



Side-by-Side Comparison of House and Senate Energy/Climate Bills

In this document we present a comparison of the *American Clean Energy and Security Act of 2009* (H.R. 2454) passed by the House and the *American Clean Energy Leadership Act of 2009* (S.1462) as passed by the Senate Energy and Natural Resources Committee and amended on 5/06/10. For the cap and trade section we compare ACES with the Kerry-Lieberman bill, the American Power Act, as released on 5/12/10. The solar energy industry's preferred outcome is listed for each provision described. Addenda focus on the Clean Energy Development Authority (CEDA) and the Buildings title of each bill.

In addition, SEIA's desired amendments to the Senate's energy bill are outlined beginning on page 17.

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Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA & Kerry-Lieberman)	SEIA's Preferred Outcome
Renewable Portfolio Standard (SEIA contact: Matt Horowitz)			
Overall RPS requirements	<p>6% in 2012, increasing to 20% by 2020 and through 2039. (p. 31)</p> <p>Qualifying renewables are wind, solar, ocean, geothermal, renewable biomass, biofuels or biogas derived from renewable biomass, and some marine and hydrokinetic energy.</p> <p>Non-qualified hydroelectric, new nuclear, and fossil-fueled facilities equipped with carbon capture are excluded from a utility's baseload calculation.</p> <p>Up to 25% of the RPS requirement can come from energy efficiency improvements. (p. 27) State governors can petition for up to 40% of the RPS to be satisfied by annual electricity savings. (p. 27)</p> <p>Renewable energy credits (RECs) can be banked for 3 years. (p. 37)</p>	<p>3% in 2011, increasing to 15% by 2021 and through 2039. (p. 103)</p> <p>Qualifying renewables are wind, solar, ocean, geothermal, biomass, landfill gas, incremental hydropower, hydrokinetic, new hydropower at existing dams with no generation, incremental geothermal production, coal-mined methane, qualified waste-to-energy, or any other renewable energy source based on innovative technology--determined by the Secretary. (p. 102)</p> <p>Efficiency measures can satisfy up to 26.67% of a utility's RPS requirement. (p. 103)</p> <p>Renewable energy credits can be banked for 3 years. (p. 107)</p>	<p>Basic framework of the RPS that is designed to encourage the growth of all forms of renewable energy, including solar applications (utility-scale, distributed, and solar water heating).</p> <p>Match President Obama's stated goal of 25% by 2025.</p> <p>Maintain efficiency as a separate category, and not a carve-out from the overall RPS requirement.</p>

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Applicability	<p>Utilities selling less than 4 million megawatt hours per year are exempt.</p> <p>Establishes an RPS for all federal energy purchases. The Federal government must purchase 6% renewable energy by 2012, increasing to 20% by 2020. (p 54)</p>	<p>Utilities selling less than 4 million megawatt hours per year are exempt. (p. 112)</p>	<p>Require all utilities to meet the RPS.</p>
Treatment of Distributed Generation within the RPS	<p>Distributed generation is defined as:</p> <ul style="list-style-type: none"> • A facility that generates renewable electricity (Solar Water Heating does not quantify) • Primarily serves 1 or more electricity consumers at or near the facility site • Is no larger than 2 megawatts in capacity for facilities in service at the time of enactment, 4 megawatts for new facilities <p>DG systems receive a 3x REC multiplier. (p. 34)</p>	<p>Distributed generation is defined as:</p> <ul style="list-style-type: none"> • A facility at or near a customer site • That provides electric energy to 1 or more customers for purposes other than resale other than to a utility through a net metering arrangement. (p. 94) <p>DG systems less than 1 megawatt receive a 3x REC multiplier. (p. 105)</p>	<p>Maintain the 3x multiplier for DG systems.</p> <p>Increase the maximum size of a distributed system to 5 MW.</p>
Treatment of Solar Water Heating within the RPS	<p>Solar water heating qualifies as a technology that meets the efficiency portion of the RPS requirement. (p. 39)</p>	<p>No Similar Provision.</p>	<p>Include solar water heating within the RPS framework as a qualifying renewable energy technology.</p>

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Alternative Compliance Penalty	<p>Establishes an ACP of \$25 per megawatt-hour (adjusted for inflation)</p> <p>Payments go to states to be used for deploying renewable electricity generation and energy efficiency mechanisms. (p. 44-49)</p> <p>Requires that if a utility opts for an ACP, it must certify that it has maximized the level of deployment of renewable electricity generation (measured in megawatt hours) and electricity savings per dollar. (p. 50)</p>	<p>Establishes an ACP of 2.1 cents per kilowatt-hour (adjusted for inflation). (p. 103)</p> <p>Payments are returned to states whose utilities have contributed to the fund. States must use the money to:</p> <ul style="list-style-type: none"> • increase the quantity of renewable energy produced in State • promote the deployment and use of electric vehicles in State • offset increases in customer's bills. (p. 111) <p>No similar provision.</p>	<p>Increase the ACP to at least 5 cents per kilowatt-hour (\$50 per megawatt-hour).</p> <p>Ensure that ACP does not go back to utilities by supporting the House language requiring states to use payments collected to deploy renewables.</p>

