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### Energy Savings and Industrial Competitiveness Act of 2011

**Congress:** 112 (2011–2013, Ended)

**Chamber:** Senate

**Policy Area:** Energy

**Introduced:** May 16, 2011

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### Sponsor

**Name:** Sen. Shaheen, Jeanne [D-NH]

**Party:** Democratic • **State:** NH • **Chamber:** Senate

### Cosponsors (3 total)

Cosponsor	Party / State	Role	Date Joined
Sen. Portman, Rob [R-OH]	R · OH		May 16, 2011
Sen. Coons, Christopher A. [D-DE]	D · DE		May 18, 2011
Sen. Landrieu, Mary L. [D-LA]	D · LA		Jul 20, 2011

### Committee Activity

Committee	Chamber	Activity	Date
Energy and Natural Resources Committee	Senate	Reported By	Sep 6, 2011

### Subjects & Policy Tags

#### Policy Area:

Energy

### Related Bills

Bill	Relationship	Last Action
112 HR 4017	Related bill	<b>Feb 21, 2012:</b> Referred to the Subcommittee on Energy and Environment.
112 HR 3221	Related bill	<b>Oct 18, 2011:</b> Referred to the Subcommittee on Energy and Power.
112 S 398	Related bill	<b>May 18, 2011:</b> Placed on Senate Legislative Calendar under General Orders. Calendar No. 54.

Energy Savings and Industrial Competitiveness Act of 2011 - **Title I: Buildings - Subtitle A: Building Energy Codes** - (Sec. 101) Amends the Energy Conservation and Production Act (ECPA) to direct the Secretary of Energy (DOE) to: (1) support the development and updating of national model building energy codes for residential and commercial buildings; (2) encourage and support the adoption by states, Indian tribes, and local governments of building energy codes that meet or exceed the national codes; and (3) support full compliance with state and local codes.

Requires the Secretary to work with states, Indian tribes, local governments, and nationally recognized code and standards developers to support the updating of such codes by establishing aggregate energy savings targets. Authorizes the Secretary to establish separate targets for commercial and residential buildings. Establishes as the baseline for updating such codes the 2009 International Energy Conservation Code (IECC) for residential buildings and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2010 for commercial buildings.

Requires targets for specific years to be established and revised by the Secretary and coordinated with nationally recognized code and standards developers at a level that: (1) is at the maximum level of energy efficiency that is technologically feasible and life-cycle cost effective, while accounting for economic considerations; (2) is higher than the preceding target; and (3) promotes the achievement of high-performance buildings through high performance energy efficiency.

Requires the Secretary to establish initial targets within a year. Requires the Secretary to develop and adjust such targets in recognition of potential savings and costs relating to: (1) efficiency gains made in appliances, lighting, windows, insulation, and building envelope sealing; (2) advancement of distributed generation and on-site renewable power generation technologies; (3) equipment improvements for heating, cooling, and ventilation systems; (4) building management systems and SmartGrid technologies to reduce energy use; and (5) other technologies, practices, and building systems that the Secretary considers appropriate regarding building plug load and other energy uses. Requires the Secretary to consider the economic feasibility of achieving such targets and the potential costs and savings for consumers and building owners.

Requires the Secretary to provide technical assistance to model code-setting and standard development organizations, states, and Indian tribes.

Requires the Secretary, if the provisions of the IECC or ASHRAE Standard 90.1 regarding building energy use are revised, to make a final determination within a year after such revision on whether the revision will improve energy efficiency in buildings compared to the existing national model building energy code and meet such targets. Establishes the revised IECC or ASHRAE Standard 90.1 as the relevant national model building energy code if: (1) the Secretary's determination is affirmative, or (2) the applicable target has not been established. Requires the Secretary to publish notice of such targets, determinations, and codes and provide an opportunity for public comment.

Requires the Secretary, if the revised IECC or ASHRAE Standard 90.1 does not meet such targets, to establish a modified national model building code that meets such targets and achieves the maximum level of energy savings that is technologically feasible and life-cycle cost-effective while accounting for the economic considerations.

