

## ACELA Summary and Comparison to the ACES Act

The American Clean Energy Leadership Act (ACELA), sponsored by Senator Bingaman, was passed out of the Senate Energy and Natural Resources Committee on June 17, 2009 on a bipartisan vote of 15 to 8. It was passed as an energy bill with provisions related to increased energy production, energy efficiency, renewable energy standards, technology research and development, energy market stabilization, and transmission network improvements, among others.

The American Clean Energy Security Act (ACES Act), sponsored by Representative Waxman and Representative Markey, passed the House of Representatives on June 26, 2009 on a vote of 219 to 212. It contains many provisions related to those in ACELA as well as others designed to tackle the issue of climate change. Pew's brief summary and detailed summary of the ACES Act can be found at: <http://www.pewclimate.org/acesa>.

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Title I: Clean Energy and Technology Deployment		
Subtitle A: Clean Energy Financing		
Subtitle A, Sections 101 & 102 Purpose & Definitions	To support the domestic development and deployment of clean energy technologies.	<p>Title I, Subtitle I of the ACES Act, Nuclear and Advanced Technologies, makes similar changes to the existing EAct05 Title XVII DOE loan guarantee program and creates a Clean Energy Deployment Administration (CEDA).</p> <p>The ACES Act authorizes the Treasury to issue \$7.5 billion in "green bonds" to initially capitalize CEDA.</p> <p>The ACES Act establishes CEDA as an independent corporation, chartered for 20 years, wholly owned by the U.S. government.</p> <p>CEDA is directed to take a portfolio investment</p>
Subtitle A, Section 103 Improvements to Existing Programs	Establishes a revolving fund, the Clean Energy Investment Fund, consisting of appropriations for the existing EAct05 Title XVII Loan Guarantee Program and other funds that may be appropriated. Makes changes to existing U.S. Department of Energy (DOE) loan guarantee program (e.g., requirements for terms of loan guarantees).	
Subtitle A, Section 104 Energy Technology Deployment Goals	Within 1 year of enactment, the Secretary of Energy shall publish near-, medium-, and long-term goals for technology deployment attributable to the credit programs established under this subtitle.	
Subtitle A, Sections 105 & 106 Clean Energy Deployment Administration & Administration Functions	Establishes the Clean Energy Deployment Administration (CEDA) within the Department of Energy, reporting to the Secretary of Energy. CEDA will have a Board of Directors whose members will be financial experts as well as an Energy	

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	Technology Advisory Council whose members will have scientific, technical, financial, and project development expertise. CEDA may issue direct loans, letters of credit, loan guarantees, insurance products, or such other credit enhancements (including through participation as a co-lender) as the Administrator considers appropriate to deploy clean energy technologies. Instructs CEDA to emphasize “breakthrough technologies.”	approach with no single technology allowed to receive more than 30 percent of total CEDA financial support and no single project to receive loans or loan guarantees amounting to more than 80 percent of its estimated total project cost.
Subtitle A, Sections 107 & 108 Federal Credit Authority & General Provisions	Within 18 months of enactment, the Secretary of Energy shall transfer to CEDA the functions and authority related to the existing DOE loan guarantee program under EAct05 Title XVII. Makes an initial investment of \$10bn in the Clean Energy Investment Fund.	
Subtitle B: Improved Transmission Siting		
Subtitle B, Section 121 Siting of Interstate Electric Transmission Facilities	Amends the Federal Power Act, instructing the Federal Energy Regulatory Commission (FERC) to coordinate regional transmission planning efforts to advance goals that include advancing renewable energy. Within 180 days of enactment, FERC shall issue national transmission planning principles. Within 2 years of enactment, public utilities and transmitting utilities must submit transmission plans to FERC either individually or jointly as part of a regional plan. FERC may require modifications of the plans to resolve inconsistencies or to advance the policy goals established by this section. This applies to the Western and Eastern Interconnections. FERC may authorize “high-priority national transmission projects” if states fail to rule on them or reject them. FERC shall establish by rule a cost allocation methodology for high-priority national transmission projects.	The ACES Act Title I, Subtitle F (Transmission Planning) establishes as federal policy that regional transmission planning facilitate the deployment of renewable and other zero-carbon energy sources and that transmission planning take into account all options. FERC is required to issue federal principles within one year of enactment reflecting the above.  Not later than 18 months after the promulgation of national electric grid planning principles, FERC is directed to require regional planning entities to submit initial regional electric grid plans with updates submitted at least every 3 years. FERC is permitted to

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		return such plans for reconsideration with recommendations.
Subtitle C: Federal Renewable Electricity Standard		
Subtitle C, Section 131 Sense of Congress on renewable energy and energy efficiency	States Congress' commitment to renewable energy and energy efficiency in: <ul style="list-style-type: none"> <li>the production and use of energy;</li> <li>the reduction of greenhouse gas emissions;</li> <li>and the reduction of dependence on foreign oil.</li> </ul>	There is no similar section in the ACES Act.
Subtitle C, Section 132 Federal renewable electricity standard.	Establishes a Renewable Electricity Standard (RES) with targets of: 2011-2013.....3.0% 2014-2016.....6.0% 2017-2018.....9.0% 2019-2020.....12.0% 2021-2039.....15.0%  State Governors may petition for permission to allow up to 26.67% of these targets to be met with energy efficiency. New nuclear power, updates to existing nuclear facilities and generation from municipal solid waste incineration are not included in the base quantity. Biomass definition is the same as the definition in the Energy Policy Act of 2005, in which there are no constraints on the extraction of defined biomass from federal lands.	The RES in the ACES Act has higher targets of: 2012-2013.....6.0% 2014-2015.....9.5% 2016-2017.....13.0% 2018-2019.....16.5% 2020-2039.....20.0%  Energy efficiency can be used for 25% of compliance, and State Governors may petition to have this increased to 40%. New nuclear power and facilities that capture and sequester carbon emitted from generation are not included in the base quantity. The definition of biomass in the ACES Act is similar to that in the EISA of 2007 in that there are limitations placed on extraction from federal and state-protected lands.
Subtitle C, Section 133 Federal purchase requirement amendments.	Commissions the DOE, USDA, EPA, and DOI to complete a study examining the impacts of biomass harvesting on: water quality, soil productivity, wildlife habitat, biodiversity, and conservation forest land within 5 years of enactment, and update it every 5 years thereafter.	There is no similar section in the ACES Act.

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Subtitle D: Energy and Water Integration		
Subtitle D, Section 141 Energy Water Nexus Study	The National Academy of Sciences shall conduct a study of the effect of energy development and generation on water resources.	<p>The ACES Act does not have a similar subtitle focused on energy and water integration.</p> <p>The most closely related provisions of the ACES Act are Sections 215, 216, and 217 under Title II, Subtitle B (Lighting and Appliance Energy Efficiency Programs). These provisions promote water-efficient products via a new EPA-administered information program, government procurement standards, and grants for programs offering incentives for consumers to purchase water-efficient products.</p>
Subtitle D, Section 142 Power Plant Water and Energy Efficiency	The Secretary of Energy, in consultation with EPA and the Department of Interior, shall study technologies and related strategies to optimize water use by all types of electricity generation.	
Subtitle D, Section 143 Reclamation Water Conservation and Energy Savings Study	The Secretary of Energy shall conduct a study to evaluate the quantities of energy used in water storage and delivery operations in major reclamation projects.	
Subtitle D, Section 144 Brackish Groundwater National Desalination Research Facility	DOE shall operate the Brackish Groundwater National Desalination Research Facility, located in Otero County, New Mexico.	
Subtitle D, Section 145 Enhanced Information on Water-Related Energy Consumption	Once every 3 years, DOE shall collect information on energy use in various sectors of the economy that are associated with the procurement, treatment, or delivery of water.	
Subtitle D, Section 146 Energy-Water Research and Development Roadmap	Within 90 days of enactment, DOE shall define the future research, development, demonstration, and commercialization efforts that are required to address emerging water-related challenges to future, cost-effective, reliable, and sustainable energy generation and production.	
Subtitle D, Section 147 Energy-Water Clean Technology Grant Program	Authorizes \$100 million in annual grants from DOE to public-private partnerships with cost-sharing for projects that demonstrate water and energy saving technologies in commercial, residential, and mixed-use developments.	
Subtitle D, Section 148 Rural Water Utilities Energy and Water Efficiency Program	Provides for on-site technical assistance to rural drinking and wastewater utilities.	
Subtitle D, Section 149 Comprehensive Water Use and Energy Savings Study	The Secretary of Energy shall conduct a comprehensive study to determine the interrelated nature of water and energy use.	

