total electricity sales by 2021), though neither would require that new renewables be developed above state policies and federal incentives included in EIA's business as usual forecast. - Senate ENR bill allows existing renewables to get tradeable credits and coal-mine methane, MSW, and small pumped hydro from Alaska to count toward the standard. - ACP provision in ACELA allows funds to be used to support non-renewable technologies or be cycled back to consumers. - ACELA includes broad compliance and penalty waivers

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>23. Renewable Energy Grant Program for State RESs</p>	<p>Not included.</p>	<ul style="list-style-type: none"> -Creates a grant program to increase renewables in states with renewable electricity standards and goals. -Priority for projects in states with binding targets and most cost-effective projects. -Eligible projects: solar, wind, biomass, landfill gas, ocean, geothermal, municipal solid waste, and incremental hydro. -Grants can't exceed 50% of total project costs 	<p>New program in CEJAPA.</p>
<p>24. Appliance Efficiency Standards</p>	<p>Higher efficiency standards for lighting, as well as commercial furnaces, outdoor lighting fixtures, water dispensers, hot food holding cabinets, and portable electric spas. Clarifies aspects of the process by which DOE periodically revises these standards</p>	<p><i>ACELA</i> Includes standards for portable fixtures, commercial furnaces, and lighting.</p>	<p>Standards in ACES bill cover more appliances.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>25. Building Energy Codes and Advanced Building Program</p>	<ul style="list-style-type: none"> - All new buildings constructed in 2010 or after must meet a 30% reduction in energy use relative to a comparable residential or commercial building constructed in compliance with 2010 baseline code. - Increases to a 50% reduction in 2014 for residential and 2015 for commercial buildings. - Additional 5% reduction in 2017 for residential, and 2018 for commercial, and every 3 years thereafter. - Establishes a building Retrofit for Energy and Environmental Performance (REEP) program for single-family and multi-family residences and nonresidential buildings and energy performance labeling programs. - Establishes new program for Energy Star manufactured homes. 	<p><i>ACELA</i></p> <ul style="list-style-type: none"> -Contains a similar provision for new buildings as ACES, but without the additional 5% reductions every three years. -Establishes a similar REEP program, but does not specify funding. -Establishes a new program at DOE that would offer competitive grants for innovative projects to improve the efficiency of multifamily and manufactured housing <p><i>CEJAPA</i></p> <ul style="list-style-type: none"> -Directs EPA or other agency heads designated by the President to establish national average residential and commercial building code efficiency targets. -Directs EPA and DOE to establish national REEP program -Specifies grant amounts of up to 50% based on different levels of efficiency savings. 	<p>Together, ACELA and CEJAPA create similar programs for new buildings and retrofits of existing buildings as ACES, except the ACELA does not include the additional 5% reductions every three years for new buildings after 2017-2018.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>26. Industrial Efficiency</p>	<ul style="list-style-type: none"> - Continued DOE support for the American National Standards Institute's voluntary industrial plant energy efficiency certification program - \$350 million total from FY11-FY15 for electric motor efficiency rebate program - Electric and thermal waste energy recovery award program - Electric motor market assessment and commercial awareness program - Regional Centers for Energy and Environmental Knowledge and Outreach. 	<p><i>ACELA</i></p> <p>Supports or creates several new programs:</p> <ul style="list-style-type: none"> -Electric motor efficiency rebate program -Industrial energy efficiency revolving loan program -Future of Industry Program -Industrial Research and Assessment Centers -Innovation and industry grants 	<p>ACES and ACELA create similar programs.</p>
V. COAL			