Sets forth provisions concerning requirements for states and Indian tribes to certify whether: (1) they have updated their codes, (2) their codes meet the national model building energy code or achieve equivalent or greater energy savings, and

(3) they have achieved full compliance with building energy codes.

Requires the Secretary to report annually on: (1) the status of national model building energy codes, (2) the status of code adoption and compliance by states and Indian tribes, (3) implementation of such updated codes, and (4) improvements in energy savings over time as a result of such targets.

Directs the Secretary to provide incentive funding to states and Indian tribes to: (1) implement this Act's requirements, (2) improve and implement building energy codes, and (3) promote building energy efficiency through the use of such codes.

Requires the Secretary to provide technical and financial support for the development of stretch codes and advanced standards for buildings for use as: (1) an option for adoption as a building energy code by local, tribal, or state governments; and (2) guidelines for energy-efficient building design. Requires such stretch codes and advanced standards to be designed to: (1) achieve substantial energy savings compared to the national model building energy codes; and (2) meet such targets, if available, at least three to six years in advance of such target years.

Requires the Secretary to study the feasibility, impact, economics, and merit of: (1) code improvements that would require that buildings be designed, sited, and constructed in a manner that makes the buildings more adaptable in the future to become zero-net-energy buildings after initial construction; (2) code procedures to incorporate measured lifetimes, not just first-year energy use, in trade-offs and performance calculations; and (3) legislative options for increasing energy savings from building energy codes, including additional incentives for effective state and local action, and verification of compliance with and enforcement of a code other than by a state or local government.

Prohibits any model building code or standard established under this Act from being binding on a state, local government, or Indian tribe.

Extends the authorization of appropriations for updating state building energy efficiency codes.

**Subtitle B: Worker Training and Capacity Building** - (Sec. 111) Directs the Secretary to provide grants to institutions of higher education and Tribal Colleges or Universities to establish Building Training and Assessment Centers to: (1) identify opportunities for optimizing energy efficiency and environmental performance in buildings; (2) promote the application of emerging concepts and technologies in commercial and institutional buildings; (3) train engineers, architects, building scientists, building energy permitting and enforcement officials, and building technicians in energy-efficient design and operation; (4) assist such entities in training building technicians; (5) promote research and development for the use of alternative energy sources and distributed generation to supply heat and power for buildings; and (6) coordinate with and assist state-accredited technical training centers, community colleges, Tribal Colleges or Universities, and local offices of the National Institute of Food and Agriculture and ensure services are provided to each U.S. region. Requires such building, training, and centers to be colocated with Industrial Assessment Centers.

**Title II: Building Efficiency Finance** - (Sec. 201) Amends the Energy Policy Act of 2005 to authorize the Secretary to provide credit support to ameliorate risks for a debt or repayment obligation incurred in connection with financing the installation and implementation of efficiency, advanced metering, distributed generation, or renewable energy technologies and measures in a building that are expected to increase the energy efficiency of such building. Authorizes credit support for commercial, multifamily residential, industrial, municipal, government, institution of higher education, school, and hospital facilities.

Requires the Secretary to prioritize: (1) the maximization of energy savings with the available credit support funding; (2) the establishment of a clear application and approval process that allows private building owners, lenders, and investors

to reasonably expect to receive credit support for projects that conform to guidelines; (3) the distribution of projects receiving credit support across states or geographical regions; and (4) projects designed to achieve whole-building retrofits.

Prohibits the Secretary from issuing credit support that exceeds: (1) 90% of the principal amount of the debt or repayment obligation that is the subject of the credit support, or (2) \$10 million for any project.

Authorizes the Secretary to charge reasonable fees for credit support.

