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### ENERGY SAVINGS AND INDUSTRIAL COMPETITIVENESS

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JUNE 3, 2013.—Ordered to be printed

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Mr. WYDEN, from the Committee on Energy and Natural Resources, submitted the following

### R E P O R T

[To accompany S. 761]

The Committee on Energy and Natural Resources, to which was referred the bill (S. 761) to promote energy savings in residential and commercial buildings and industry, and for other purposes, having considered the same, reports favorably thereon with amendments and recommends that the bill, as amended, do pass.

The amendments are as follows:

1. On page 2, before line 1, strike the items relating to title V and insert the following:

#### TITLE V—MISCELLANEOUS

Sec. 501. Offset.  
Sec. 502. Budgetary effects.  
Sec. 503. Advance appropriations required.

2. On page 23, lines 3 and 4, strike “this section” and insert “section 304”.

3. Beginning on page 25, strike line 4 and all that follows through page 29, line 22, and insert the following:

#### **SEC. 201. PRIVATE COMMERCIAL BUILDING EFFICIENCY FINANCING.**

(a) **IN GENERAL.**—The Secretary shall establish a program to be known as the “Commercial Building Energy Efficiency Financing Initiative” under which the Secretary shall provide grants to States (as defined in section 3 of the Energy Policy and Conservation Act (42 U.S.C. 6202)) to establish or expand programs to promote the financing of energy efficiency retrofit projects for private sector and commercial buildings.

(b) APPLICATIONS.—A State may apply to the Secretary for a grant under subsection (a) to establish or expand a program described in subsection (a), including—

- (1) a commercial Property Assessed Clean Energy (PACE) financing program;
- (2) a credit enhancement structure that is designed to mitigate the effects of default, including a loan guarantee program, loan loss reserve program, collateral or subordinated capital program, or other program;
- (3) a revolving loan fund;
- (4) a program to promote the use of energy savings performance contracts or utility energy service contracts, or both;
- (5) a utility on-bill financing or repayment program;
- (6) utility energy efficiency programs for all segments of the utility industry;
- (7) an interest buy-down program;
- (8) a secondary market financing program;
- (9) a leasing structure that recognizes energy costs and addresses split-incentives;
- (10) an educational program involving commercial lenders, energy service companies, commercial building owners, and other stakeholders established—
  - (A) to provide information to the community regarding program and project options and outcomes; and
  - (B) to build consensus on approaches to greater energy efficiency investments; and
- (11) any other activity that will significantly increase the total investment in, and energy savings from, building retrofit projects and programs.

(c) ADMINISTRATION.—

- (1) IN GENERAL.—A State receiving a grant under subsection (a) shall give a higher priority to programs and projects that—
  - (A) leverage private and non-Federal sources of funding; and
  - (B) aim explicitly to expand the use of energy efficiency project financing using private sources of funding, including philanthropic and other institutional investment.
- (2) OTHER ACTIONS.—A State receiving a grant under this section is encouraged—
  - (A) to consider establishing such other appropriate policies, incentives, or actions that will advance the purposes of this section; and
  - (B) to coordinate the activities described in subsections (a) and (d).

(d) LARGE COMMERCIAL BUILDING EFFICIENCY FINANCING INITIATIVES.—

- (1) IN GENERAL.—As part of this section, the Secretary shall conduct large commercial building efficiency financing initiatives to encourage States to promote the financing of energy efficiency retrofit projects

for larger private sector commercial, multifamily, and mixed use buildings.

(2) APPLICATIONS.—A State or a group of States may apply to the Secretary for a grant under this subsection to establish or expand programs to promote the purposes described in paragraph (1) through—

(A) the facilitation of energy performance contracts in commercial, multifamily, and mixed use buildings by providing guarantees that cover owner default risk, but do not cover technology and other risks that are borne by the contractor;

(B) actions by States to work together and with real estate owners, financiers, and other stakeholders to ensure multistate consistency, including common underwriting standards;

(C) minimum loan-to-value ratios;

(D) minimum debt-to-income coverage ratios;

(E) a green leasing program;

(F) a commercial Property Assessed Clean Energy (PACE) financing program; and

(G) any other activity that will significantly increase the total investment in, and energy savings from, building retrofit projects and programs.