<p>27. CO₂ Performance Standards for New Coal Plants</p>	<p>ACES imposes a CO₂ standard that requires at least 50% CCS on new coal plants but not on those permitted before 2009; and the standard may not apply until 2025 or even later for plants permitted between 2009 and 2020.</p>	<p>Same as ACES.</p>	<p>None.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>28. EPA Authority Under Clean Air Act</p>	<p>ACES removes the authority under the Clean Air Act that the EPA has to regulate CO₂ from capped sources, including coal plants.</p> <p>However, ACES also requires the EPA to inventory major uncapped sources and adopt performance standards, covering 80% of identified emissions in 3 years and the rest over 10 years.</p>	<p>The ACES language depriving EPA of authority to regulate coal plants and other capped sources under the CAA is not included.</p> <p>The ACES language requiring the EPA to adopt performance standards according to a certain schedule for uncapped sources is also not included. In fact, new language delays EPA of the authority to adopt performance standards that apply to any uncapped sources that are eligible for offset credit under sections 733 and 737 until 2020. Methane emissions from coal mines, landfills and fugitive natural gas sources will be eligible for offsets under CEJAPA. Those sources that do not qualify for offsets may be subject to NSPS.</p>	<p>CEJAPA allows EPA to regulate capped sources like coal plants but not uncapped ones (if they could qualify for offsets) before 2020. CEJAPA therefore will not result in the reductions that otherwise might have been obtained under the uncapped source performance standards before 2020.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>29. Subsidies for Advanced Coal with Carbon Capture and Storage (CCS)</p>	<p>-1.75% of allowances to fund CCS investments from 2014-2017, increasing to 4.75% from 2018-2019 and 5% from 2020 through 2050. -This would provide an estimated \$140-251 billion in cumulative funding through 2050, or approximately \$4-7 billion per year on average, using EPA and CBO allowance price projections from their modeling of ACES (higher if using numbers from EIA’s ACES analysis). These deployment incentives are in addition to a \$10 billion CCS demonstration program.</p>	<p>Aggregate amount of allocations dedicated to the program and the \$10 billion CCS early demonstration program are similar to ACES. Establishes a process for certifying expected levels of sequestration and reserving bonus allowances to cover them, but still only paid annually when sequestering.</p>	<p>CEJAPA increases from 6 GW to 20 GW the “Phase I” projects getting specified payments per ton and increases the payments. The enlarged Phase I portion of the program means far more projects are eligible for the per-ton subsidies specified in the bill regardless of the actual cost of adding CCS, rather than getting subsidies under Phase II when payments are intended to reflect actual CCS costs.</p>
<p>30. Merchant Coal Generators</p>	<p>Starting in 2012, up to 10% of power sector allocation would go to merchant coal generators. This translates to 4.37% of total allowances, gradually dropping to 3.5% from 2016 through 2025, and then gradually phasing out by 2030. This amounts to a subsidy of from about \$40 billion to \$70 billion, assuming allowance price projected by the EPA modeling of ACES (Scenario 2) and the CBO modeling of ACES (higher if using numbers from EIA’s ACES analysis).</p>	<p>No significant changes to allocation formula. Amount is still 10% of power sector allocation. Overall power sector allocation is unspecified.</p>	<p>None. More details on CEJAPA allocations to be determined in the Senate committee process.</p>

VI. NUCLEAR, NATURAL GAS, AND OTHER ENERGY ISSUES

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>31. Reprocessing of Nuclear Wastes</p>	<p>Not included.</p>	<p><i>ACELA.</i> -Establishes a federal advisory commission to conduct a comprehensive study of alternative means of safely managing or disposing of spent nuclear fuel and high level radioactive waste. -Directs commission to recommend to Congress such legislative or other action as may be necessary to manage or dispose of spent nuclear fuel and high level radioactive waste successfully and safely based on study results. -Expresses sense of Congress on importance of nuclear energy and authorizes new research on spent nuclear fuel recycling.</p> <p><i>CEJAPA</i> -Establishes Spent Nuclear Waste Disposal Research and Development Program that focuses on short-term and long-term disposal and proliferation-resistant nuclear spent fuel recycling (reprocessing).</p>	<p>The ACES bill does not include a provision on reprocessing of nuclear waste.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>32. Clean Energy and Natural Gas</p>	<p>Not included.