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Provision	House Bill (ACES)	Senate Bill (ACELA & Kerry-Lieberman)	SEIA's Preferred Outcome
Transmission (SEIA contact: Katherine Gensler)			
Regional Transmission Grid Planning	<p>Not later than 1 year after enactment, FERC shall adopt rules for national electricity grid planning principles that will apply to on-going and future transmission planning</p> <p>Not later than 3 months after adoption of rules by FERC, regional planning entities must identify themselves and the regions for which they propose to develop plans</p> <p>FERC shall encourage cooperation and coordination across regions; provide support and assistance as requested; and assist regional planning entities in resolving conflicts between plans</p> <p>Plans must be submitted to FERC 18 months after final rule is issued (p. 172-190)</p>	<p>Not later than 180 days after enactment, FERC shall publish a rule establishing planning principles for the development of interconnection-wide plans which identify high-priority national transmission projects. (p. 63)</p> <p>Regional plans are to be developed by one or more utilities, transmission owners, RTOs/ISOs, or regional entities. Any utility that does not participate in a regional planning process must develop its own plan. (p. 66-67)</p> <p>Plans shall be submitted to FERC within 2 years of enactment of this legislation and periodically thereafter, as established by FERC. (p. 67)</p> <p>FERC shall encourage coordination that would permit submission of a single, interconnection-wide plan. FERC may require modification of plans to reconcile inconsistencies or achieve established policy goals. (p. 67-68)</p>	<p>Develop a strong national transmission grid that enables increased renewable energy generation.</p> <p>Require the development of regional and interconnection-wide transmission plans, to be approved by FERC.</p>

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Federal Siting Authority	<p>This authority applies only to the Western Interconnection and only to interstate transmission projects.</p> <p>States will have one year from time of filing of a proposal to site a transmission project identified in the planning stage.</p> <p>If state(s) have been unable to site the facility or have denied the application, the transmission developer may go to FERC for its siting permits. FERC shall consider any siting constraints and mitigation measures identified by state and local authorities.</p> <p>Dept. of the Interior will be the lead agency for any transmission project that involves public lands.</p>	<p>States will have one year from time of filing of a proposal to site a high priority national transmission project identified in the planning stage. (p. 69)</p> <p>If state(s) have been unable to site the facility or have denied the application, the transmission developer may go to FERC for its siting permits. (p. 69-70) FERC shall give due weight to the record established in the state siting proceedings. (p. 73)</p> <p>Dept. of the Interior will be the lead agency for purposes of coordinating the environmental review for any high-priority transmission project that involves public lands. (p. 77)</p>	<p>Ensure FERC siting authority if state(s) fail to issue permits for transmission facilities identified in the plan.</p>

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Provision	House Bill (ACES)	Senate Bill (ACELA & Kerry-Lieberman)	SEIA's Preferred Outcome
Regional Cost Allocation	No Similar Provision.	<p>Not later than 270 days after enactment, FERC shall establish rules governing cost allocation methodologies for high-priority national transmission projects. (p. 87)</p> <p>FERC may allocate costs to load-serving entities within all or part of a region. Costs may not be allocated unless they are "reasonably proportionate to measurable economic and reliability benefits." (p. 87-88)</p> <p>Costs may be allocated to generators of electricity connected by a high-priority national transmission project. (p. 88)</p> <p>FERC shall provide deference to cost allocation proposals supported by broad agreement among affected States. (p. 88)</p>	Allocate the cost of new transmission facilities identified in the interconnection-wide plan broadly across the interconnection.

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Provision	House Bill (ACES)	Senate Bill (ACELA & Kerry-Lieberman)	SEIA's Preferred Outcome
Climate (SEIA contact: Katherine Stainken)			
Carbon Allowances	<p>Emissions to be reduced 3% by 2012, 17% by 2020, 42% by 2030, and 83% by 2050, all below 2005 levels. Allowances based off these emission levels. (p.367)</p> <p>Renewable energy and energy efficiency receive 10% of emission allowances: 9.5% for the State Energy and Environmental Development (SEED) accounts (p. 872) and 0.5% going toward greater efficiency and renewables in buildings. The SEED allowances begin at 9.5% in the first 4 years, declining afterwards until 2050. (p.872)</p> <p>States have control of the allowances and the proceeds from the SEED accounts. States must use at least 20% of the proceeds exclusively for renewable energy projects, with no limit on the project size or scale. (p. 148)</p> <p>Solar also qualifies for allowances allocated to Energy Innovation Hubs, investment in workers, domestic and international adaptation, and the international clean technology fund. (p. 873-880)</p>	<p>Emissions to be reduced 4.75% in 2013, 17% by 2020, 42% by 2030, and 83% by 2050, all below 2005 levels Allowances based off these emission levels. (p.265*)</p> <p>Renewable energy and energy efficiency receive 2.5% of allowances the first 3 years, declining afterwards. Of this amount, 0.5% must be used for a Rural Energy Savings Program the first 3 years, with the remaining allowances going to state programs for renewable energy. (p.199, 503*) An additional 2% of allowances from 2013-2021 will go towards renewables R&D. (p.502*)</p> <p>The bill recognizes the importance of large-scale deployment of renewable energy and transmission, but does not allocate allowances or revenue for this. (p.187*)</p> <p>The bill recognizes the importance of the Voluntary Market for renewables; and requires a report on the growth of the market in light of the climate bill. No allowances given for this though, and no cap reduction in recognition of voluntary purchases. (p.206*)</p> <p>*These page numbers refer to the Kerry-Lieberman bill released on 5/12/10.</p>	<p>Maintain a stronger cap early on, with 20% by 2020 emission reductions below 2005 levels.</p> <p>Maintain the 10% of allowances allocated to solar and other renewables as in the House bill.</p> <p>Support an allocation of allowances for large-scale deployment of renewables that recognizes technology diversity and size.</p> <p>In addition to the allocation via the states, SEIA strongly supports an “off-the-top” provision, in which approximately 2% of allowances would be set aside in a voluntary renewable energy account that is under the control of the administrator. Under this off-the-top provision, based on a demonstration and documentation of voluntary renewable energy purchases, the administrator would retire carbon allowances on behalf of the voluntary purchases.</p>