(3) LEVERAGING PRIVATE SECTOR FINANCING.—A State receiving a grant under this subsection shall focus on leveraging private sources of funds and working with real estate lenders, financiers, and building owners to assist in expanding the reach of the program established under this subsection.

(4) MULTISTATE FACILITATION.—The Secretary shall consult with States and relevant stakeholders with applicable expertise to establish a process to identify eligible lenders, financiers, and building owners with real estate asset portfolios across multiple States that may be eligible for the efficiency financing initiatives conducted under this subsection.

(e) EVALUATION OF PROGRAMS.—The Secretary shall evaluate applications from States under this section on the basis of—

(1) the likelihood that a proposed program or activity will—

(A) be established or expanded;

(B) increase the total investment and energy savings of the retrofit projects to be supported; and

(C) increase the total investment and energy savings in a State or region in which investments and energy savings have the greatest potential for growth as compared to other States or regions;

(2) in the case of large commercial building efficiency financing initiatives conducted under subsection (d), evidence of multistate cooperation and coordination with real estate lenders, financiers, and owners; and

(3) other factors that will advance the purposes of this section, as determined by the Secretary.

(f) REPORTS.—

(1) IN GENERAL.—Not later than 2 years after the date of the receipt of a grant under this section, a State shall submit to the Secretary, the Committee on Energy and Natural Resources of the Senate, and the Committee on Energy and Commerce of the House of Representatives a report on the performance of programs and activities carried out with the grant.

(2) DATA.—

(A) IN GENERAL.—A State receiving a grant under this section and the Secretary shall cooperate to collect and share data resulting from programs and activities carried out under this section.

(B) DEPARTMENT DATABASES.—The Secretary shall incorporate data described in subparagraph (A) into appropriate databases of the Department of Energy, with provisions for the protection of confidential business data.

(g) FUNDING.—

(1) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section \$250,000,000, to remain available until expended.

(2) ALLOCATION.—Of the amount made available for a fiscal year under paragraph (1)—

(A) 50 percent of the amount shall be allocated on a formula-basis that is consistent with the formula used to allocate funds for State energy conservation programs established under part D of title III of the Energy Policy and Conservation Act (42 U.S.C. 6321 et seq.), as determined by the Secretary; and

(B) 50 percent of the amount shall be allocated to large commercial building financing initiatives conducted under subsection (d), with no individual State receiving more than 10 percent of the amount made available for a fiscal year under this subparagraph.

(3) STATE ENERGY OFFICES.—Funds provided to a State under this section shall be provided to the office within the State that is responsible for developing the State energy plan for the State under part D of title III of the Energy Policy and Conservation Act (42 U.S.C. 6321 et seq.).

(4) LOANS.—No funds made available under this section may be used to provide direct Federal loans for purposes of any of the programs or activities described in subsection (b).

4. Beginning on page 31, line 22, strike “CENTERS” and all that follows through “Section” on page 32, line 1, and insert “CENTERS.—Section”.

5. On page 32, lines 4 through 19, redesignate subparagraphs (A) through (D) as paragraphs (1) through (4), respectively, and indent appropriately.

6. On page 32, line 11, strike “subparagraph (A)” and insert “paragraph (1)”.

7. On page 37, line 15, strike “2108,” and insert “2108 of this Act and”.

8. On page 44, between lines 14 and 15, insert the following:

(e) **TERMINATION OF EFFECTIVENESS.**—The authority provided by this section terminates effective December 31, 2015.

9. On page 45, line 2, insert “operation and maintenance processes,” after “hardware,”.

10. Beginning on page 46, strike line 14 and all that follows through page 47, line 4, and insert the following:

**SEC. 403. NATURAL GAS AND ELECTRIC VEHICLE INFRASTRUCTURE.**

(a) **UTILITY INCENTIVE PROGRAMS.**—Section 546(c)(1) of the National Energy Conservation Policy Act (42 U.S.C. 8256(c)(1)) is amended by inserting “(including measures to support the use of natural gas vehicles and electric vehicles or the fueling or charging infrastructure necessary for natural gas vehicles and electric vehicles)” after “demand”.