</p>	<p>-New program to promote 300,000 gigawatt-hours (GWh) of “dispatchable” CO2-reducing generation within 3 years (equals ~7% of total US electricity generation in 2008.)</p> <p>--requires projects to reduce emissions below 2007 U.S. average rate for the whole power sector by:</p> <p>--25% between 2010-2020</p> <p>--40% between 2021-2025, and</p> <p>--65% between 2026-2030.</p> <p>-Projects that receive an investment or production tax credit in 2009 or first year of operation don’t qualify.</p> <p>-Priority for projects that help integrate or provide storage for intermittent renewables; CCS projects not eligible for bonus allowances; and most cost-effective projects.</p> <p>Another new program provides R&D grants for advanced technologies, including gas power plants and for residential and commercial purposes.</p> <p>Appropriation of sums as necessary.</p>	<p>The ACES bill does not include a title on natural gas.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>33. Clean Energy Deployment Administration (CEDA)</p>	<p>Establishes new entity to promote domestic deployment of “clean energy technologies” by establishing a self-sustaining fund that would help private capital markets provide affordable financing for a range of clean energy-related technologies, including nuclear power. Ensures diversity by limiting support that can go to any one technology; retains Federal Credit Reform Act of 1990 (FCRA) oversight, which helps to limit overall amount of loan guarantees through the appropriations process, and includes a greenhouse gas metric that would help to ensure that the most cost-effective, environmentally sound technologies are pursued first.</p>	<p><i>ACELA</i> Similar to ACES, except CEDA’s proposed structure has the potential to allow for an unknown amount of loan guarantees to capital-intensive technologies; lacks restrictions on the amount of financial support that can go to the most costly, most risky, and least sustainable energy technologies; and does not include a greenhouse gas metric that would ensure that the most cost-effective, environmentally sound technologies are pursued first. This could put taxpayers at excessive risk for high risk loans and could adversely impact the competitiveness of renewable resources.</p>	<p><i>ACELA</i> lacks the protections in the ACES bill that ensure technology diversity by limiting support that can go to any one technology, particularly the most capitol-intensive ones; <i>ACELA</i> also fails to retain FCRA oversight, which helps to limit the overall amount of loan guarantees through the appropriations process; and fails to include a greenhouse gas metric, which would help to ensure that the most cost-effective, environmentally sound technologies are pursued first.</p>
<p>34. Transmission</p>	<p>Directs FERC to adopt transmission planning principles and assist with coordination and dispute resolution among regional planning entities. Provides for back-stop siting of new facilities in the Western Interconnection that are identified in the planning process; does not address cost allocation of new facilities in either the East or Western Interconnections.</p>	<p><i>ACELA</i> Provides for regional and utility transmission planners to address FERC-specified planning principles and submit plans for FERC review; provides for back-stop federal certification and siting of projects of EHV and renewable feeder lines designated in the planning process, and authorizes FERC to address cost allocation with deference to state recommendations.</p>	<p><i>ACELA</i> provides a nationwide federal backstop on siting and cost allocation if states and/or regions cannot agree on siting of needed transmission improvements and related cost allocation. ACES accommodates differences in planning and willingness to accept FERC as a backstop for transmission in the West vs. a hands off planning “lite” approach in the East. ACES also accommodates long-standing East-West differences underscored by separate electrical interconnections.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
VII. TRANSPORTATION			
35. Low Carbon Fuel Standard	Not included.	Not included.	None
36. Indirect Land Use and Renewable Fuel Standard Analysis	The consideration of emissions from indirect land use change in the calculation of lifecycle emissions for biofuels and forestry projects is prohibited pending the outcome of a five-year study by the NAS.	Not included.	ACES prohibits consideration of indirect land-use change pending the outcome of a five-year NAS study.