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Auction Revenues	Auction proceeds are directed toward reduction of the deficit and a Climate Change Consumer Refund account. (p. 881-882)	<p>The bill phases out allowance allocation over time to a full auction, with the majority of revenue being directed into a Universal Trust fund for consumers, or to a Deficit Reduction Fund. (p.496, 509*)</p> <p>Grants available to develop programs of study for renewables, energy efficiency (p.829*), including an information and resources clearinghouse for vocational education and job training in the renewable energy sector (p.833*)</p> <p>*These page numbers refer to the Kerry-Lieberman bill released on 5/12/10.</p>	<p>Maintain that auction proceeds or additional allowances are directed toward renewable energy programs in agriculture states. Encourage these funds to augment the funding for the Rural Energy for America Program (REAP).</p> <p>Support programs for green worker training, either with allowance allocation, auction revenue, or other grants.</p>
Preservation of State Programs	The bill does not hinder the state programs; however, a state is not allowed to implement a cap and trade program or similar program that caps and trade emissions. (p. 1018)	<p>No State or political subdivision of a state may operate a cap and trade program. (p.668*)</p> <p>State allowances in CA or under RGGI or WCI can be exchanged for federal ones. (p.510*)</p> <p>*These page numbers refer to the Kerry-Lieberman bill released on 5/12/10.</p>	Ensure no current state programs for solar are hindered or pre-empted.

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Other Solar-Related Provisions (Multiple SEIA staff, see specific contacts below)			
<p>Long-term Power Purchase Agreements for the Federal Government</p> <p>(SEIA contact: Scott Hennessey)</p>	<p>Grants federal agencies the authority to enter into 20-year power purchase agreements for renewable energy.</p> <p>Requires the Secretary of Energy to report agency-by-agency renewable electricity consumption.</p> <p>Requires the Secretary of Energy, through the Federal Energy Management Program, to publish a standardized renewable energy purchase agreement that contains commercial terms and conditions that Federal agencies may use to acquire electricity generated from a renewable energy resource. (p.55)</p>	<p>Federal agencies can enter into a contract of no more than 30 years to acquire renewable energy. (p. 273-274)</p> <p>The Secretary of Energy, acting through the Federal Energy Management Program, will publish a standardized renewable energy purchase agreement that contains commercial terms and conditions that Federal agencies may use to acquire renewable energy. (p. 274)</p>	<p>Ensure authority to sign 20- to 30-year power purchase agreement for all federal entities.</p>

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Provision	House Bill (ACES)	Senate Bill (ACELA & Kerry-Lieberman)	SEIA's Preferred Outcome
<p>Clean Energy Deployment Administration</p> <p>(SEIA contact: Scott Hennessey)</p>	<p>Establishes a Clean Energy Deployment Administration to aid the domestic development and deployment of renewable technologies including solar. (p. 269-273)</p> <p>CEDA is empowered to provide a suite of financing options, including direct loans, letters of credit, loan guarantees, insurance products and others.</p> <p>CEDA is an independent corporation of the U.S.</p>	<p>Establishes a Clean Energy Deployment Administration to promote the domestic development and deployment of clean energy technologies including the development of breakthrough technologies perceived as too risky by commercial lenders. CEDA will also focus on the deployment and advancement of achieving the commercial viability of clean energy technologies. (p. 20 & 34)</p> <p>CEDA will provide various types of credit to support the deployment of clean energy technologies, including loans, loan guarantees and secondary market support. CEDA will also develop products such as clean energy-backed bonds that would allow less expensive lending in the private sector. (p. 33 & 38)</p> <p>CEDA is established as a corporation within the Department of Energy. (p. 20)</p> <p>Implements reforms to the existing DOE Loan Guarantee Program including a new "Clean Energy Investment Fund." (p. 11)</p>	<p>Create a clean energy bank that would be the central office for the government to provide a range of financial tools to support the widespread deployment of solar energy in the U.S. This entity would offer rebates, loan guarantees, and other financial mechanisms to finance solar energy deployment and generation.</p> <p>Support the House provision establishing CEDA as an independent corporation.</p> <p>Eliminate the preference for "breakthrough" technologies.</p> <p>For additional elaboration on SEIA's preferences see Addendum A, below.</p>

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Provision	House Bill (ACES)	Senate Bill (ACELA & Kerry-Lieberman)	SEIA's Preferred Outcome
<p>Interconnection Standards and Net Metering Provisions</p> <p>(SEIA contact: Matt Horowitz)</p>	<p>Prohibits utilities from imposing additional charges or fees if a federal facility installs on-site renewable generation that interconnects to the grid.</p> <p>Requires utilities to offer net metering to federal facilities and provide an electric meter capable of measuring the on-site renewable generation.</p> <p>Applies to utilities that sold over 4 million MWh of electricity in the preceding year. (p. 190-195)</p>	<p>Directs FERC to create two national interconnection standards: one for systems 15 kW or smaller, and one for systems between 15 kW and 20 MW. Requires FERC to study extending the former standard to systems up to 50 kW. (p. 312-315)</p>	<p>Establish uniform national net metering for all retail and commercial customers, with provisions to allow for full offset of electricity purchased at retail by electricity generated on-site, and with provision for use of time-differentiated rates. Establish a national grid interconnection standard for distributed generation, which prohibits unreasonable fees and permitting requirements, and which utilizes existing technical standards (IEEE 1547/UL 1741).</p> <p>(For additional elaboration on SEIA's amendment recommendations, see p.15)</p>