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Subtitle E: Vehicle Technology Deployment		
Subtitle E, Section 151 Transportation Roadmap Study	The NAS will produce a comprehensive analysis of energy use within the light-duty vehicle sector and use it to study technology options that could reduce petroleum consumption and GHG emissions.	There is no similar section in the ACES Act. Sections 121-125 of the ACES Act cover PHEVs and advanced vehicle technologies.
Subtitle E, Section 152 Vehicle Technology and Recharging Infrastructure	Amends Section 131 of EISA 2007. The DOE Secretary, in consultation with the EPA administration and DOT Secretary shall analyze and assess the charging facilities required for PHEVs and minimum technical standards for these. The section also directs the Secretary to establish a program to support the deployment of PHEVs by providing financial support to State and local governments.	There is no similar section in the ACES Act. Sections 121-125 of the ACES Act cover PHEVs and advanced vehicle technologies.
Subtitle E, Section 153 Electric Drive Transportation Standardization	The Secretary of Energy, in consultation with the National Institute of Standards and Technology, the National Labs, utilities, vehicle manufacturers, battery manufacturers, industry trade associations, and other entities shall submit a report with recommendations on standards for electric drive transportation.	There is no similar section in the ACES Act. Sections 121-125 of the ACES Act cover PHEVs and advanced vehicle technologies.
Subtitle E, Section 154 Pilot Program for Plug-In Electric Drive Vehicles for Federal Fleet	Amends section 131 of EISA 2007. The Secretary of Energy shall establish a pilot grant program for the purchase of PHEVs by federal agencies	There is no similar section in the ACES Act. Sections 121-125 of the ACES Act cover PHEVs and advanced vehicle technologies.
Subtitle E, Section 155 Study of End-Of-Useful Life Options for Motor Vehicle Batteries	The Secretary of Energy shall conduct a study on the end-of-useful life options for motor vehicle batteries, including batteries used in electric drive vehicles.	There is no similar section in the ACES Act. Sections 121-125 of the ACES Act cover PHEVs and advanced vehicle technologies.
Title II: Enhanced Energy Efficiency		
Subtitle A: Manufacturing Energy Efficiency		
Subtitle A, Section 201 State partnership industrial energy efficiency revolving loan program.	Calls for the establishment of a revolving loan program to facilitate the implementation of commercial available energy efficiency technologies. These loans will be cost-matched by eligible lenders, not exceeding \$100,000,000 for any fiscal year.	The ACES Act has a section on Clean Energy Manufacturing Revolving Loan Fund Program – this section outlines a program to award grants to States to establish revolving loan

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	This section authorizes funds of \$500,000,000 for each of fiscal years 2010 through 2012.	funds to provide loans to small and medium sized manufacturers to finance energy efficiency upgrades.
Subtitle A, Section 202 Coordination of research and development of energy efficient technologies for industry.	Directs the Secretary of Energy to establish research partnerships with other programs within the Office of Energy Efficiency and Renewable Energy with the goal of promoting early stage energy efficiency technology development and applying the knowledge and expertise of the Industrial Technologies Program to help other programs meet goals. Not later than 2 years after the date of enactment of this Act and then every 2 years, the Secretary shall report on actions and progress to Congress.	There is no similar section in the ACES Act.
Subtitle A, Section 203 Energy efficient technologies assessment.	Within 60 days of enactment of this Act, the Secretary of Energy shall start an assessment of commercially available, cost competitive energy efficiency technologies that are not widely implemented within the United States for the most energy intensive industries (including steel, chemicals and petroleum refining). Not later than 1 year after enactment, the Secretary shall publish a detailed report with information regarding cost, energy impact and greenhouse gas emissions impact of each technology for each industry, and also provide a comparison of energy efficiency technology adoption rates in other countries.	Similar to the ACES Act (Title 1, Subtitle H) Sec. 171 and 172.
Subtitle A, Section 204 Future of Industry program.	Amends Section 452(c)(2) of the Energy Independence and Security Act of 2007 by inserting a new section “Future of Industry Program” that will develop a road map process for industry-specific assessments of energy consumption, GHG emissions and waste/operating costs, and will identify opportunities for improvement. This section also calls for the Secretary of Energy to establish a Center of Excellence at up to 10 of the highest performing industrial research and assessment centers.	The ACES Act (Title 1, Subtitle H) Sec. 172 also calls for the Secretary to establish a Center of Excellence at up to 10 of the highest performing industrial research and assessment centers.

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Subtitle A, Section 205 Sustainable manufacturing initiative.	Adds <i>Sec. 376. Sustainable manufacturing initiative</i> to the Energy Policy and Conservation Act to increase collaboration across USDOE, National Institute of Standards and Technology and other appropriate agencies. This section calls for a sustainable manufacturing initiative that would provide onsite technical assessments for manufacturers.	The ACES Act Section 247 is about Clean Energy and Efficiency Manufacturing Partnerships. This section amends the Hollings Manufacturing Partnership Program of the National Institute of Standards and Technology Act to add the establishment of a clean energy manufacturing supply chain initiative.
Subtitle A, Section 206 Innovation in industry grants.	Amends the Energy Policy Act of 2005 by directing the Secretary of Energy to carry out a program to competitively award grants to State-Industry partnerships to develop and commercially deploy new clean technologies and processes. The Federal funds provided will be matched by the State-Industry partnership (each 1-time grant can be no more than \$500,000).	There is no similar section in the ACES Act.
Subtitle A, Section 207 Study of advanced energy technology manufacturing capabilities in the United States.	Not later than 2 months after enactment, the National Academy of Sciences shall assess the development of advanced manufacturing capabilities for various energy technologies, including manufacturing supply chains of established and emerging industries. The assessment will also cover trends in supply chains and opportunities for improvement. The Academy will provide recommendations on which sections of the supply chain are crucial for the United States to retain or develop to be internationally competitive.	There is no similar section in the ACES Act.
Subtitle A, Section 208 Industrial Technologies steering committee.	Establishes a steering committee to guide the Industrial Technologies Program at DOE.	There is no similar section in the ACES Act.
Subtitle A, Section 209 Authorization of appropriations.	Authorizes the necessary funds to implement Subtitle A.	There is no similar section in the ACES Act.
Subtitle B: Improved Efficiency in Appliances and Equipment		
Subtitle B, Section 221 Test procedure petition process.	Amends the Energy Policy and Conservation Act to allow any person to petition the Secretary of Energy to conduct	There is no similar section in the ACES Act.