(b) **ENERGY SAVINGS PERFORMANCE CONTRACTS.**—Section 804(4) of the National Energy Conservation Policy Act (42 U.S.C. 8287c(4)) is amended—

(1) in subparagraph (A), by striking “or” after the semicolon;

(2) in subparagraph (B), by striking the period at the end and inserting “; or”; and

(3) by adding at the end the following:

“(C) a measure to support the use of natural gas vehicles and electric vehicles or the fueling or charging infrastructure necessary for natural gas vehicles and electric vehicles, including the use of utility energy service contracts to support those vehicles or infrastructure.”.

11. On page 47, between lines 16 and 17, insert the following:

**SEC. 501. OFFSET.**

Section 422(f) of the Energy Independence and Security Act of 2007 (42 U.S.C. 17082(f)) is amended—

(1) in paragraph (3), by striking “and” after the semicolon at the end; and

(2) by striking paragraph (4) and inserting the following:

“(4) \$200,000,000 for fiscal year 2013;

“(5) \$130,000,000 for fiscal year 2014; and

“(6) \$100,000,000 for each of fiscal years 2015 through 2017.”.

12. On page 47, line 17, strike “501” and insert “502”.

13. On page 48, line 1, strike “502” and insert “503”.

## PURPOSE

The purpose of S. 761 is to promote energy savings in residential and commercial buildings and industry, and in Federal, State, local, and Tribal governments.

## BACKGROUND AND NEED

Since the 1973 oil embargo, and in every subsequent energy crisis, studies have shown that the United States could save energy and money by investing in energy efficiency. Today, efficient energy use and deployment of more efficient technologies are critical to domestic economic competitiveness and job creation. In addition, efficient energy use reduces pollution associated with energy production. Nevertheless, many existing cost-effective energy efficiency technologies and programs have not been installed or implemented.

A National Academy of Sciences study released in 2010, *Real Prospects for Energy Efficiency in the United States*, on the potential for energy efficiency in commercial and residential buildings, transportation, and manufacturing, found that greater deployment of commercially available energy efficiency technologies could more than offset the Energy Information Administration's projected increases in U.S. energy consumption through 2030.

The Energy Savings and Industrial Competitiveness Act of 2013 sets out a national strategy to increase the use of energy efficiency technologies in the residential, commercial, federal, and industrial sectors of our economy. The legislation uses a variety of low-cost tools to reduce barriers for private sector efficiency investments and to drive the adoption of commercially available technologies that will reduce energy costs for individual consumers and businesses, make the U.S. more energy independent, our economy more competitive, and reduce environmental impacts.

In 2011, residential and commercial buildings used 41 percent of the nation's energy, and the Federal Government is the largest single energy consumer in the United States. S. 761 targets these three sectors for energy efficiency improvements that will contribute to economic growth throughout the country.

## LEGISLATIVE HISTORY

S. 761 was introduced on April 18, 2013, by Senators Shaheen and Portman. Senators Ayotte, Collins, Coons, and Warner are co-sponsors. The Committee on Energy and Natural Resources held a legislative hearing on April 23, 2013, and the bill was ordered favorably reported with amendments on May 8, 2013.

The Committee considered similar legislation, S. 1000, during the 112th Congress. S. 1000 was introduced by Senators Shaheen and Portman on May 16, 2011, heard by the Committee on Energy and Natural Resources on June 9, 2011 (S. Hrg. 112-273), and reported favorably on September 6, 2011 (S. Rept. 112-71).

## COMMITTEE RECOMMENDATION

The Senate Committee on Energy and Natural Resources, in open business session on May 8, 2013, by voice vote of a quorum present recommends that the Senate pass S. 761, if amended as de-

scribed herein. Senators Lee, Flake, and Scott asked to be recorded as voting no.

#### COMMITTEE AMENDMENTS

During its consideration of S. 761, the Committee approved 13 perfecting amendments offered by Senator Portman.

The first amendment makes conforming changes to the table of contents in section 1(b).

The second amends section 307 of the Energy Conservation and Production Act to clarify that any model building code or standards established under section 304 are voluntary and not binding on a State, local government, or Indian tribe as a matter of federal law.

The third amends section 201 of the bill to include a large commercial and multifamily building efficiency financing initiative for the states.

The fourth, fifth, and sixth are clerical amendments that re-designate subparagraphs of section 302 of the bill as paragraphs.