37. Public Transportation and Smart Growth	<p>Directs States and metropolitan planning organizations (MPOs) to establish goals for reducing GHG emissions from the transportation sector. Short- and long-term plans to be submitted by states and MPOs to EPA. Overall VMT goals not quantified in bill.</p> <ul style="list-style-type: none"> • Role of public transit in reducing overall VMT mentioned, but not quantified • Requires establishment of goals for transportation systems, but highway funding not tied to reduced emissions. • Noted for possible inclusion, but not required or incentivized. 	<p>Directs EPA Administrator, in conjunction with the Secretary of Transportation, to set a national greenhouse gas emissions reduction target for the transportation sector.</p> <p>Requires States and MPOs to include transportation-related greenhouse gas reduction targets, oil savings considerations, and other sustainability criterion in long-term transportation planning.</p> <p>Provides additional funds for public transit programs.</p>	In CEJAPA EPA, in consultation with Transportation Secretary, sets a national target, versus state and MPOs setting goals in ACES

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>38. Vehicle R&D</p>	<p>Financial assistance (approximately \$20 billion by 2025) for both infrastructure and vehicle development and deployment, to ensure that both utilities and automakers are ready for vehicle electrification.</p> <p>Note: In terms of electric- drive vehicle technology, ACES focuses exclusively on PHEVs and battery electrics, and does not include hydrogen fuel cell vehicles.</p>	<p>The bill creates a new fund, the 'Clean Vehicle Technology Fund' which is funded through an unspecified volume of allowance auction revenues. 80% of the funds must be used for the development and demonstration of plug-in hybrids and advanced vehicles as defined by the Energy Independence and Security Act (EISA) of 2007, Sec. 136. The other 20% goes to a series of grants for diesel vehicles that were originally authorized as part of the Energy Policy Act of 2005 (EPAct 2005) (Sec.792).</p>	<p>ACES directly funds Sec. 136 of EISA, while CEJAPA creates a new fund with similar, but slightly different requirements.</p>
VIII. CROSS-CUTTING: ENERGY AND TRANSPORTATION			
<p>39. Bioenergy Definitions</p>	<p>The renewable biomass definitions from the 2007 Farm Bill were adopted on private lands (essentially a list of biomass sources without any substantive protections to ensure sustainable practices). Materials from public lands were also allowed with limited safeguards against unsustainable harvest levels and exclusions of some especially sensitive areas.</p>	<p>A broad range of materials from farms and forests qualify as renewable biomass, with protections against converting natural forests and native prairies. Materials from national forests were also allowed, with the exception of materials from "old-growth and mature forests."</p>	<p>CEJAPA language mirrors the language passed in the House Energy and Commerce Committee and has stronger protections, especially on private lands.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
40. Renewable Biomass from Waste	Allows municipal solid waste (MSW) and construction and demolition debris (CDD) into RES through a “qualified waste to energy” provision. This addressed some recycling and air quality issues, but since it was outside of the Renewable Biomass Definitions proper, it excluded MSW and CDD from use as a liquid fuel feedstock.	Biomass definition excludes MSW. However, the new definition would apply only to the provisions of the bill and would not, as written, amend the definitions for the RFS and RES.	The ACES treatment of MSW and CDD alters RES and RFS while the CEJAPA definition does not.
IX. SCIENTIFIC INTEGRITY			
41. Scientific Integrity	Creates twelve advisory panels, not counting an unspecified number of advisory panels for energy innovation hubs. Conflicts of interest addressed in energy innovation advisory hub panels	Creates six advisory panels, not counting an unspecified number of advisory panels for energy innovation hubs. Conflicts of interest addressed in hub panels for energy innovation but language is not as specific as in ACES.	ACES has more panels and more details on conflict of interest restrictions for innovation hub advisory panels. CEJAPA addresses conflicts but lacks specifics. Neither bill ensures the independence and accountability of the advisory panels each bill creates.