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Provision	House Bill (ACES)	Senate Bill (ACELA & Kerry-Lieberman)	SEIA's Preferred Outcome
<p>Elimination of Restrictive Covenants, High Permit Fees</p> <p>(SEIA contact: Matt Horowitz)</p>	<p>Conditions receipt of Community Development Block Grant (CDBG) funding on a limit for the costs of a permit or license for the construction or installation of any solar system (Residential: \$500; Non-residential: \$10,000), including solar thermal systems. (p. 416-419)</p> <p>Discourages any private covenant, contract provision, lease provision, homeowners' association rule or bylaw for one-family homes to prohibit the installation of solar systems, including solar thermal. (p. 419)</p>	<p>No Similar Provision</p>	<p>Maintain House Language.</p>

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Provision	House Bill (ACES)	Senate Bill (ACELA & Kerry-Lieberman)	SEIA's Preferred Outcome
<p>Jobs and Worker Training</p> <p>(SEIA contact: Scott Hennessey)</p>	<p>The Secretary of Education will award grants, on a competitive basis, to eligible partnerships to develop programs of study focusing on emerging careers and jobs in renewable energy, energy efficiency, and climate change mitigation. (p. 1127)</p> <p>Authorizes the HUD Secretary to create grants to train, educate, support, or advise community development organizations or qualified youth service and conservation corps in improving energy efficiency or installing or constructing renewable energy improvements, including solar. (p. 368)</p> <p>Establishes an Energy Efficiency and Renewable Energy Worker Training Fund. (p. 1131)</p> <p>Establishes within the Department of Labor an information and resources clearinghouse to aid career and technical education and job training programs for the renewable energy sector. (p. 1131)</p>	<p>The Director of Science, Engineering, and Mathematics shall establish best practices for career pathway programs at public secondary schools that prepare students for careers in the energy technology industry. (p. 431)</p> <p>This bill will establish a grant program to award State educational agencies to create or expand energy career academies.</p> <p>This program will supply sufficient training to allow academy graduates to secure jobs in the energy technology industry.</p> <p>The Director of the Office of Science and Technology Policy shall report to Congress on energy workforce training programs funded by Federal agencies.</p> <p>The Director of the Office of Science and Technology Policy shall also submit a plan which will provide a Federal strategy for the training of a domestic workforce to support the production, transmission, and use of energy in the U.S.</p>	<p>Support the plan for state educational agencies to develop programs of study in the renewable energy sector which will prepare students for careers in the renewable energy industry.</p> <p>Support domestic workforce education and training in the renewable energy industry.</p>

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Provision	House Bill (ACES)	Senate Bill (ACELA & Kerry-Lieberman)	SEIA's Preferred Outcome
Smart Grid Advancement (SEIA contact: Katherine Gensler)	Each load serving entity shall prepare a peak demand reduction plan to demonstrate and assure a minimum of distributed solar electric generation capacity in instances where peak period and peak demand conditions are directly related to solar radiation and accompanying heat. (p. 154-172)	The Secretary of Energy, in cooperation with relevant entities, shall develop an action plan, updated every 3 years, to optimize the planning and operation of national and local electricity systems in a manner that the system load factor will be improved by 1.5 percent per year during each of calendar years 2010 through 2030. (p. 308-310)	Support provisions to advance the smart grid.
State Feed-in-Tariff (SEIA contact: Matt Horowitz)	Allows states and/or regulatory authorities to set the rates for electricity sales from renewable energy sources in accordance with a State- approved production incentive program, under which the facility voluntarily sells the electricity. (p. 53)	No Similar Provision	Ensure that states have the authority to create a feed-in-tariff policy, should the state so desire one.
National Energy Efficiency Goals (SEIA contact: Scott Hennessey)	Establishes a goal to improve the overall energy productivity of the U.S. by at least 2.5 percent per year by 2012 and to maintain that annual rate of improvement. (p. 565-568)	Establishes a goal to improve the nation's energy productivity by at least 2.5% annually by 2012 (measured in GDP per unit of energy input), and to maintain that annual rate of improvement till 2030. (p.278)	Maintain this goal of 2.5% annually by 2012 and thereafter, and the ability to strengthen this goal if necessary.

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Provision	House Bill (ACES)	Senate Bill (ACELA & Kerry-Lieberman)	SEIA's Preferred Outcome
Financing Clean Energy Manufacturing-IMPACT Act (SEIA contact: Scott Hennessey)	Establishes a Clean Energy Manufacturing Revolving Loan Fund Program to provide loans to small and medium-sized manufacturers to finance the cost of re-equipping, expanding, or establishing a manufacturing facility in the United States to produce clean energy technology products, energy efficient products, or reduce the energy intensity or greenhouse gas production of a manufacturing facility. Up to \$15 billion is authorized for the fund in Fiscal Years 2010 and 2011. (p. 534)	Requires the National academy of Sciences to conduct a study of the development of advanced manufacturing capabilities for various energy technologies, including recommendations on leveraging the expertise of energy efficiency and renewable energy user facilities so that best materials and manufacturing practices are designed and implemented. (p. 191) Under the Sustainable Manufacturing Initiative, the Secretary of Energy shall award grants to State-industry partnerships to develop, demonstrate, and commercialize new energy efficiency technologies. This will be a competitive program. (p. 187)	Support a Clean Energy Manufacturing Revolving Loan Fund-IMPACT Act.

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Amendments to ACELA

SEIA's Desired Amendments	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Strengthen the RPS (SEIA contact: Matt Horowitz)	No Provision	No Provision	Support Udall, Dorgan and other amendments to require 20 - 25% of electricity from renewables by 2020 – 2025.
Add Solar Water Heating to the RPS (SEIA contact: Matt Horowitz)	No Provision	No Provision	Include solar water heating as a qualifying technology included in the RPS.
Cost Allocation of New Transmission Facilities (SEIA contact: Katherine Gensler)	No Provision	No Provision	Allocate the cost of new transmission facilities broadly across the region or interconnection.
Voluntary Markets (SEIA contact: Katherine Stainken)	No Provision	No Provision	Safeguard voluntary renewable energy deployment by implementing an “off the top” approach to allowance allocation.
REAP Plus (SEIA contact: Scott Hennessey)	No Provision	No Provision	Augmenting funding for the existing REAP (Rural Energy for America Program) which provides financial assistance for new renewable energy systems or energy efficiency improvements.