The seventh is a technical correction to the citation of section numbers in other laws.

The eighth terminates the energy efficient transformer rebate program in section 331 of the bill.

The ninth adds “operation and maintenance processes” to the list of energy-saving information and communications technologies to be employed by Federal agencies under section 401(a) of the bill.

The tenth amends section 403 of the bill to clarify that Federal agencies are authorized to use both Energy Service Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs) to install electric and natural gas vehicle charging infrastructure.

The eleventh adds a new section 501 that offsets the authorization of the appropriations authorized by the bill by reducing the authorization of appropriations for the Zero-Net-Energy Commercial Buildings Initiative authorized by section 422(f) of the Energy Independence and Security Act of 2007 (42 U.S.C. 17082(f)).

The twelfth and thirteenth re-numbers sections 501 and 502 as 502 and 503.

#### SECTION-BY-SECTION ANALYSIS

##### TITLE I—BUILDINGS

###### *Subtitle A—Building energy codes*

*Section 101(a)* amends section 303 of the Energy Conservation and Production Act (ECPA) (42 U.S.C. 6832) to add three new definitions.

*Section 101(b)* amends section 304 of ECPA (42 U.S.C. 6833), relating to state building energy efficiency codes.

*ECPA section 304(a)*, as amended, directs the Secretary of Energy to encourage and support the adoption of building energy codes by States, Indian tribes, and local governments that meet or exceed the model building energy codes, and to support full compliance with these codes.

*ECPA section 304(b)(1)*, as amended, requires that not later than 2 years after the date on which a model building energy code is updated, each State or Indian tribe shall certify whether or not it has updated the energy provisions of their building code. This certifi-

cation shall include a demonstration of whether the codes meet or exceed the savings of the updated model code or the targets established under section 307(b)(2). If a model code is not updated by a target date established under section 307(b)(2)(D), each State or Indian tribe shall, not later than 2 years after the specified date, certify whether or not they have reviewed and updated their codes to meet or exceed the target in section 307(b)(2).

*ECPA section 304(b)(2)*, as amended, requires that, not later than 90 days after a State or Indian tribe certification under paragraph (1), the Secretary shall determine whether their code provisions meet the criteria specified in paragraph (1) and, if the determination is positive, validate the certification.

*ECPA section 304(c)*, as amended, requires that, not later than 3 years after the date of a certification under subsection (b), each State and Indian tribe shall certify whether or not they have achieved compliance with the applicable building energy code or made significant progress toward achieving compliance. If the State or Indian tribe certifies progress toward achieving compliance, they shall repeat the certification until they certify compliance. A State or Indian tribe shall be considered to have achieved full compliance if at least 90 percent of building space covered by the code in the preceding year substantially meets or exceeds all the requirements of the applicable code specified, or the estimated excess energy use of buildings that did not meet the applicable code specified in the preceding year, compared to a baseline of comparable buildings that meet this code, is not more than 5 percent of the estimated energy use of all buildings covered by this code during the preceding year. A State or Indian tribe shall be considered to have made significant progress toward achieving compliance if the State or Indian tribe has developed and is implementing a plan for achieving compliance during the 8-year-period beginning on the date of enactment, including annual targets for compliance and active training and enforcement programs; and has met the most recent target.

A certification shall include documentation of the rate of compliance based on independent inspections of a random sample of the buildings covered by the code in the preceding year, or an alternative accurate method. Not later than 90 days after a State or Indian tribe certification of compliance, the Secretary shall determine whether they are in compliance, including accurate measurement, and if so, validate the certification.

*ECPA section 304(d)*, as amended, requires that a State or Indian tribe that has not made a timely certification under (b) or (c) shall submit a report on their status and a plan for meeting the requirements and submitting the certification. For any State or Indian tribe for which the Secretary has not certified compliance, the lack of certification may be a consideration for Federal support authorized under this section. In any State or Indian tribe for which the Secretary has not certified compliance, a local government may be eligible for Federal support by meeting the certification requirements. The Secretary shall submit an annual report to Congress on: the status of model building energy codes; the status of code adoption and compliance in the States and Indian tribes; implementation of this section; and improvements in energy savings. The report shall also include estimates of impacts of past action and po-



tential impacts of further action on: upfront financial and construction costs; cost benefits and returns; and lifetime energy use for buildings; resulting energy costs to individuals and businesses; and resulting overall annual building ownership and operating costs.