X. DOMESTIC ADAPTATION PROVISIONS			

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>42. National Climate Change Adaptation</p>	<p>Subtitle E, Sec 451: This subtitle repeals the U.S. Global Change Research Program Act of 1990 (USGCRP) and establishes the U.S. Global Change Research Program with The Office of Science and Technology Policy (OSTP) as the lead agency. OSTP can allocate \$10 million per year to direct research within agencies. National Global Change Research and Assessment Plan (updated every 5 yrs) to develop information necessary for policies to mitigate and reduce vulnerability. NAS and National Governors' Association reviews plans. Vulnerability Assessment updated every 5 yrs. Policy Assessment updated every 4 yrs (by NAPA and NAS). Calls for specific studies: Ice Sheets; Sea Level Rise; Hurricanes. A host of data management, coordination efforts between relevant agencies and establishes central clearinghouse for products and services.</p>	<p>Subtitle C, Sec 341: Establishes within U.S. Global Change Research Program a National Climate Change Adaptation Program.</p>	<p>CEJAPA provision appears to be a placeholder or takes the approach of not specifying much about what studies or methods should be required and leaves it up to the USGCRP. CEJAPA also does not repeal USGCRP but rather adds adaptation functions to existing structure.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
43. National Climate Service	Subtitle E, Sec 452: This subtitle repeals the National Climate Program Act. Establishes a National Climate Service via an interagency OSTP-led plan that ultimately leads to OSTP designating a lead agency for NCS. Meanwhile, NOAA will establish a Climate Service Program with regional and local affiliates (6 Regional Climate Centers; Regional Integrated Sciences and Assessments program; National Integrated Drought Information System). NOAA establishes a Climate Service Advisory Committee with half content experts and half stakeholders.	Subtitle C, Sec 342: Establishes within NOAA a National Climate Service.	ACES invokes a process for determining what entity will lead the National Climate Service (OSTP-led effort and decision). CEJAPA establishes the National Climate Service in NOAA without as many specific structure requirements as in the House version.
44. State Adaptation	Subtitle E, Sec 453: 99% of funds go to states; 1 % to tribes. State allocation calculated by per capita US income divided by per capita state income. Calculation excludes natural disaster assistance impact to state income. States and tribes submit adaptation plans for federal approval and necessary for receiving state funds.	See specific programs CEJAPA pulls out for State Adaptation programs below.	CEJAPA calls out specific types of adaptation projects that can be funded (see below) rather than an all inclusive anything can be considered approach.

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>45. Public Health Adaptation</p>	<p>Subtitle E, Sec 461-467: Health and Human Services, in consultation with other appropriate agencies, state, local gov, tribes and other stakeholders, submits a strategic plan (updated every 4 yrs) to monitor health impacts, identify vulnerable communities, develop new tools, promote research, and establish regional centers. Reports: initial needs assessment and Climate Change Health Protection and Promotion (updated every 4 yrs). NAS recommends members for half the Science Advisory Board.</p>	<p>Subtitle C, Sec 351-356: Public Health adaptation section includes: information sharing, research, public education, and assist developing nations to prepare health systems for climate change. HHS, in consultation with appropriate agencies, Tribes, state and local gov, and other stakeholders, publish strategic action plan (updated every 4 yrs). NAS recommends members for half the Science Advisory Board. Initial needs assessment with NRC and Institute of Medicine. HHS prepares a Climate Change Health Protection and Promotion report (updated every 4 yrs).</p>	<p>Very similar in both bills. CEJAPA adds a focus on developing nation health impacts.