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SEIA's Desired Amendments	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
<p>Net Metering and Interconnection Standards (SEIA contact: Matt Horowitz)</p>	<p>Prohibits utilities from imposing additional charges or fees if a federal facility installs on-site generation that interconnects to the grid.</p> <p>Requires utilities to offer net metering to federal facilities and provide an electric meter capable of measuring the on-site generation.</p> <p>Applies to utilities that sold over 4 million MWh of electricity in the preceding year. (p.190-195)</p>	<p>Directs FERC to create two national interconnection standards: one for systems 15 kW or smaller, and one for systems between 15 kW and 20 MW. Requires FERC to study extending the former standard to systems up to 50 kW. (pp. 312-315)</p>	<p>Combine House net metering and Senate interconnection provisions. Expand the net metering to include non-governmental generators. Add prohibitions on unreasonable fees and permitting requirements to the interconnection standard.</p> <p>For additional elaboration on SEIA's preferences, see p. 10</p>
<p>Prohibition of Restrictive Covenants (SEIA contact: Matt Horowitz)</p>	<p>Discourages any private covenant, contract provision, lease provision, homeowners' association rule or bylaw for one-family homes to prohibit the installation of solar systems, including solar water heating equipment.</p>	<p>No Provision</p>	<p>Maintain House language.</p> <p>For additional information, see p. 10</p>
<p>DOE Loan Guarantee Program (SEIA contact: Katherine Gensler)</p>	<p>No Provision</p>	<p>No Provision</p>	<p>Modify the DOE Loan Guarantee Program so that only an Environmental Assessment is required under sections 1703 and 1705, rather than a full Environmental Impact Statement.</p>
<p>Restore \$2 Billion to the DOE Loan Guarantee Program (SEIA contact: Katherine Gensler)</p>	<p>No Provision</p>	<p>No Provision</p>	<p>Restoration of the \$2 Billion to the DOE Loan Guarantee Program that was redirected to the "Cash for Clunkers" program.</p>

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DOE Loan Guarantee Program (SEIA contact: Katherine Gensler)	No Provision	No Provision	Modify the temporary section 1705 program to extend the commence construction date by one year.
Grants in Lieu of the ITC (SEIA contact: Scott Hennessey)	No Provision	No Provision	Modify the Treasury Grant Program to extend the eligibility by two years and include REITs as eligible entities.
Economic Substance Doctrine (SEIA contact: Scott Hennessey)	No Provision	No Provision	Modify Committee Reports so that clean energy technologies are safeguarded from punitive treatment under the economic substance doctrine.
Extension of 50 % Bonus Depreciation (SEIA contact: Scott Hennessey)	No Provision.	No Provision.	Extend the temporary 50 % bonus depreciation for one additional year.
Commercial Pool Heating (SEIA contact: Matt Horowitz)	No Provision	No Provision	Amend the ITC so commercial entities that use pools as an integral part of their business would be able to access the 30 percent tax credit provided in the Internal Revenue Code for solar property.
Allow use of private activity bonds for solar projects (SEIA contact: Scott Hennessey)	No Provision	No Provision	Allow use of tax-free state, county & local bonds to finance installation of solar property.
Recapture of the Solar Investment Tax Credit (SEIA contact: Scott Hennessey)	No Provision	No Provision	Change the ITC to exempt from recapture the sale of a solar facility to its host customer if the solar facility is interconnected to a meter on residential property and remains in service for the duration of the five-year recapture period.

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Residential Solar Group Financing (SEIA contact: Matt Horowitz)	No Provision	No Provision	Allow solar customers to aggregate the financing for their solar systems through a government guaranteed loan program.

Addendum A: Clean Energy Deployment Administration Provisions

ACES p. 269-273 and ACELA p. 20-38

SEIA contact: Scott Hennessey

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Amendments to DOE's existing loan guarantee programs	The Credit Subsidy Cost could be paid from a combination of appropriations and borrower fees. §181(b).	The Credit Subsidy Cost could be paid from the newly-created "Clean Energy Investment Fund," by the borrower, or by a combination of balances in the Fund and payments by the borrower. §103(b)(2). The Fund would initially include amounts that have been appropriated for administrative expenses to carry out DOE's loan guarantee programs, amounts deposited into the Fund under the Act, and other sums that are appropriated. §103(a)(1).	Support all reductions in borrower fees.
	Same as Senate bill. §181(e).	The Guarantee Agreement shall "provide for sharing the proceeds from the sale of project assets with other creditors or control the disposition of project assets if necessary to protect the interests of the United States" and "provide such lien priority in project assets as necessary to protect the interest of the United States in the case of default" (this will give DOE flexibility to allow <i>pari passu</i> structures). §103(b)(3).	Support giving DOE flexibility to negotiate collateral structures.