*ECPA section 304(e) and (f)*, as amended, requires the Secretary to provide technical assistance and incentive funding to States and Indian tribes to implement this section. Additional funding shall also be provided to States, Indian Tribes, or local governments to achieve and document full compliance with residential and commercial building energy codes, a portion of this funding may be used by the State for training purposes.

*ECPA section 304(g)*, as amended, requires the Secretary to provide technical and financial support for the development of stretch codes, advanced standards and targets for residential and commercial buildings as an option for building energy codes and guidelines for efficient building design.

*ECPA section 304(h)*, as amended, requires the Secretary to do a study of: code improvements so that, in the future, buildings might become zero-net-energy after initial construction; code procedures to incorporate measured lifetime energy use; and legislative options for increasing energy savings from building energy codes.

*ECPA section 304(i) and (j)*, as amended, state that nothing in this section or section 307 supersedes or modifies the application of sections 321 through 346 of the EPCA, and that \$200,000,000 is authorized to be appropriated to carry out this section and section 307.

*Section 101(c)* amends section 305 of the Energy Conservation and Production Act (ECPA) (42 U.S.C. 6834) by striking “voluntary building energy code” each place it appears in subsections (a)(2)(B) and (b) and inserting “model building energy code”.

*Section 101(d)* amends section 307 of the ECPA (42 U.S.C. 6836) regarding model building energy codes.

*ECPA section 307(a) and (b)*, as amended, directs the Secretary to support the updating of model building energy codes to achieve aggregate energy savings targets. The Secretary shall work with State, Indian tribes, local governments, nationally recognized code and standards developers, and others to support the updating of model building energy codes by establishing one or more aggregate energy savings targets using a baseline code of 2009 IECC for residential buildings and ASHRAE Standard 90.1–2010 for commercial buildings. The Secretary may establish separate targets for commercial and residential buildings. Targets for specific years shall be established and revised by the Secretary through rulemaking at the maximum level that is technologically feasible and life-cycle cost effective, while accounting for specified economic considerations, including a return on investment analysis. Initial targets shall be established no later than 1 year after the date of enactment and the Secretary may set later target years if the Secretary determines that a target cannot be met. When establishing targets the Secretary shall comply with the Small Business Regulatory Enforcement Fairness Act of 1996. Finally, the Secretary shall develop and adjust targets in recognition of savings and costs relating to efficiency gains made in appliances, lighting, windows, insulation, and building envelope sealing; advancement of distributed generation and on-site renewable power generation technologies; equip-

ment improvements for heating, cooling, and ventilation systems; building management systems and SmartGrid technologies to reduce energy use; and other factors the Secretary considers appropriate.

*ECPA section 307(c)*, as amended, directs the Secretary to provide technical assistance to model building energy code-setting and standard development organizations. The Secretary may submit code amendment proposals to such organizations to enable the codes to meet the targets and the Secretary shall make publicly available the entire calculation methodology used to estimate the energy savings of codes, standard proposals and revisions.

*ECPA section 307(d)*, as amended, provides that if the IECC or ASHRAE 90.1 building energy codes are revised, then the Secretary shall make a preliminary determination not later than 90 days after the date of the revision, and a final determination not later than 15 months after the date of the revision, on whether or not the revision will improve building efficiency compared to the existing code and meet the targets under subsection (b)(2). If the Secretary makes a preliminary determination that a code or standard does not meet the targets under subsection (b)(2), then the Secretary may provide the code or standard developer with proposed changes that would result in a code that meets the targets. On receipt of these proposed changes, the code or standard developer shall have an additional 270 days to accept or reject the proposed changes to the code or standard and for the Secretary to make a final determination.

*ECPA section 307(e)*, as amended, provides that, in carrying out this section, the Secretary shall publish notice of targets and supporting analysis in the Federal Register and shall provide an opportunity for public comment.

*ECPA section 307(f)*, as amended, states that notwithstanding any other provision of this section, any model building code or standard established under section 304 shall not be binding on a State, local government, or Indian tribe as a matter of Federal law.