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	a rule-making (for consumer products covered in the Federal Register, excluding automobiles) to prescribe/modify a test procedure if better options are available.	
Subtitle B, Section 222 Energy Star program.	Amends the Energy Policy and Conservation Act to clearly delineate the role of different government agencies involved in the Energy Star program, and to create a formal process for making high-level decisions that incorporates the program approaches of the agencies involved. This section also calls for annual meetings to establish strategic priorities and goals, prescribed courses of action, and third-party program reviews. This section also establishes reviews for each product category every 3 years, or when market share for an Energy Star product category reaches 35 percent. This section also authorizes annual funds of \$25,000,000 to the Department of Energy and annual funds of \$100,000,000 to the Environmental Protection Agency.	The ACES Act Section 2190 also calls for more stringent standards, product reviews every 3 years.
Subtitle B, Section 223 Petition for amended standards.	Amends the Energy Policy and Conservation Act to direct the Secretary of Energy to publish (no later than 180 days receiving the petition) the decision and explanation in the Federal Register.	There is no similar section in the ACES Act.
Subtitle B, Section 224 Portable light fixtures	Amends the Energy Policy and Conservation Act to include detailed definitions of portable and stationary light fixtures. This section also establishes that LED associated test procedures will be based on the Illuminating Engineering Society of North America's test procedures. This section also establishes requirements for portable light fixtures manufactured on or after 1/1/12.	ACES Act Section 211 (Lighting Efficiency Standards) includes the same provisions on portable light fixtures.
Subtitle B, Section 225 GU-24 base lamps.	Amends the Energy Policy and Conservation Act to include definitions and energy efficiency standards for GU-24 base lamps.	ACES Act Section 211 (Lighting Efficiency Standards) includes the same provisions on GU-24



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		base lamps.
Subtitle B, Section 226 Standards for certain incandescent reflector lamps and reflector lamps.	Amends the Energy Policy and Conservation Act to establish energy efficiency standards for certain incandescent reflector lamps and reflector lamps.	ACES Act Section 211 (Lighting Efficiency Standards) includes the same provisions on reflector lamps.
Subtitle B, Section 227 Standards for commercial furnaces.	This section amends the Energy Policy and Conservation Act to expand energy efficiency standards for commercial furnaces – gas-fired units shall have a minimum combustion efficiency of 80%, and oil-fired units shall have a minimum thermal efficiency of 81%.	Same as the ACES Act Section 212.
Subtitle B, Section 228 Motor efficiency rebate program.	Amends part C of Title III of the Energy Policy and Conservation Act by adding a motor efficiency rebate program as the following new section: Sec. 347. Motor Efficiency Rebate Program The program would provide rebates for the purchase of a new electric motor meeting specified efficiency requirements and replacing an installed motor. The section specifies the eligibility requirements and the amount of the rebates, and authorizes appropriations to carry out this program for years 2011-2015.	Same as the ACES Act Sec. 245. Motor Efficiency Rebate Program.
Subtitle B, Section 229 Study of compliance with energy standards for appliances.	Directs the Secretary of Energy to conduct a study of the degree of compliance with appliance energy standards, including opportunities for improving compliance rates (such as by improved enforcement). Not later than 18 months after enactment, the Secretary shall report results and recommendations to appropriate committees of Congress.	There is no similar section in the ACES Act.
Subtitle B, Section 230 Study of direct current electricity supply in certain buildings.	Directs the Secretary of Energy to conduct a study of the costs and benefits of requiring high-quality, direct current electricity to certain buildings, and to determine the federal government's role in setting the requirements.	There is no similar section in the ACES Act.
Subtitle B, Section 231 Motor market assessment and commercial awareness program.	Requires the Secretary of Energy to conduct an assessment of electric motors and the electric motor market in the United States. The assessment should, among	Similar to the ACES Act Sec. 244. Motor Market Assessment and Commercial Awareness Program <b><u>except</u></b>

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	<p>other things, characterize and estimate the opportunities for improvement in energy efficiency of the motor systems by market segment. The Secretary shall develop an updated profile of motor system purchase and maintenance practices, and methods to update this profile. The Secretary shall also develop methods to estimate the energy savings and market penetration that is attributable to the Save Energy Now Program of the Department of Energy. Based on the assessment and resulting recommendations, the Secretary should establish a national program targeted at motor end-users to, among other things, increase awareness of the energy and cost-saving opportunities of using higher efficiency electric motors.</p>	<p>ACESA does not address an updated profile of motor system purchase and maintenance practices or methods to update this profile and estimate the energy savings and market penetration.</p>
<p>Subtitle B, Section 232 Study regarding Energy Superstar concept.</p>	<p>Calls for a study of costs and benefits of establishing an Energy Super Star tier to highlight the best 5 percent performers per category.</p>	<p>Similar to the ACES Act Section 219: directs research into an Energy Star ranking system, but evaluates the top 10 products in every category vs. the top 5% in ACELA.</p>
<p>Subtitle B, Section 233 Technical amendment.</p>	<p>Amends Section 343(a) of the Energy Policy and Conservation Act to use “Air-Conditioning, Heating, and Refrigeration Institute” instead of “Air- Conditioning and Refrigeration Institute.”</p>	<p>There is no similar section in the ACES Act.</p>
<p>Subtitle C: Building Efficiency</p>		
<p>Subtitle C, Section 241  Greater energy efficiency in building codes</p>	<p>Establishes targets for a national model building code: 30 percent by 2010 50 percent by 2016</p> <p>Both targets are as compared to the 2006 IECC (residential) and ASHRAE Standard 90.1-2004 (commercial).</p> <p>The Secretary of Energy will provide support for a code-setting organization to develop a national model building code</p>	<p>The targets in the ACES Act Section 201 are slightly different: 30% by 2010 50 % by 2014(res) or 2010(comm) with a 5% reduction required every three years thereafter. The ACES Act uses the same IECC and ASHRAE baselines.</p> <p>The Secretary will be</p>

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	<p>that meets these targets.</p> <p>States may certify within 2 years of enactment that they have updated their codes to either meet the IECC 2009 or ASHRAE 90.1-2007 codes or achieve equivalent energy savings. Three years after certification, they may certify that they have either achieved or made progress toward compliance.</p> <p>The bill authorizes \$100,000,000 for 2009-2013 and necessary sums after that for the purposes of this section. This is to be used as incentive funding for states to implement the requirements of the section or update their codes, and as additional funding for complying states. Local governments in non-complying states that implement comparable codes are eligible for the additional funding.</p>	<p>required to create a national building code. States are required to either update their codes to meet the targets or adopt the national code. The ACES Act requires compliance from all states, whereas ACELA does not (instead, ACELA makes a portion of building code funding contingent on compliance).</p> <p>The Secretary of Energy will not be required to work within the framework of a code-setting organization's codes, although it is an option if the code meets the energy efficiency targets.</p> <p>The ACES Act allocates a portion of allowance value to states for the purposes of complying with these provisions.</p>
<p>Subtitle C, Section 242.</p> <p>Multifamily and Manufactured Housing Energy Efficiency Grant Program.</p>	<p>Authorizes the Secretary of Energy to establish the "Multifamily and Manufactured Housing Energy Efficiency Grant Program" to provide grants for eligible entities to carry out energy efficiency programs in multifamily buildings or manufactured housing.</p> <p>Program options for multifamily housing include renovations or recommendations for replacing less efficient systems with Energy Star systems.</p> <p>In manufactured housing, rebates will be offered to owners of pre-1976 manufactured homes for an Energy Star model replacement.</p>	<p>Through the Manufactured Homes Rebate program established in Sec. 203 of the ACES Act, states are directed to provide rebates to the owners of pre-1976 manufactured homes for an Energy Star model replacement. Rebates are limited to \$7,500 per home.</p> <p>A portion of allowance value is allocated to states to fund this program.</p> <p>The ACES Act does not have comparable provisions for multifamily housing efficiency.</p>

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<p>Subtitle C, Section 243.</p> <p>Building Training and Assessment Centers.</p>	<p>Directs the Secretary of Energy to provide grants to institutions of higher education to establish building training and assessment centers. These centers are intended for research and workforce training.</p> <p>This program will be coordinated with the Industrial Assessment Centers program established under this Act.</p> <p>Appropriations are authorized as necessary to carry out this section.</p>	<p>Sec. 173 of Title I, Subtitle H directs the Secretary of Energy to provide funding to institutions of higher education for Building Assessment Centers. The centers will identify efficiency opportunities, workforce training, and promote emerging concepts and technologies in commercial and institutional buildings.</p> <p>Section 171 of Title I, Subtitle H directs the Secretary of Energy to establish eight Clean Energy Innovation Centers, each of which will focus on a unique area of clean energy technology, including efficiency. The Centers will include partners from university and private research communities, industry, venture capital, national laboratories, and others.</p> <p>A portion of allowance value is allocated for these centers.</p>
<p>Subtitle C, Section 251.</p> <p>Weatherization Assistance for Low-Income Persons</p>	<p>Amends the Energy Conservation and Production Act to authorize \$1,700,000,000 each year from 2011—2015 for the Weatherization Assistance Program.</p>	<p>Various low-income energy efficiency programs are included in the ACES Act, but there is no funding specifically for the weatherization assistance program.</p>
<p>Subtitle C, Sec. 255.</p> <p>State Energy Program</p>	<p>Amends Section 365 of the Energy Policy and Conservation Act to authorize \$250,000,000 each year from 2011-2015.</p>	<p>There is no similar section in the ACES Act.</p>