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
	Administrative fees would be deposited into a new "Incentives for Innovative Technologies Fund" and remain available to DOE to cover administrative expenses. §181(c).	Administrative fees would be deposited into the Clean Energy Investment Fund. §103(b)(4).	Support all reductions in borrower fees.
	No provision.	DOE may waive the independent credit rating requirement. §103(b)(4).	Support statutorily eliminating this expensive and time-consuming requirement that is set forth in DOE's regulations.
	No provision.	DOE must use best efforts to make decisions on applications within 180 days of receipt of an application. §103(b)(5).	Support accelerating DOE's review process.
	No provision.	Of the amount of a fee that is imposed on an applicant at the conditional commitment stage, 75% will be refunded if there is no financial close. §103(b)(4).	Support all reductions in borrower fees.
	No provision.	Aggregate amount of loan guarantees would not be subject to Congressional approval. §103(b)(2).	Support codifying GAO's opinion that Section 1702(b) of the Energy Policy Act supersedes Section 504(b) of the Federal Credit Reform Act.
	The bill does not address restrictions on multiple applications for projects with the same technology.	The bill does not address restrictions on multiple applications for projects with the same technology.	Support statutorily eliminating DOE regulation that sponsors may not submit applications for multiple projects using the same type of technology.

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
	The bill does not address National Environmental Policy Act (NEPA) compliance.	The bill does not address National Environmental Policy Act (NEPA) compliance.	Support streamlining NEPA review requirements.
Nature of organization	CEDA would be an independent corporation of the United States. §186.	CEDA would be established within the Department of Energy (part of the Executive Branch of the Federal government). §105(a).	Support CEDA being an independent corporation.
Direct support for clean energy technologies	CEDA would be authorized to issue direct loans, letters of credit and loan guarantees to deploy "clean energy technologies." §187(a). (CEDA's loan guarantees would be in addition to loan guarantees under DOE's existing loan guarantee programs)	CEDA would be authorized to issue direct loans, letters of credit, loan guarantees, insurance products or other forms of credit enhancements or debt instruments to deploy "clean energy technologies." §106(a)(1)	Support all forms of direct support for clean energy technologies.
	Same as Senate bill. §187(d).	CEDA would seek to make decisions on applications for direct financial support within 180 days. §106(a)(1)(D)(i).	Support a streamlined application review process. See amendment p. 15

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
<p>Indirect support for clean energy technologies</p>	<p>CEDA could provide credit support for portfolios of taxable debt obligations originated by state, local and private sector entities that enable owners and users of buildings to increase energy efficiency or install systems that individually generate electricity from renewable energy sources and have a capacity of not more than two megawatts. §188(a)(1).</p> <p>CEDA could facilitate financing in tax equity markets and long-term purchasing of clean energy by state, local, and non-profit entities to the degree and to the extent that CEDA determines is appropriate. §188(a)(2).</p>	<p>In cooperation with federal, state, local and private sector entities, CEDA could develop debt instruments that provide for the aggregation of projects for clean energy technology deployments on a scale appropriate for residential or commercial applications. §106(a)(2)(B)(i).</p> <p>CEDA could purchase any debt instrument associated with the deployment of clean energy technologies for the purpose of enhancing the availability of private financing for clean energy technology deployments. §106(a)(2)(B)(ii).</p>	<p>Support all forms of indirect support for clean energy technologies, including financial products that aggregate multiple small-scale projects.</p> <p>Support specific authorization in House Bill to facilitate financing transactions in tax equity markets (see "Tax Equity" below).</p>

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
<p>Definition of "Clean Energy Technologies" that are eligible for support</p>	<p>"Clean energy technology" means a technology related to the production, use, transmission, storage, control, or conservation of energy (A) that will contribute to a stabilization of atmospheric greenhouse gas concentrations through reduction, avoidance, or sequestration of energy-related emissions and (i) reduce the need for additional energy supplies by using existing energy supplies with greater efficiency or by transmitting, distributing or transporting energy with greater effectiveness through the infrastructure of the United States; or (ii) diversify the sources of energy supply of the United States to strengthen energy security and to increase supplies with a favorable balance of environmental effects if the entire technology system is considered; and (B) for which, as determined by the Administrator, insufficient commercial lending is available to allow for widespread deployment. §183(4).</p>	<p>"Clean energy technology" means a technology related to the production, use, transmission, storage, control, or conservation of energy that will (A) reduce the need for additional energy supplies by using existing energy supplies with greater efficiency or by transmitting, distributing, or transporting energy with greater effectiveness through the infrastructure of the United States; (B) diversify the sources of energy supply of the United States to strengthen energy security and to increase supplies with a favorable balance of environmental effects if the entire technology system is considered; or (C) contribute to a stabilization of atmospheric greenhouse gas concentrations thorough reduction, avoidance, or sequestration of energy-related emissions. §102(5).</p>	<p>Support Senate definition, which does not require a determination by the Administrator that insufficient commercial lending is available to allow for widespread deployment.</p> <p>This condition in (B) of the House Bill is ambiguous and prejudicial to commercial technologies.</p>

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Portfolio approach/ preferences for breakthrough technologies	Same as Senate bill. §187(c)(3)(C).	CEDA must use a portfolio investment approach that provides the "maximum practicable percentage of support to promote breakthrough technologies." §106(a)(1)(c)(iii)(III).	<p>Support clarifying CEDA objective of providing the "maximum practicable percentage of support" for breakthrough technologies; ensure that support is available for commercial technologies.</p> <p>For example, the bill could specify that "no more than [50]% of the financial support provided by CEDA may be available for breakthrough technologies," which would (i) clarify CEDA's goal of providing the "maximum practicable percentage of support" for breakthrough technologies, (ii) limit CEDA's overall financial risk, and (iii) ensure that CEDA would provide adequate support for commercially proven technologies.</p>
	No particular technology may receive more than 30% of the financial support available in the portfolio. §187(c)(3)(A).	No limit on how much support a particular technology may receive.	Support limit on support for any particular technology, as provided in House Bill.