#### *Subtitle B—Worker training and capacity building*

*Section 111(a)* directs the Secretary to provide grants to institutions of higher education and Tribal Colleges or Universities to establish building training and assessment centers to: identify opportunities for optimizing efficiency and environmental performance in buildings; promote the application of emerging concepts and technologies in commercial and institutional buildings; train building professionals; assist institutions of higher education and Tribal Colleges or Universities in training building technicians; promote research and development for the use of alternative energy and distributed generation to supply heat and power for buildings; and to 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 appropriate services are provided under this section to each region of the United States.

*Section 111(b)* directs the Secretary to coordinate this program with the industrial research and assessment centers program and with other Federal programs to avoid duplication of effort, and to the maximum extent practicable, collocate building, training, and

assessment centers under this section with Industrial Assessment Centers.

TITLE II—PRIVATE COMMERCIAL BUILDING EFFICIENCY FINANCING

*Section 201(a)* directs the Secretary to establish the “Commercial Building Energy Efficiency Financing Initiative” under which the Secretary shall provide grants to States to establish or expand programs to promote the financing of energy efficiency retrofit projects for private sector commercial buildings.

*Section 201(b)* provides that a State may apply to the Secretary for a grant to establish or expand a program described in (a) that would significantly increase the total investment in, and energy savings from, commercial building retrofit projects and programs.

*Section 201(c)* provides that a State receiving a grant under subsection (a) shall give a higher priority to programs and projects that leverage private and non-Federal sources of funding and that aim to expand the use of private funding including philanthropic and other institutional investment. Additionally, a State receiving a grant under this section is encouraged to consider establishing other appropriate policies, incentives, or actions that will advance the purposes of this section, and to coordinate the activities described in subsections (a) and (d).

*Section 201(d)* provides that as a part of this section, the Secretary shall conduct large commercial building efficiency financing initiatives to encourage States to promote the financing of energy efficiency retrofit projects for larger private sector commercial, multi-family, and mixed use buildings. A State or a group of States may apply to the Secretary for a grant under this subsection to promote the purposes of this subsection through: energy performance contracts that cover owner default risk; actions by States to work together and with real estate owners, financiers, and other stakeholders to ensure multistate consistency; and other activities to increase investment and energy savings. Additionally, a State receiving a grant under this subsection shall leverage private funds and work with real estate lenders, financiers, and building owners to expand the reach of the program. Finally, the subsection requires the Secretary to consult with States and other relevant stakeholders to establish a process to identify eligible lenders, financiers, and building owners with real estate asset portfolios located in multiple States that may be eligible for financing initiatives under this subsection.

*Section 201(e)* provides that the Secretary shall evaluate applications from States under this section on the basis of the likelihood that a proposed program or activity will be established or expanded; increase the total investment and energy savings of the retrofit projects to be supported; in the case of large commercial building efficiency financing initiatives conducted under subsection (d), evidence of multistate cooperation and coordination among real estate lenders, financiers and owners; and other factors that will advance the purposes of this section.

*Section 201(f)* provides that not later than 2 years after receipt of a grant under this section, a State shall submit to the Secretary and to committees of Congress a report on the performance of activities carried out with the grant. Additionally, the subsection requires that a State receiving a grant and the Secretary shall co-

operate to collect and share data resulting from programs and activities under this section, and that the Secretary shall incorporate this information, with provisions for the protection of confidential business data, into appropriate databases of the Department.

*Section 201(g)* provides an authorization for appropriations of \$250,000,000, to remain available until expended. Of the amount made available for any fiscal year, 50 percent shall be allocated on a formula-basis consistent with the allocation formula for State energy conservation programs established under part D of title III of EPCA (42 U.S.C. 6321 et seq.), and 50 percent shall be allocated to large commercial building financing initiatives conducted under subsection (d), with no individual State receiving more than 10 percent of the available amount. Additionally, funds provided to a State under this section shall be provided to the office within the State that is responsible for developing the State energy plan for the State under part D of title III of the EPCA and no funds made available may be used to provide direct Federal loans.

#### TITLE III—INDUSTRIAL EFFICIENCY AND COMPETITIVENESS

##### *Subtitle A—Manufacturing energy efficiency*

*Section 301* provides that the purposes of this subtitle are to reform and reorient the industrial efficiency programs of the Department of Energy; establish a clear and consistent authority for industrial efficiency programs at the Department; accelerate the demonstration and deployment of efficiency technologies; stimulate domestic economic growth and strengthen public-private partnerships.