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<p>Subtitle C, Sec 261-265.</p> <p>State Energy Efficiency Retrofit Programs</p>	<p>Sec. 261 establishes definitions for the following sections.</p> <p>Sec. 262 directs the Secretary of Energy to make grants to states for energy efficiency retrofit programs. Home retrofit programs can use either a prescriptive option for efficiency improvements or a performance-based option.</p> <p>States can also provide grants for commercial building retrofits that provide energy improvements of at least 20 percent compared to the previous year (with part of the grant to be given upfront and part to be given contingent on actual performance improvements). Historic buildings are eligible for extra funding.</p> <p>Sec. 263. The Secretary shall provide support to states within 90 days of enactment.</p> <p>Sec. 264. The Secretary shall promulgate regulations to carry out this part within 180 days of enactment.</p> <p>Sec. 265. Of the authorized funds for grants under Sec. 262, 45% is home retrofits, 45% is for commercial retrofits, and 10% for administrative and technical support. Funds are authorized for 2010-2015.</p>	<p>Section 202 of Title II-A in the ACES Act directs the EPA Administrator to develop and implement standards for a national building retrofit policy for residential and nonresidential buildings—the Retrofit for Energy and Environmental Performance (REEP) program.</p> <p>States will administer the program, using allowance value allocated to state SEED accounts to provide incentives and initial capital for retrofits, fund utility-operated programs, and fund local government programs.</p>
<p>Subtitle C, Section 266.</p> <p>Home Energy Retrofit Finance Program.</p>	<p>Authorizes the Secretary of Energy to provide grants to states to establish or expand a state revolving finance fund for program delivery entities (including local governments or utilities) to make efficiency or renewable energy improvements on existing residential buildings. 20 percent or less can be used for interest rate reductions, and the remainder is for direct funding or other programs.</p> <p>The section authorizes such sums as are</p>	<p>Section 202 of Title II-A in the ACES Act directs the EPA Administrator and Secretary of Energy to provide consultation and assistance to states and local governments for retrofit programs, including revolving loan programs. It does not mandate a specific type of revolving loan</p>

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	necessary to carry out this section each year from FY 2010-2015.	program.
<p>Subtitle C, Section 271.</p> <p>Federal Purchase Requirement.</p>	<p>Amends section 203 of the Energy Policy Act of 2005 to require federal renewable energy purchase requirements to apply to all energy consumed by the federal government (rather than only electric energy).</p> <p>Renewable energy produced on federal or Indian lands is to be calculated separately from energy used, and it may be used to comply with this section.</p> <p>This section also limits federal renewable energy purchase contracts to 30 years or less. Within 90 days of enactment, the Secretary is to publish a standardized purchase agreement for federal agencies.</p>	<p>Section 103 of Title I-A in the ACES Act requires the President to ensure that specified percentages of all electricity consumed by federal agencies in the U.S. come from renewable sources with the required percentage starting at 6 percent in 2012 and increasing to 20 percent by 2020 and thereafter through 2039. The President may reduce the percentage requirements if they are determined not to be feasible.</p> <p>Section 251 of Title II-E in the ACES Act includes a provision nearly identical to ACELA to calculate renewable energy produced on federal or Indian lands separately and for compliance with the section.</p>
<p>Subtitle C, Section 272</p> <p>Competition Requirements for Task or Delivery Orders under Energy Savings Performance Contracts.</p> <p>Subtitle C, Section 273.</p> <p>Funding Flexibility.</p>	<p>Section 272 amends section 801 of the National Energy Conservation Policy Act to establish a competitive process for choosing contractors for energy savings performance contracts in federal agencies.</p> <p>Section 273 amends section 801 of the National Energy Conservation Policy Act to allow agencies to use either appropriated funds or private financing under energy savings performance contracts or other private financing (or a combination of these options) to carry out the contract.</p>	<p>Section 251 of Title II-E in the ACES Act is nearly identical to this section of ACELA.</p>

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<p>Subtitle C, Section 274.</p> <p>Definition of Energy Savings.</p>	<p>Amends section 804 of the National Energy Conservation Policy Act to include the installation of renewable energy systems under the energy savings definition.</p>	<p>There is no similar section in the ACES Act.</p>
<p>Subtitle C, Section 275.</p> <p>National Energy Efficiency Improvement Goals</p>	<p>Establishes a goal for achieving an improvement in the overall energy productivity of the U.S.: at least 2.5 percent per year by 2012 and maintain that rate of improvement through 2030.</p> <p>The Secretary of Energy, Administrator of the EPA, and the heads of other appropriate agencies are directed to develop a strategic plan to achieve this goal.</p>	<p>Section 272 of Title II-G in the ACES Act is the same as this section.</p>
<p>Subtitle C, Section 276.</p> <p>Energy Sustainability and Efficiency Grants and Loans for Institutions</p>	<p>Amends Section 339A of the Energy Policy and Conservation Act to make technical assistance and funding for certain sustainable energy initiatives described in the Act available to not-for-profit hospitals and not-for-profit inpatient health care facilities. It increases the grant amount to up to \$2,500,000 and increases funding such that “such sums as are necessary” are allocated from 2010-2015.</p>	<p>Section 261 of Title II-F in the ACES Act includes an identical provision, except that it also includes Indian tribes as eligible for technical assistance and funding.</p>
<p>Subtitle C, Section 277.</p> <p>Federal Implementation Strategy for Energy-Efficient Information and Communications Technologies</p>	<p>Amends section 543 of the National Energy Conservation and Production Act to require that federal agencies consult with Director of the Office of Management and Budget to create an implementation strategy for certain energy efficiency and energy-reducing information and communications technology and practices. The Director shall establish performance goals for evaluating efforts and shall provide a description of the agencies’ efforts in an annual report, starting in 2011.</p>	<p>Section 271 of Title II-G in the ACES Act includes a nearly-identical provision.</p>

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<p>Subtitle C, Section 278.</p> <p>Incentives for Federal Agencies to Participate in EE Programs</p>	<p>Amends section 546 of the National Energy Conservation and Production Act to encourage federal agencies to participate in energy-savings programs put on by Independent System Operators, state agencies, and third part entities implementing programs on behalf of utilities or state agencies, in addition to programs put on by gas, water, or electric utilities.</p>	<p>There is no similar section in the ACES Act.</p>
<p>Subtitle C, section 281.</p> <p>Building Energy Performance Information Program</p>	<p>Directs the Administrator of the EPA, in consultation with the Secretary of Energy, to establish a voluntary energy performance information program.</p> <p>90 days after enactment, the Secretary must provide a report describing principal building types where data exists or is required.</p> <p>Within 2 years of identifying the covered building types, the Administrator of the EPA is directed to establish a method for measuring achieved performance and collecting and updating information. The Administrator must also create a display format.</p> <p>The Secretary shall coordinate this effort with the Zero-Net Energy Commercial Buildings Initiative of the Energy Independence and Security Act.</p> <p>The Secretary is directed to coordinate with state and local offices as well as federal buildings to integrate this program.</p>	<p>Section 204 of Title II-A in the ACES Act directs the EPA Administrator to establish a similar building energy performance labeling program for the residential and commercial sector.</p> <p>States will be eligible for allowances to implement the program.</p>
<p>Subtitle C, Section 282.</p> <p>Evaluation, Measurement, and Verification of Savings</p>	<p>Directs the Secretary of Energy, within 2 years of enactment, to promulgate rules to document energy savings and avoided greenhouse gases from energy efficiency programs that: 1) receive funding from federal, state, local governments or public utilities;</p>	<p>There is no similar section in the ACES Act.</p>