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>46. Natural Resource Adaptation</p>	<p>Subtitle E, Sec 471-482: To protect, restore, conserve natural resources (specifically calls out ocean acidification as a high priority climate change impact). Establishes a Natural Resources Climate Change Adaptation Panel with CEQ as chair, coordinating with appropriate federal agencies. The panel submits a strategy for research, identifies entities with greatest need for protection, sets QA/QC standards, manages coordination, etc. Establishes the National Climate Change and Wildlife Science Center in USGS. USGS and NOAA together coordinate to lead federal effort to provide technical assistance to federal agencies, state and local governments, tribes, and interested private landowners to conduct research and develop natural resource adaptation plans. Survey of natural resources impacts (updated every 5 yrs). Science Advisory Board balanced membership among federal agencies, state and local governments, tribes, universities, and conservation organizations with half recommended by NAS. Fed agencies must submit Natural Resource adaptation plans (updated every 5 yrs). States and Tribes submit natural resource adaptation plans to DOI and DOC for approval. Establishes Natural Resources Climate Change Adaptation Fund with 84.4% to State Wildlife Agencies and 15.6% coastal natural resources. States must match 10% of the funds they receive. Encourages information sharing between states and tribes to protect wildlife habitat corridors. Assess energy development, transmission, water, transportation or other land use projects to avoid, minimize or mitigate impacts to wildlife corridors.</p>	<p>Subtitle C, Sec 361-372: Natural Resources Climate Change Adaptation Policy to make natural resources more resilient to climate change, including ocean acidification, drought, flooding, and wildfire. Establishes a Natural Resources Climate Change Adaptation Account. USGS and NOAA implement the policy and are advised by a Science Advisory Board (balanced membership among agencies, government, and stakeholders with half recommended by NAS). CEQ is chair of the Natural Resources Climate Change Adaptation Panel comprised of appropriate federal agencies. Panel submits strategy in coordination with tribes, local governments and stakeholders (updated every 5 yrs). Each agency member of Panel submits agency adaptation plans to President. Natural Resource Adaptation Information led by USGS (via newly established National Climate Change and Wildlife Science Center) and NOAA to provide technical assistance, information, research and a survey of natural resources report (updated every 5 yrs). States and tribes submit natural resource adaptation plans to DOI (and DOC if applicable) in order to be eligible for funds (updated every 5 yrs). Similar content for federal agency and state plans: describe impacts, monitor, prioritize conservation actions, consider strategies to engage youth and young adults in service or conservation corps programs, assess effectiveness of actions taken, and take into account other natural resource acts and plans. States must match 10% of the funds they receive. Encourages information sharing between states and tribes to protect wildlife habitat corridors. Assess energy development, transmission, water, transportation or other land use projects to avoid, minimize or mitigate impacts to</p>	<p>Very similar in both bills. CEJAPA adds focus on flooding, drought, and wildfire in addition to the ocean acidification focus of ACES. CEJAPA encourages funding for youth and young adult programs.</p>

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
47. Water System Adaptation	Not specifically called out.	Subtitle C, Sec 381: Water system mitigation and adaptation partnerships established to provide funds to water system adaptation projects. The owner or operator submits application for grants to the state. Federal share of grants distributed shall not exceed 50% of project cost.	New specific focus in CEJAPA.
48. Flood Control Adaptation	Not specifically called out.	Subtitle C, Sec 382: Flood control, protection, prevention, and response program established to distribute funds to States for these projects.	New specific focus in CEJAPA.
49. Wildfire Adaptation	Not specifically called out.	Subtitle C, Sec 383: Authorize a program to reduce risk of wildfires in communities. USDA and DOI develop regional maps of communities most at risk.	New specific focus in CEJAPA.

Policy Provisions	ACES (Waxman-Markey House-Passed Bill)	CEJAPA (Kerry-Boxer)	Key Differences
<p>50. Coastal and Great Lakes Adaptation</p>	<p>Not specifically called out.</p>	<p>Subtitle C, Sec 384: Funds allocated to coastal states (defined by Coastal Zone Management Act) as follows: 25% based on the formula for each state (State shoreline miles/ US shoreline miles); 25% based on the formula (state population/total population coastal States); 50% divided equally among all coastal states. States receiving funds obligated to submit report (updated biennially until funding expended).</p>	<p>New specific focus in CEJAPA.</p>