*Section 302(a) and (b)* amends section 452 of the Energy Independence and Security Act of 2007 (EISA) (42 U.S.C. 17111) to redesignate the heading “Future of Industry Program” and to insert a definition for “energy service provider.”

*Section 302(c)* amends section 452(e) of EISA to direct the Secretary to increase the value and capabilities of the Industrial Research and Assessment Centers by requiring them to coordinate with the Manufacturing Extension Partnership Centers of the National Institute of Standards and Technology, the Building Technologies Program of the Department, and to increase partnerships with the National Laboratories. Additionally, section 452(e) of EISA, as amended, directs the Secretary to provide funding for outreach activities by the Centers to inform small- and medium-sized manufacturers of services available and to coordinate Center activities with those of Federal and State governments, utilities, energy service providers and others. Amended section 452(e) also directs the Secretary to pay a 50 percent Federal share for internships for students to work with businesses to implement Center recommendations. Amended section 452(e) would further direct the Administrator of the Small Business Administration to expedite consideration of applications from small businesses for loans to implement recommendations of the Centers. Finally, the amended section 452(e) directs the Secretary to establish an advisory steering committee to provide recommendations regarding the Advanced Manufacturing Office of the Department.

*Section 303(a)* amends part E of title III of the Energy Policy and Conservation Act (EPCA) (42 U.S.C. 6341–6345) by adding a new

section 376 at the end to establish a Sustainable Manufacturing Initiative.

*EPCA section 376(a)*, as amended, directs the Secretary, upon the request of a manufacturer, to conduct onsite technical assessments to identify energy efficiency opportunities in industrial processes and to achieve other objectives.

*EPCA section 376(b)*, as amended, directs that the Secretary shall carry out this Initiative in coordination with the private sector and appropriate agencies including the National Institute of Standards and Technology.

*EPCA section 376(c)*, as amended, directs the Secretary, as part of the industrial efficiency programs of the Department, to carry out a joint industry-government partnership program to research, develop, and demonstrate new sustainable manufacturing technologies and processes that maximize the energy efficiency of industrial plants, reduce pollution, and conserve natural resources.

*Section 303(b)* amends the table of contents of EPCA to add the new section 376.

*Section 304* makes conforming amendments.

#### *Subtitle B—Supply Star*

*Section 311* adds a new section 324B at the end of Part B of Title III of EPCA.

*EPCA section 324B(a)* establishes a Supply Star program to identify and promote practices, recognize companies and recognize products that use highly efficient supply chains that conserve energy, water, and other resources.

*EPCA section 324B(b)* directs the Secretary to consult with other appropriate agencies and coordinate efforts with the Energy Star program.

*EPCA section 324B(c)* directs the Secretary to promote practices, recognize companies, and products that comply with the Supply Star program as the preferred practices, companies, and products in the marketplace for maximizing supply chain efficiency; work to enhance industry and public awareness of the Supply Star program; collect and disseminate data on supply chain energy resource consumption, and undertake other duties.

*EPCA section 324B(d)* provides that, in any evaluation of supply chain efficiency carried out by the Secretary, the Secretary shall consider energy consumption and resource use throughout the entire lifecycle of a product, including production, transport, packaging, use, and disposal.

*EPCA section 324B(e)* provides that the Secretary may award grants or other incentives on a competitive basis to eligible entities for the purposes of studying supply chain energy resource efficiency and demonstrating and achieving reductions in energy resource consumption of commercial products through improvements to the production supply and distribution chain. This subsection further provides that any information generated shall be used to inform the development of the Supply Star Program.

*EPCA section 324B(f)* directs the Secretary to use funds to support professional training programs to develop and communicate methods, practices, and tools for improving supply chain efficiency.

*EPCA section 324B(g)* provides that for purposes of this section, the impact on climate change shall not be a factor in determining supply chain efficiency.

*EPCA section 324B(h)* provides that for the purposes of this section, the outsourcing of American jobs in the production of a product shall not count as a positive factor in determining supply chain efficiency.

*EPCA section 324B(i)* provides that there are authorized to be appropriated to carry out this section \$10,000,000 for fiscal years 2014 through 2023.