ACELA Subtitle and Section	Summary	Comparison to ACES Act
	<p>2) require specific levels of energy reductions; or</p> <p>3) are eligible for allowances or allowance proceeds under climate change regulations.</p>	
<p>Subtitle C, Section 291.</p> <p>Residential High Performance Zero-Net-Energy Buildings Initiative</p>	<p>Directs the Secretary of Energy to establish the Residential High Performance Zero-Net-Energy Buildings Initiative to reduce energy consumed and increase renewable energy generated in residential buildings.</p> <p>This effort shall be coordinated with the Building America Industry consortia and other consortia selected by the Secretary.</p> <p>The goals of the initiative include efforts to design and construct a zero-net-energy building by 2015 and enable all new residential buildings to be cost-effective zero-net-energy buildings by 2020.</p> <p>Appropriations authorized: \$40,000,000 for FY 2010; \$60,000,000 each year for FY 2011-2012; \$100,000,000 each year for FY 2013-2020.</p>	<p>In setting national energy efficiency targets under Section 201 of Title II-A in the ACES Act, the Secretary of Energy is directed to consider the zero-net-energy commercial buildings goal established in the Energy Independence and Security Act of 2007.</p>
<p>Subtitle D: Electric Grid</p>		
<p>Subtitle D, Section 295</p> <p>National electric system efficiency and peak demand reduction goal</p>	<p>Establishes a goal for the United States to optimize and make more efficient the planning and operation of electric power systems, with a particular focus on reducing the frequency and severity of peak demand periods through a variety of smart grid and demand response technologies. Specifically, it sets a numeric goal for improving the “system load factor” of electric power systems by 1.5 percent per year from 2010 through 2030. A “system load factor” is calculated by dividing the total number of kilowatt hours provided by an electric power system in a given year by the highest level of demand that occurred during that year.</p>	<p>The ACES Act Subtitle E Section 144 requires that load serving entities (LSEs) or states establish peak demand reduction goals, and an accompanying plan that includes energy efficiency, demand response, Smart Grid, energy storage, and distributed generation programs. The Federal Energy Regulatory Commission is permitted, “for good cause,” to grant relief to LSEs from these requirements.</p>

ACELA Subtitle and Section	Summary	Comparison to ACES Act
Subtitle D, Section 296 Uniform national standards for interconnection of certain small power production facilities	Amends the Public Utility Regulatory Policies Act (PURPA) to make a finding that national standards for the interconnection of certain small power production facilities are necessary for the protection of public health, safety, and welfare, and the preservation of national security. This section also amends PURPA to allow electric consumers to receive upon request interconnection services for electric facilities that generate up to 15 kilowatts of electricity on the premises of the customer.	There is no similar section in the ACES Act.
Title III: Improved Energy Security		
Subtitle A: Cyber Security of the Electric Transmission Grid		
Subtitle A, Section 301 Critical electric infrastructure	Instructs the FERC to issue such rules or orders as are necessary to protect the critical electric infrastructure from cyber security vulnerabilities.	The ACES Act establishes as U.S. policy that regional electric grid planning ensure cyber security in Title I, Subtitle F, Sec. 151 (Transmission Planning and Siting).
Subtitle B: Nuclear Energy		
Subtitle B, Section 311 National Commission on Nuclear Waste	Amends the Nuclear Waste Policy Act of 1982 to establish a National Commission on Nuclear Waste tasked with studying alternatives for managing nuclear waste and recommending to Congress legislative or other changes necessary to successfully and safely manage nuclear waste. The Commission shall submit its report within 2 years of this act’s enactment.	The ACES Act has no similar subtitle. Aside from the changes to the nuclear loan guarantee program (see above), the only nuclear-specific provision in ACESA is Title I, Subtitle J, Sec. 199A, which instructs the Secretary of Energy to conduct a study on the use of thorium-fueled nuclear reactors for national energy needs.
Subtitle B, Section 312 Sense of Congress Regarding the Strategic Role of Nuclear Energy	Expresses finding of Congresses that nuclear energy is a strategic technology whose expansion is essential, in particular for the reduction of greenhouse gas emissions.	
Subtitle B, Section 313 Advanced Fuel Recycling Process Development	Instructs DOE to conduct, among other activities, engineering and cost studies of advanced fuel reprocessing technologies.	
Subtitle B: Subtitle C—Improving United States Strategic Reserves		
Subtitle C, Section 321 Petroleum Product Reserve	Amends Section 154(a) of the Energy Policy and Conservation Act (EPCA) to include a requirement for 30 million barrels of refined petroleum product in the Strategic Petroleum Reserve (SPR). The section also	There is no similar section in the ACES Act.

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
	adds Section 155 which requires the DOE Secretary to submit a plan to include refined petroleum products in the SPR	
Subtitle C, Section 322 Petroleum Exchange Authority	Amends Section 160(a) of the EPCA to allow the DOE Secretary to accept monetary compensation for differences in volume, quality, or time of delivery of petroleum products. Also amends Section 167(b) which affects the funds used for acquisition, transportation, and injection of petroleum products into the SPR.	There is no similar section in the ACES Act.
Subtitle D: Federal Oil and Gas Development		
Part I: Oil and Gas Leasing		
Sec. 331. Oil and Gas Permit Processing Improvement Fund	Amends the Mineral Leasing Act by authorizing appropriations from the Fund for the coordination and processing of oil and gas use authorizations and for oil and gas inspection and enforcement on onshore Federal land.	There is no similar section in the ACES Act.
Sec. 332. Facilitation of coproduction of geothermal energy on oil and gas leases.	Amends the Geothermal Steam Act by adding that land under an oil and gas lease issued under the Mineral Leasing Act or the Mineral Leasing Act for Acquired Lands that has an approved permit for drilling and from which oil and gas production is occurring may be available for leasing by the holder of the oil and gas lease to provide for the coproduction of geothermal energy with oil and gas.	There is no similar section in the ACES Act.
PART II—OUTER CONTINENTAL SHELF		
Sec. 341. Implementation of inventory of outer Continental Shelf resources.	Amends EPACT to require a seismic inventory and analysis of oil and natural gas resources, as well as other potential resources, including alternative energy potential, navigation uses, fisheries, aquaculture uses, recreational uses, habitat, conservation, and military uses, for the waters of the Outer Continental Shelf (OCS). Provides an authorization of appropriations to carry out this section.	There is no similar section in the ACES Act.
Sec. 342. Alaska OCS permit processing coordination office.	Establishes a regional joint outer Continental Shelf lease and permit processing office for the Alaska outer Continental Shelf region. Designates the	There is no similar section in the ACES Act.

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
	assignment of qualified staff and authorizes necessary funds for the coordination and processing of oil and gas use authorizations.	
Sec. 343. Moratorium of oil and gas leasing in certain areas of the Gulf of Mexico.	Amends the Gulf of Mexico Energy Security Act of 2006 to establish a moratorium on oil and gas leasing or any related activity in the Eastern Planning Area that is within 45 miles of the coast line of Florida, with the exception of the Destin Dome Area and the Pensacola Area.	There is no similar section in the ACES Act.
Sec. 344. Repeal of outer Continental Shelf deep water and deep gas royalty relief.	Repeals sections 344 and 345 of EPACT which provided royalty relief for deep water oil and gas production in the Western and Central Planning Area of the Gulf of Mexico.	There is no similar section in the ACES Act.
<b>PART III—MISCELLANEOUS</b>		
Sec. 351. Minerals Management Service.	Amends the Federal Oil and Gas Royalty Management Act of 1982 to require that the Director of MMS be appointed by the President and approved by the Senate.	There is no similar section in the ACES Act.
Sec. 352. Preservation of geological and geophysical data.	Amends EPACT to extend the authorization of funds for preservation of geophysical and geological data through 2020.	There is no similar section in the ACES Act.
Sec. 353. Alaska natural gas pipeline.	Amends the Alaska Natural Gas Pipeline Act to increase the amount of the federal guarantee provided for financing the pipeline from \$18 billion to \$30 billion.	There is no similar section in the ACES Act.
Sec. 354. Denali National Park and Preserve natural gas pipeline.	Authorizes the Secretary of the Interior to issue right-of-way permits for a high-pressure natural gas transmission pipeline in non-wilderness areas within Denali National Park.	There is no similar section in the ACES Act.
Sec. 355. Exemption of trans-Alaska oil pipeline system from certain requirements.	Exempts the trans-Alaska oil pipeline system from the National Historic Preservation Act.	There is no similar section in the ACES Act.
Sec. 356. Procurement and acquisition of alternative fuels.	Amends Section 526 of EISA to require that no Federal agency shall enter into a contract for the purchase of an alternative or synthetic fuel unless the contract specifies that the lifecycle GHG emissions associated with the production and combustion of the fuel is less than or equal to the emissions from the equivalent fuel	There is no similar section in the ACES Act.