**Title III: Industrial Efficiency and Competitiveness - Subtitle A: Manufacturing Energy Efficiency - (Sec. 301)**

Amends the Energy Policy and Conservation Act to direct the Secretary to provide grants for a revolving loan program to implement commercially available technologies or processes that significantly reduce systems energy intensity and improve U.S. industrial competitiveness. Requires grant recipients to: (1) be community and economic development lenders; (2) lead partnerships that include state government agencies and private financial institutions or other providers of loan capital; and (3) ensure that non-federal funds are provided to match federal funds provided to carry out such program. Limits the amount of cost-matched awards.

Requires projects funded by such grants to: (1) improve energy efficiency, including improvements in efficiency and use of water, power factor, or load management; and (2) enhance the industrial competitiveness of the United States.

(Sec. 302) Requires the Secretary, as part of the research and development activities of DOE's Industrial Technologies Program, to establish collaborative research and development partnerships with other programs within the Office of Energy Efficiency and Renewable Energy and the Office of Science that: (1) leverage the research and development expertise of such programs to promote early stage energy efficiency technology development; and (2) support the use of innovative manufacturing processes and applied research for development, demonstration, and commercialization of new technologies and processes to improve efficiency (including improvements in efficient use of water), reduce emissions, reduce industrial waste, and improve industrial cost-competitiveness. Requires the Secretary to report on such Program biennially.

(Sec. 303) Requires the Secretary to assess and report on commercially available, cost competitive, energy efficiency technologies that are not widely implemented within the United States for the energy-intensive industries of steel, aluminum, forest and paper products, food processing, metal casting, glass, chemicals, petroleum refining, cement, industrial gases, and information and communication technologies and for other industries that use large quantities of energy, emit large quantities of greenhouse gases, or use a rapidly increasing quantity of energy.

(Sec. 304) Amends the Energy Independence and Security Act of 2007 to rename the Energy-intensive Industries Program as the Future of Industry Program. Expands the list of partnership activities that are eligible for funding to include research to establish a road map process under which: (1) industry-specific studies are conducted to determine the intensity of energy use, greenhouse gas emissions, and waste and operating costs; (2) targets of opportunity are established for synergistic improvements in efficiency, sustainability, and resilience; and (3) public-private actionable plans are created to achieve roadmap goals.

Requires the Secretary to: (1) establish a Center of Excellence at up to 10 of the highest performing industrial research and assessment centers to coordinate with and advise the industrial research and assessment centers located in its region; (2) provide funding to establish additional centers at institutions of higher education that do not have industrial research and assessment centers; and (3) pay 50% of the cost of carrying out internship programs under which students work with or for industries, manufacturers, and energy service providers to implement the recommendations of such

centers.

Requires the Administrator of the Small Business Administration (SBA) to expedite consideration of applications from eligible small businesses for loans under the Small Business Act to implement recommendations of such centers.

(Sec. 305) Amends the Energy Policy and Conservation Act to require the Secretary, as part of DOE's Industrial Technologies Program, to carry out: (1) a sustainable manufacturing initiative under which the Secretary will conduct onsite technical assessments at the request of a manufacturer to identify opportunities for maximizing the energy efficiency of industrial processes and cross-cutting systems, preventing pollution and minimizing waste, improving efficient use of water in manufacturing processes, and conserving natural resources; and (2) an industry-government partnership program to research, develop, and demonstrate new sustainable manufacturing and industrial technologies and processes that maximize the energy efficiency of industrial systems, reduce pollution, and conserve natural resources.

(Sec. 306) Requires the Secretary to arrange with the National Academy of Sciences to study the development of advanced manufacturing capabilities for energy technologies.

(Sec. 307) Requires the Secretary to establish an advisory steering committee that includes national trade associations representing energy-intensive industries or energy service providers to provide recommendations on planning and implementation of DOE's Industrial Technologies Program.