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
	<p>CEDA must give the highest priority to investments that promote technologies that will achieve the maximum greenhouse gas emission reductions within a reasonable period of time per dollar invested and the earliest reductions in greenhouse gas emissions. §187(c)(3)(D).</p>	<p>No special priority for investments in technologies that will achieve the maximum reductions in greenhouse gas emissions.</p>	<p>Support priority for investments in technologies that will achieve the maximum reductions in greenhouse gas emissions.</p>

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Funding/capitalization	<p>The Act would establish the Clean Energy Investment Fund within the Treasury, consisting of amounts deposited into the Fund under the Act and other sums that are appropriated to supplement the Fund. §184(a). (appropriations and borrower fees related to the Title XVII loan guarantee program would not be deposited into this Fund)</p> <p>The Treasury would initially issue \$7.5 billion in "Green Bonds" to acquire all capital stock of CEDA. §184(e)(1).</p> <p>(issuance of "Green Bonds" is not subject to a finding that CEDA is ready to commence operations)</p> <p>Additional issuances of "Green Bonds" are not addressed.</p>	<p>The Act would establish the Clean Energy Investment Fund within the Treasury, consisting of amounts that have been appropriated for administrative expenses to carry out the Title XVII loan guarantee programs, amounts deposited into the Fund under the Act (e.g. fees paid by borrowers under the Title XVII loan guarantee programs), and other sums that are appropriated to supplement the Fund. §103(a)(1).</p> <p>Upon a finding by the Secretary of Energy and the Administrator of CEDA that CEDA is ready to assume its functions, and in no case later than 18 months after passage of the Act, (i) the Treasury would transfer \$10 billion to the Fund to remain available until expended and (ii) CEDA would have authority to make use of all amounts in the Fund. §107(a)(6).</p> <p>CEDA may also issue up to \$2 billion in notes, debentures, bonds, or other obligations for purchase by the Treasury in order to maintain liquidity for indirect financial support for clean energy technologies (e.g., debt instruments that provide for the aggregation of projects). §107(e)-(g).</p> <p>Any earnings from funds to the Administration may only be spent with the authorization of an Act by Appropriations § 108 (d) (2) As amended 5/06/10.</p>	<p>To provide meaningful support in the industry, CEDA needs an initial capitalization of at least \$50 billion and authority to issue bonds to increase capitalization to up to \$100 billion.</p>

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Collateral/sharing of collateral among lenders	Same as Senate bill.	The bill does not include security requirements for loans or other obligations of CEDA. The bill also does not address security issues in cases where there are multiple lenders.	Support flexibility for CEDA to negotiate collateral structures.
	The bill does not amend the security requirements for DOE's existing loan guarantee programs.	For DOE's existing loan guarantee programs (which would be transferred to CEDA), the bill proposes amending the requirement that DOE must have a superior right to property acquired pursuant to a loan guarantee. This amendment would facilitate <i>pari passu</i> lending.	Support giving DOE flexibility to negotiate collateral structures (see "Amendments to DOE's existing loan guarantee programs" above).
Co-lending authority	No provision.	CEDA could participate as a co-lender or a member of a syndication. §106(a)(1).	Support authority of CEDA to work with private lenders.
Relation to private credit markets/dependence of authority on private credit markets	For a particular technology to qualify for support, the Administrator of CEDA must determine that there is insufficient commercial lending available to allow for widespread deployment of the technology. §183(4)(B) (definition of "clean energy technology").	One duty of the Administrator of CEDA is to promote participation of private financial institutions and other sources of private capital on commercially reasonable terms if and to the extent the capital is available. §105(b)(2)(C)(v).	Support coordination between CEDA and private financing markets. Support should not be contingent on a finding that insufficient commercial lending is available (see "Definition of 'clean energy technologies'" above).

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
	Same as Senate bill. §186(c)(2)(D).	One duty of the Board of Directors is to ensure that the operations of CEDA are consistent with the development of a robust private sector that can provide commercial loans or financial projects. §105(c)(2)(D).	Support coordination between CEDA and private financing markets.
Environmental reviews	Same as Senate bill. §187(d)(2).	CEDA would seek to avoid duplicating efforts already undertaken by other agencies and would seek to develop the most expeditious review process practicable. §106(a)(1)(D)(ii).	Support streamlined environmental reviews.
Role of commercial banks in processing loans	Same as Senate bill.	The bill does not provide any explicit authority for CEDA to contract with private lenders for processing loans.	Support flexibility of CEDA to contract with private entities.
Borrower fees	Same as Senate bill. §189(b)(4).	CEDA may use other alternative compensation arrangements (such as profit participation, contingent fees, and other valuable contingent interests) as CEDA considers appropriate. §107(c)(4).	Support flexibility in fee arrangements.

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Interest rates	No provision.	No provision.	Support authority of CEDA to charge interest rates at the same rates charged by the Treasury Department's Federal Financing Bank.
Tax equity	CEDA would be authorized to facilitate financing in tax equity markets. §188(a)(2).	The bill does not address financing transactions in tax equity markets.	Support authorization of CEDA to facilitate financing in tax equity markets, as provided in House Bill.
Financing of lease payments	Same as Senate bill.	The bill does not provide any explicit authority for CEDA to provide financing support or guarantees for lease payments.	Support authorization for CEDA to provide financing for lease payments.
Applications for support	No provision.	No provision.	<p>CEDA should function like a commercial bank and accept unsolicited proposals for direct and indirect support.</p> <p>CEDA should not be required to issue solicitations for applications and evaluate those applications on a competitive basis.</p>