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
	produced from conventional petroleum sources, with several exceptions, including if the contract does not specifically require the contractor to provide a fuel from a nonconventional petroleum source.	
Sec. 357. Geologic Materials Archiving Grant Program.	Establishes a grant program within the Department of the Interior to provide grants to states, geological surveys, or regional consortiums to build, maintain, and operate centers to store geologic samples collected as a result of oil and gas exploration, mineral exploration, and geotechnical studies and research.	There is no similar section in the ACES Act.
<b>Subtitle E: Public Land Renewable Energy Deployment</b>		
Subtitle E, Section 361 Renewable energy Federal permit coordination.	Amends Sec. 365 of the EPO Act of 2005 (Pilot Project to Improve Federal Permit Coordination) by creating Renewable Energy Permit Coordination Offices designed to facilitate the development of renewable energy on federal lands in western BLM states. Establishes a “BLM Wind and Solar Energy Permit Processing Improvement Fund” that is supported with revenues generated by renewable projects on federal land. The fund will also be guaranteed \$10 million dollars for fiscal years 2009 to 2019.	There is no similar section in the ACES Act.
Subtitle E, Section 362 Extension of funding for implementation of Geothermal Steam Act of 1970.	Extends the period of funding—with funds coming from geothermal leases on federal lands— for the implementation of the Geothermal Steam Act of 1970 into 2020: implementation funds had originally been allotted for a 5-year period beginning after the enactment of the EPO Act of 2005.	There is no similar section in the ACES Act.
Subtitle E, Section 363 Programmatic environmental impact statements and land use planning.	Commissions the Secretary of the Interior to complete an environmental impact statement analyzing solar energy development on BLM lands and amend land use plans for renewable development accordingly within 18 months of enactment. Commissions the Secretary of Agriculture to do the same for wind and solar energy on NFS lands.	There is no similar section in the ACES Act.
Subtitle E, Section 364	Commissions the National Academy of	There is no similar section in

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
Report.	Sciences, in an arrangement with the Secretary of the Interior and the Secretary of Agriculture, to complete a study on the siting, development, and management of wind and solar energy projects on NFS and BLM lands within 18 months from the date of enactment.	the ACES Act.
Subtitle E, Section 365 Renewable energy development on brownfield sites.	Tasks the Secretary of Energy and the EPA Administrator with promoting renewable energy development on brownfield sites by providing technical assistance and other publicly available resources to state and local officials. Requires that a report examining policies and incentives for development on brownfields, along with data on the economic and environmental benefits of brownfield renewable energy development, be submitted no later than 1 year after enactment. Requires that regional stakeholder forums be held discussing the effects and difficulties of renewable energy development on brownfield sites.	There is no similar section in the ACES Act.
Subtitle E, Section 366 Development of solar and wind energy on public land.	Requires that the Secretary of Interior select 4 sites, 2 for solar and 2 for wind, and establish a leasing system for those sites. The Secretary must then compile a report and decide on what type of leasing program should be used, if any, for renewable energy development on federal lands. The section also outlines environmental and economic requirements that must be considered in any leasing program.	There is no similar section in the ACES Act.
<b>Subtitle F: Carbon Capture</b>		
Subtitle F, Section 371 Large-Scale Carbon Storage Program	DOE shall carry out a program of up to 10 projects competitively selected to demonstrate the commercial application of integrated systems for the capture, injection, monitoring, and long-term geological storage of carbon dioxide from industrial sources (including power plants). Authorizes DOE to indemnify demonstration project owners against liability for damages from carbon storage	Title I, Subtitle B of the ACES Act contains several provisions related to carbon capture and storage (CCS). The ACES Act provisions address regulation of geological carbon storage. The ACES Act funds a CCS demonstration and early deployment program via a

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
	projects in excess of financial insurance required of projects and to collect a fee from projects in order to cover expected costs associated with this indemnification.	surcharge on electricity sales. In addition, the ACES Act includes a program to subsidize commercial deployment of CCS using cap-and-trade allowance value. Finally, the ACES Act sets emission performance standards for new coal power plants that would require use of CCS.
Subtitle F, Section 372 Training Program for State Agencies	DOE shall establish a program to provide grants for employee training purposes to State agencies involved in permitting, management, inspection, and oversight of carbon capture, transportation, and storage projects.	There is no similar section in the ACES Act.
Subtitle G: Island Energy		
Subtitle G - Island Energy, Section 381 Affiliated Island Energy Independence Team	DOE shall establish energy teams of experts to assist in preparing energy action plans for affiliated islands (e.g., Guam, Puerto Rico, Virgin Islands, etc.) aimed at enhancing energy independence and improving energy efficiency.	Same as the ACES Act Section 273
Title IV – Energy Innovation and Workforce Development		
Subtitle A: Funding		
Subtitle A, Section 401 Funding	Authorizes appropriations for energy research, development, demonstration, and commercial application activities. These include a number of energy efficiency and conservation measures, distributed energy and electric energy system activities, and renewable energy research and deployment. Appropriation amounts begin at \$1,974,000,000 in 2010 and gradually increase to \$3,258,000,000 in 2013. The Energy Policy Act of 2005 is also amended to include additional funding for nuclear energy (\$998,000,000 in 2010, increasing each year up to \$1,592,000,000 in 2013) and fossil energy programs (\$1,074,000,000 in 2010, increasing each year up to \$1,668,000,000 in 2013) as well as funding for the Office of Science (\$5,800,000,000 in 2010, increasing each	There is no similar section in the ACES Act, however section 171 directs the Secretary of Energy to create Energy Innovation Hubs for the purpose of promoting commercial deployment of clean, indigenous energy alternatives to oil and other fossil fuels, reducing greenhouse gas emissions, and ensuring that the United States maintains a technological lead in these areas.

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
	year up to \$8,046,427,000 in 2013).	
<b>Subtitle B: Grand Energy Challenges Research Initiative</b>		
Subtitle B, Section 411 Grand Energy Challenges Research Initiative	Establishes a Grand Energy Challenges Research Initiative for the purposes of accelerating solutions to “grand energy challenges” through a multidisciplinary RD&D approach. DOE will award grants to or enter into cooperative agreements with research consortiums meeting certain membership criteria and that can demonstrate a plan for meeting at least one of the grand energy challenges identified in the Act.	See above description of the ACES Act section 171. In addition, section 172 directs the Director of the Advanced Research Projects Agency-Energy to distribute allowances to institutions of higher education, companies, research foundations, trade and industry research collaborations, consortia of these entities, or other appropriate research entities on a competitive basis. Allowances are to be used to achieve the goals of the Advanced Research Projects Agency-Energy.
<b>Subtitle C: Improvements to Existing Energy Research and Development Programs</b>		
Subtitle C, Section 421 Advanced Research Projects Agency Energy	Amends Section 5012 of the America COMPETES Act. This section allows the Advanced Research Projects Agency Energy (ARPA-E) to initiate and execute grants and other transactions separate from DOE.	There is no similar section in the ACES Act.
Subtitle C, Section 422 Domestic vehicle battery manufacturing research	Amends the United States Energy Storage Competitiveness Act of 2007. The Secretary shall conduct a research program on manufacturing batteries and battery systems to support electric drive vehicles to develop higher quality and less expensive batteries.	There is no similar section in the ACES Act.
Subtitle C, Section 423 Lightweight materials research and development	Amends section 651 of EISA 2007 and authorizes \$100 million for materials research	There is no similar section in the ACES Act.
Subtitle C, Section 424 Amendments to the Methane Hydrate Research and Development Act of 2000	Amends Sections 2 and 4 of the Methane Hydrate Research and Development Act of 2000 and designates methane as a GHG. Allows the Secretary to award grants to conduct research on methane hydrate as a source of energy and authorize appropriations from 2011 to 2015.	There is no similar section in the ACES Act.
Subtitle C, Section 425	The Secretary shall support programs of	There is no similar section in