**Subtitle B: Supply Star** - (Sec. 311) Amends the Energy Policy and Conservation Act to establish within DOE a Supply Star program to identify and promote practices, and recognize companies and products, that use highly efficient supply chains in a manner that conserves energy, water, and other resources. Authorizes the Secretary to award grants or other incentives for entities to: (1) study supply chain energy resource efficiency, and (2) demonstrate and achieve reductions in the energy resource consumption of commercial products through changes and improvements to the production supply and distribution chain of the products. Requires the Secretary to use funds to support professional training programs to develop and communicate methods, practices, and tools for improving supply chain efficiency. Prohibits: (1) climate change from being a factor in determining supply chain efficiency, and (2) outsourcing of American jobs in the production of a product from counting as a positive factor in determining such efficiency. Extends appropriations for such program for FY2012-FY2021.

**Subtitle C: Electric Motor Rebate Program** - (Sec. 321) Directs the Secretary to establish a rebate program for expenditures for the purchase and installation of a new constant speed electric motor control that reduces motor energy use by at least 5%.

**Subtitle D: Transformer Rebate Program** - (Sec. 331) Requires the Secretary to establish a program to provide rebates for expenditures made by building owners for the purchase and installation of a qualified new energy efficient transformer (a transformer that meets or exceeds the National Electrical Manufacturers Association (NEMA) Premium Efficiency designation as having 30% percent or fewer losses than the NEMA TP-1-2002 efficiency standard for a transformer of the same number of phases and capacity). Specifies rebate amounts of: (1) between \$5 and \$15 for three-phase transformers, , depending on capacity; and (2) 75% of such amounts for single-phase transformers of the same capacities.

**Title IV: Federal Agency Energy Efficiency** - (Sec. 401) Directs the Secretary to issue guidance for federal agencies to employ advanced tools for energy savings by using computer hardware, energy-efficiency software, and power management tools. Requires each federal agency to report to the Secretary on: (1) its plans for implementing such

guidance within the agency, and (2) estimated energy and financial savings from employing such tools.

(Sec. 402) Authorizes the Administrator of the General Services Administration (GSA), for any building project for which congressional approval has been received and the design completed, but the construction of which has not begun, to use appropriated funds to update the building's design to meet energy efficiency and other standards for new federal buildings. Prohibits funds for such purpose from exceeding 125% of the estimated energy or other cost savings associated with the updates as determined by a life-cycle cost analysis under the National Energy Conservation Policy Act.

(Sec. 403) Amends the National Energy Conservation Policy Act (NECPA) to require the Secretary to develop best practices for the advanced metering of energy use in federal facilities, buildings, and equipment.

(Sec. 404) Directs energy managers of federal facilities covered under NECPA to use a web-based tracking system to publish energy and water consumption data on an individual facility basis.

(Sec. 405) Amends NECPA to include as an "energy or water conservation measure" that is eligible for energy savings performance contracts a measure to support the use of electric vehicles or the fueling or charging infrastructure necessary for such vehicles.

(Sec. 406) Includes thermal energy within the meaning of "renewable energy" for the purposes of federal purchase requirements under such Act.

(Sec. 407) Requires the Secretary to conduct a feasibility study for closing a minimum of 800 federal data centers by October 1, 2015.

**Title V: Miscellaneous** - (Sec. 501) Amends the Energy Independence and Security Act of 2007 to reduce funding for the zero net energy commercial buildings initiative for FY 2012-FY2013.

### **Actions Timeline**

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- **Sep 6, 2011:** Committee on Energy and Natural Resources. Reported by Senator Bingaman with an amendment in the nature of a substitute. With written report No. 112-71.
- **Sep 6, 2011:** Placed on Senate Legislative Calendar under General Orders. Calendar No. 151.
- **Jul 14, 2011:** Committee on Energy and Natural Resources. Ordered to be reported with an amendment in the nature of a substitute favorably.
- **Jun 9, 2011:** Committee on Energy and Natural Resources. Hearings held. Hearings printed: S.Hrg. 112-273.
- **May 16, 2011:** Introduced in Senate
- **May 16, 2011:** Read twice and referred to the Committee on Energy and Natural Resources.