Addendum B: Green Building Provisions

SEIA contact: Scott Hennessey

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Building Codes	<p>Compared to the 2006 IECC for residential buildings and the ASHRAE Standard 90.1-2004 for commercial buildings, new buildings must meet:</p> <ul style="list-style-type: none"> • 30% reduction in energy use relative to a comparable building constructed in compliance with the baseline order (effective on enactment date). • 50% reduction in energy use relative to baseline code in 2014 for residential buildings, 2015 for commercial buildings. <p>If there is any successor code to the baseline that provides for greater reduction in energy use, the overall percentage reduction in energy use provided by the successor code shall be the national building code efficiency target.</p>	<p>Compared to the 2006 IECC for residential buildings and the ASHRAE Standard 90.1-2004 for commercial buildings, new buildings must meet:</p> <ul style="list-style-type: none"> • 30% energy savings for each model code or standard released during and after 2010. • 50% energy savings for each model code or standard released during and after 2016. (p. 229) <p>Voluntary advanced model codes that achieve 30% energy savings compared to national model building codes and standards shall be supported. (p. 240)</p>	Maintain this provision in the final bill.

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Residential High-Performance Zero-Net Energy Buildings initiative	Directs the Secretary of Energy to consider ways to support deployment of renewable technologies and seek to achieve the goal of zero net energy commercial buildings.	<p>Directs the Secretary of Energy to develop technologies, policies, and practices for establishment of zero net energy buildings.</p> <p>Promote strategies for design and construction by 2015; and new residential building constructed on or after 2020 to be a cost-effective zero net energy building. (p. 302)</p> <p>Funds appropriated are:</p> <ul style="list-style-type: none"> • \$40 million in FY2010 • \$60 million in FY2011, FY2012 • \$100 million each year FY2013-FY2020 	Maintain support for zero net energy buildings.

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Labeling of Building Energy Performance	<p>Establish a building energy performance labeling program with broad applicability to the residential and commercial markets to enable and encourage knowledge about building energy performance.</p> <p>Demonstration projects will be conducted.</p> <p>Appropriated amount: \$50,000,000 for implementation FY2010-FY2020 to the administrator; and \$20,000,000 for implementation in FY2010 and \$10,000,000 in FY2011-FY2020 to the Secretary of Energy.</p>	<p>Establishes a voluntary energy performance labeling and information program for residential and commercial buildings. (p. 285)</p> <p>Establishes a voluntary state and local building information program. (p. 293)</p> <p>Demonstration projects will be conducted for energy performance labeling, including zero net energy commercial buildings. (p. 292)</p>	Support a labeling system on buildings showing energy performance.

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
<p>Energy Efficiency Retrofits</p>	<p>Creates a Retrofit for Energy and Environmental Performance (REEP) Program.</p> <p>Incentives for reducing financial barriers to improved energy and environmental performance in buildings shall be created.</p> <p>Residential buildings funds for audits and energy savings up to 50% of the total retrofit costs.</p> <p>Non-residential buildings funds for audits and energy savings based on retrofitted floor area. (p. 369)</p>	<p>Grants made available to states to carry out Energy Efficiency Retrofit Programs.</p> <p>Priority for funding based on cost-effectiveness of the energy efficiency program, number of jobs created, and quantity of energy and water saved, among others.</p> <p>States that receive a grant to carry out an energy efficiency program may implement the program through the state or a 3rd party designated by the state.</p> <p>Grants may be given from the state to a home owner for an energy efficiency retrofit in accordance with either a prescriptive option or a performance based option.</p> <p>Grants may be given from the state to a commercial building owner for an energy efficiency retrofit based on floor area retrofitted. (p. 255)</p> <p>Establishes a Home Energy Retrofits Finance Program to provide grants to states for the purpose of expanding or establishing a State revolving finance fund for energy efficiency measures and renewable energy improvements in residential buildings. (p. 266)</p>	<p>Maintain retrofitting provisions as long as solar hot water and other solar technologies qualify.</p>

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Energy Efficiency Manufactured Homes	Rebates of up to \$7,500 are available to assist low-income households residing in manufactured homes constructed prior to 1976 to purchase new, Energy Star-qualified manufactured homes. (p. 372-376)	Manufactured Housing Energy Efficiency Grant Program is established, and includes Multifamily homes. (p. 246)	Support an energy efficient manufactured homes provision as long as solar technologies qualify.
Building Efficiency Knowledge Centers	The Secretary of Energy will provide funding to institutions of higher education for Building Assessment Centers to identify opportunities for optimizing energy efficiency and environmental performance in existing buildings. Solar water heaters qualify for this program. (p. 251-253)	Provides grants to higher education institutions to establish building training and assessment centers for: <ul style="list-style-type: none"> • Promoting emerging technologies and concepts • Promoting R&D for heating and cooling, among others. (p. 249) 	Maintain provisions for building training and assessment centers.

Side-by-Side Comparison of House and Senate Energy/Climate Bills

Provision	House Bill (ACES)	Senate Bill (ACELA)	SEIA's Preferred Outcome
Other Green Building Provisions	<p>Gives Fannie Mae and Freddie Mac authority to insure energy-efficiency mortgages. These include installation of solar systems. (p. 609)</p> <p>Solar Counts toward energy efficient certifications for manufactured housing with mortgages. (p.623- 625)</p> <p>Requires consideration of the installation of renewable energy sources when doing private property appraisals. (p. 650)</p> <p>Establishes the Alternative Energy Sources State Loan Fund and authorizes \$5 billion for its funding. The fund can provide loans to States and Indian Tribes to incentivize the installation of renewable energy systems in homes, commercial property, and public buildings. (p. 654)</p>	<p>Establishes a uniform efficiency descriptor and accompanying test methods for covered water heaters: meaning water heaters, storage water heaters, instantaneous water heaters, and unfired water storage tanks (as defined in section 340). As amended 5/06/10.</p>	<p>Support the House provision to promote energy-efficient mortgages.</p>