<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
Program to exploit low-Btu gas and conserve helium resources	research, development, commercial application, and conservation to expand the domestic production of low-Btu gas and helium resources.	the ACES Act.
Subtitle C, Section 426 Office of Arctic Energy	Amends Title II of the DOE Organization Act. Establishes an Office of Arctic Energy within the Department to promote research and development suited to arctic regions. Authorizes appropriations from 2010 and thereafter.	There is no similar section in the ACES Act.
Subtitle C, Section 427 Ultra-deepwater and unconventional natural gas and other petroleum resources program	Amends Section 999A(a) of EPAct 2005. Establishes the Unconventional Domestic Natural Gas and Other Petroleum Resources Program to support related research.	There is no similar section in the ACES Act.
<b>Subtitle D: Energy Workforce Development</b>		
Subtitle D, Section 431 Best practices for energy career academies	Directs the Director of Science, Engineering, and Mathematics to disseminate best practices for energy technology career pathway programs in public secondary schools.	There is no similar section in the ACES Act.
Subtitle D, Section 432 Energy career academies	Establishes a grant program to support state creation or expansion of energy career academies through local education agencies. Grants are awarded on a competitive basis; states must submit applications for grant funding, including a plan for how funds will be used to support proposed career academies.	<p>Title IV, Subtitle B of the ACES Act includes provisions relevant to green jobs and worker training. Generally, these programs are restricted to energy efficiency and renewable energy, while ACELA includes programs aimed at supporting a broader range of energy sector jobs. ACELA also includes a more specific focus on programs at the community college level.</p> <p>Section 421 authorizes the Secretary of Education to award grants, on a competitive basis, to support the development of programs of study that are focused on emerging careers and jobs in renewable energy, energy efficiency,</p>

ACELA Subtitle and Section	Summary	Comparison to ACES Act
		<p>and climate change mitigation. Eligible partnerships for the development of these programs can include local education agencies, career or technical education schools, post-secondary institutions, and community representatives including businesses, labor organizations, and industry.</p> <p>Section 422 increases funding from \$125 million to \$150 million for training programs under the Workforce Investment Act of 1998.</p> <p>Sec. 424 requires the Secretary of Labor, within 180 days of enactment, to establish a green construction demonstration project aimed at promoting middle class careers among targeted workers while advancing efficiency and performance in the green construction sector.</p>
Subtitle D, Section 433 Energy utility trades program for community colleges	Establishes a program to expand and enhance community college programs relevant to energy utility industry careers. Community colleges with such programs are eligible for grants, awarded competitively based on a number of criteria; grants can be made in amounts of up to \$500,000/year for up to five years.	See above descriptions of the ACES Act sections 421-424.
Subtitle D, Section 434 Student awareness of energy career opportunities	Establishes programs to raise secondary and postsecondary student awareness of energy career opportunities.	Section 423 of the ACES Act requires the Secretary of Labor, in consultation with the Departments of Energy and Education, within 18 months of enactment, to develop an internet-based

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
		information and resources clearinghouse to aid career and technical education and job training programs for the renewable energy sectors.
Subtitle D, Section 435 Coordination of energy workforce training programs	Requires the Director of the Office of Science and Technology policy to submit to Congress, within one year of enactment of this Act, a report that surveys energy workforce training programs funded by federal agencies. This plan will include a strategy for training of a domestic workforce dedicated to energy production, transmission, and use.	There is no similar section in the ACES Act.
Subtitle D, Section 436 Direct hire authority	Grants new authority to the Secretary of Energy regarding the hiring of scientists, engineers, and technical personnel.	There is no similar section in the ACES Act.
Subtitle D, Section 437 Critical pay authority	Grants authority to the Secretary to establish, fix the pay of, and appoint individuals to critical positions in DOE meeting certain criteria.	There is no similar section in the ACES Act.
Subtitle D, Section 438 Reemployment of civilian retirees	Grants authority to the Secretary to reemploy civilian retirees without reduction of annuity.	There is no similar section in the ACES Act.
Subtitle D, Section 439 Sustainable energy training program for community colleges	Directs the Secretary of Energy and the Secretary to Labor to establish a sustainable energy workforce training and education program that awards grants to community colleges to provide training in areas such as alternative energy, energy efficiency, and other sustainable energy technologies. To carry out this program, the bill would appropriate \$100,000,000/year from 2010-2015.	There is no similar section in the ACES Act.
<b>Subtitle E: Strengthening Education and Training in the Subsurface Geosciences and Engineering for Energy Development</b>		
Subtitle E, Section 452 Strengthening Education and Training in the Subsurface Geosciences and Engineering for Energy Development	States that it is the policy of the United States to maintain and expand the human capital needed to sustain energy, ground water, and mineral resource security.	There is no similar section in the ACES Act.
Subtitle E, Section 453 Strengthening Education and Training in the	Directs the Secretary of the Interior to provide funds to institutions of higher learning to support research programs in	Relevant sections of the ACES Act do not contain provisions relating to

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
Subsurface Geosciences and Engineering for Energy Development	subsurface geosciences and engineering. In some cases, the Secretary may provide funds to consortia to support broader national or regional projects in subsurface geosciences or engineering.	geosciences and engineering.
Subtitle E – Strengthening Education and Training in the Subsurface Geosciences and Engineering for Energy Development, Section 454	Directs the Secretary of the Interior to provide funds to institutions of higher education to provide merit-based scholarships to students in geosciences or engineering programs. Preference for award of scholarships shall be given to veterans of the Iraq or Afghanistan wars.	
Subtitle E – Strengthening Education and Training in the Subsurface Geosciences and Engineering for Energy Development, Section 455	Directs the Secretary of the Interior to support (through funding to qualifying institutions) certain educational or training programs in subsurface geosciences and engineering careers, or in disciplines that provide essential support to these industries.	
Subtitle E – Strengthening Education and Training in the Subsurface Geosciences and Engineering for Energy Development, Section 456	Describes cost-sharing provisions for relevant research activities under this subtitle, and also stipulates appropriate uses and prohibitions of funds made available under this subtitle.	
Subtitle E – Strengthening Education and Training in the Subsurface Geosciences and Engineering for Energy Development, Section 457	Directs the Secretary of the Interior to establish an Advisory Committee on Geosciences and Geoengineering Education to provide advice on carrying out the provisions of this subtitle. The committee will be comprised of the Deputy Secretary of the Interior and 18 appointees from a range of institutions including universities and other educational institutions, industry, and other relevant fields. The committee will recommend a national plan for using the fiscal resources provided under this subtitle.	
Subtitle E – Strengthening Education and Training in the Subsurface Geosciences and Engineering for Energy Development, Sections 458-459	Section 458 allows the Secretary of the Interior to establish an office dedicated to carrying out this subtitle; Sec. 459 authorizes appropriations of \$200,000,000/year from 2010 through 2020 to fund this subtitle.	

ACELA Subtitle and Section	Summary	Comparison to ACES Act
Subtitle E – Strengthening Education and Training in the Subsurface Geosciences and Engineering for Energy Development, Section 460	Amends the Energy Policy Act of 2005 to require the Secretary of the Interior to work with the Secretary of Labor and the National Academies to conduct a study of the current and future availability of skilled workers in the energy and mineral resources fields (including in the oil, natural gas, coal, nonfuel mineral, ground water, nuclear, geothermal, solar, wind, and electric utility industries). The results of the study must be delivered to Congress by the end of 2012. \$2,000,000 would be appropriated to carry out this section.	
Subtitle F: Miscellaneous		
Sec. 471. Other Transactions Authority	Gives the Secretary of Energy authority to enter into transactions with public agencies, private organizations, or other persons as appropriate to functions vested in the Secretary. Certain information submitted to the Secretary as part of those transactions is protected from disclosure. The section is intended to facilitate the use of “nontraditional government contractors” by DOE.	The ACES Act does not address intellectual property rights for projects that result from the incentives in the bill.
Sec. 472. Definition of National Laboratory	The Energy Policy Act of 2005 is amended by defining “SLAC National Accelerator Laboratory.”	There is no similar section in the ACES Act.
Sec. 473. Protection of Results	Authorizes the Secretary of Energy to protect information developed through a transaction entered into by the DOE, for up to 5 years.	The ACES Act does not address intellectual property rights for projects that result from the incentives in the bill.
Sec. 474. Marine and Hydrokinetic Renewable Energy Research and Development	Provides assistance and incentives for marine and hydrokinetic energy R&D and commercialization. Provides for both DOE-run programs and grant-making. \$250 million is appropriated for each of fiscal years 2010 through 2021.	The ACES Act includes marine and hydrokinetic energy in the definition of renewable energy, so it is covered by all the renewable energy provisions and incentives in the bill, but the ACES Act has no specific designation for marine and hydrokinetic research and commercialization.
Title V: Energy Markets		

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
Sec. 501. Enhanced information on critical energy supplies.	<p>Directs DOE and CFTC to collect information identifying all oil inventories, and other physical oil assets that are owned by the 50 largest traders of oil contracts (including derivative contracts). Directs EIA to collect information quantifying the commercial storage capacity for oil and natural gas in the United States.</p> <p>Establishes a Financial Market Analysis Office in EIA responsible for analysis of the financial aspects of energy markets and will recommend to the EIA Administrator how to more fully integrate financial market information—including the role of energy futures contracts, energy commodity swaps, and derivatives in price formation for oil—into EIA analyses and forecasts.</p>	There is no similar section in the ACES Act.
Sec. 502. Working Group on Energy Markets	Creates a working group composed of the Secretary of Energy (Chair), Secretary of the Treasury, Chairman of FERC, Chairman of FTC, Chairman of SEC, Chairman CFTC and the Administrator of EIA to (1) investigate the effect of increased financial investment in energy commodities on energy prices and the energy security of the United States; (2) recommend to the President and Congress laws (including regulations) that may be needed to prevent excessive speculation in energy commodity markets; and (3) review energy security implications of developments in international energy markets.	Section 401 of the ACES Act requires the President to establish an interagency working group on carbon market oversight to make recommendations to the CFTC regarding proposed regulations.
Sec. 503. Study of Regulatory Framework for Energy Markets	<p>The Working Group shall conduct a study and report within one year to identify the factors that affect the pricing of crude oil and refined petroleum products, including an examination of the effects of market speculation on prices; and review and assess existing statutory authorities relating to the oversight and regulation of energy markets and the need for additional oversight.</p> <p>The study and the report should provide options and recommendations for Federal coordination of oversight and regulatory</p>	There is no similar section in the ACES Act.

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
	actions to ensure transparency of crude oil and refined petroleum product pricing and the elimination of excessive speculation.	
Sec. 504. Metadata Formats for Energy Prices	Improves the ability of retail rate utility customers to compare tariff options by making the most up-to-date electric utility tariffs available in an online format that can be read and manipulated electronically. Expands DOE's Tariff Analysis Project.	There is no similar section in the ACES Act.
Sec. 505. Emergency Powers under the Federal Power Act	Amends Section 202 of the Federal Power Act by allowing FERC to require by order the temporary suspension or modification of any rate, term, or condition of service if there is an emergency where a major disturbance in wholesale electric markets substantially disrupts, or threatens to substantially disrupt, the reliability of service to electric consumers; or is characterized by sudden and excessive price fluctuations in wholesale electric markets.	There is no similar section in the ACES Act.
Sec. 506. Cease-and-desist authority under the Federal Power Act	Amends Section 222 of the Federal Power Act by adding cease-and-desist authority. If FERC finds, on a proper showing, after notice and opportunity for a hearing, that any entity is manipulating or attempting to manipulate or has manipulated or attempted to manipulate any market for the sale of electric energy at wholesale in interstate commerce in violation of a rule or regulation, the Commission may enter an order requiring the entity to cease and desist from committing the violation.	The ACES Act Section 359 provides FERC the authority to issue cease and desist orders to entities found to be manipulating the energy markets. Prior to the cease and desist order, FERC would need to provide notice and opportunity for a hearing unless doing so is impracticable.
Sec. 507. Cease-and-desist authority under the Natural Gas Act	Amends Section 4A of the Natural Gas Act to provide FERC with cease-and-desist authority in the natural gas markets. If the Commission finds, on a proper showing, after notice and opportunity for a hearing, that any entity is manipulating or attempting to manipulate the market for the purchase, sale, or transportation of natural gas, the Commission may make and enter an order requiring the entity to cease and desist from committing the violation.	The ACES Act Section 359 is similar except that prior to the cease and desist order, FERC would need to provide notice and opportunity for a hearing unless doing so is impracticable or contrary to the public interest.
Sec. 508. De novo review	Section 22(b) of the Natural Gas Act is	There is no similar section in

<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
of civil penalties under the Natural Gas Act	amended by inserting before the final period the following: “in accordance with the same provisions as are applicable under section 31(d) of the Federal Power Act in the case of civil penalties assessed under section 31 of the Federal Power Act.”	the ACES Act.
<b>Title VI: Policy Studies and Reports</b>		
Sec. 601. Helium Gas Resource Assessment	Instructs the Secretary of the Interior, acting through the USGS, to conduct a comprehensive national helium gas resource assessment.	There is no similar section in the ACES Act.
Sec. 602. Potash Mineral Resource Assessment	Instructs the Secretary of the Interior, acting through the USGS, to conduct a comprehensive national potash resource assessment.	There is no similar section in the ACES Act.
Sec. 603. Better Energy Strategy for Tomorrow	Makes minor changes to the DOE Organization Act (42 U.S.C. 7321), for improved energy policy planning.	There is no similar section in the ACES Act.
Sec. 604. Addressing Climate Change in China and India	Calls for cooperation between the US, China, and India in addressing climate change. Creates an interagency task force for that purpose. Specifies several focus areas for the task force.	The ACES Act calls for equal stringency, whereas ACELA calls for action “commensurate with their national circumstances and levels of economic development.”
Sec. 605. Carbon Leakage Mitigation Study	Instructs the Secretary of Energy to conduct a comprehensive study of the potential for emissions leakage resulting from implementation of a cap and trade program to control greenhouse gas emissions.	The ACES Act includes several measures to control emissions leakage, and requires progress reports on those measures.
Sec. 606. Study of Foreign Fuels Subsidies	Instructs the Secretary of Energy to conduct a study of foreign fuel subsidies.	There is no similar section in the ACES Act.
Sec. 607. Assessment of Renewable Energy Resources	Commissions an assessment of renewable energy potential through 2030.	There is no similar section in the ACES Act.
Sec. 608. Efficiency Review of Electric Generation Facilities	Instructs the Secretary of Energy to conduct an efficiency review of electric generation facilities in the United States. Data is to be reported only anonymously and in aggregate. Also calls for a report of the results of the review, focusing particularly on a technology review.	No comparable section in the ACES Act, though it requires generation efficiency progress reports.
Sec. 609. Report on	Instructs the Secretary of Energy to	Section 551 of the ACES Act



<b>ACELA Subtitle and Section</b>	<b>Summary</b>	<b>Comparison to ACES Act</b>
Emissions of Alternative Transportation Fuels	conduct an R&D program to evaluate emissions and air quality effects of alternative fuels.	calls for a NAS study on transportation fuels that has some similar elements.
Sec. 610. Oil Savings	States that it is the policy of the United States to reduce dependence on foreign oil. Commissions a report from an interagency task force that describes options for oil savings, and follow-on reports every year thereafter.	There is no similar section in the ACES Act.