*Subtitle C—Electric motor rebate program*

*Section 321(a) and (b)* directs the Secretary to establish a rebate program for the purchase and installation of new constant speed electric motor controls that reduce a motor's energy use by at least 5 percent. The rebate would be worth \$25 per horsepower of the motor.

*Section 321(c)* authorizes appropriations of \$5,000,000 for each of fiscal years 2014 and 2015.

*Subtitle D—Energy efficient transformer rebate program*

*Section 331(a) and (b)* provides a definition for the term “qualified transformer” and directs the Secretary to establish a program under which rebates are provided for the purchase and installation of a new energy efficient transformers.

*Section 331(c)* provides for applications as the Secretary may require and for the authorized amount of rebates.

*Section 331(d) and (e)* authorizes appropriation of \$5,000,000 for each of fiscal years 2014 and 2015, and terminates authority for the Program on December 31, 2015.

TITLE IV—FEDERAL AGENCY ENERGY EFFICIENCY

*Section 401* requires Federal Agencies to develop a plan for adopting personal computer power savings techniques and to submit a report on plans and savings.

*Section 402* allows the Administrator of General Services to use appropriated funding to update plans for any project that has been approved by Congress and for which construction has not begun. The funds would be used to update the building design to meet energy efficiency standards established in the Energy Conservation and Production Act. Funds used for this purpose could not exceed 125 percent of the estimate energy or other cost savings resulting from the design changes.

*Section 403* amends sections 546(c)(1) and 804(4) of the National Energy Conservation Policy Act (NECPA) (42 U.S.C. 8256(c)(1) and 42 U.S.C. 8287c(4)) to authorize the use of energy savings performance contracts and utility energy service contracts for projects to support the use of natural gas vehicles and electric vehicles or the fueling or charging infrastructure necessary for natural gas vehicles and electric vehicles.

*Section 404* directs that the Administrator for the Office of E-Government and Information Technology within the Office of Management and Budget shall develop and publish a goal for the total amount of planned energy and cost savings by the Federal Govern-

ment through the consolidation of Federal data centers during the 5-year period beginning on the date of enactment of this Act.

TITLE V—MISCELLANEOUS

*Section 501* provides offsets for the authorizations in the bill.

*Section 502* states that the budgetary effects of the bill under the Statutory Pay-As-You-Go regulations shall be determined by the latest statement on the bill.

*Section 503* specifies that authorizations for appropriations shall apply only if such sums are actually appropriated.

COST AND BUDGETARY CONSIDERATIONS

The following estimate of costs of this measure has been provided by the Congressional Budget Office:

*S. 761—Energy Savings and Industrial Competitiveness Act of 2013*

Summary: S. 761 would authorize appropriations to support a variety of activities aimed at promoting energy efficiency in certain sectors of the economy. To offset a portion of the new discretionary spending authorized under the bill, S. 761 would reduce amounts authorized to be appropriated for an existing program aimed at promoting energy-efficient commercial buildings. Assuming appropriation actions consistent with the bill, CBO estimates that implementing S. 761 would have a net discretionary cost of \$210 million over the 2014–2018 period.

In addition, S. 761 would expand federal agencies’ authority to enter into certain long-term contracts to acquire certain types of vehicles and related infrastructure. CBO estimates that enacting the proposed expansion would increase direct spending by \$350 million over the 2014–2023 period. Because the bill would affect direct spending, pay-as-you-go procedures apply. Enacting S. 761 would not affect revenues.

S. 761 would impose an intergovernmental mandate, as defined in the Unfunded Mandates Reform Act (UMRA), by requiring states and tribal governments to certify to the Department of Energy (DOE) whether or not they have updated residential and commercial building codes to meet standards developed by building efficiency organizations. CBO estimates that the cost of that mandate would fall well below the annual threshold established in UMRA (\$75 million in 2013, adjusted annually for inflation).

S. 761 would impose no private-sector mandates as defined in UMRA.

Estimated cost to the Federal Government: The estimated budgetary impact of S. 761 is shown in the following table. The costs of this legislation fall primarily within budget functions 050 (defense), 270 (energy), and 800 (general government).

	By fiscal year, in millions of dollars—					
	2014	2015	2016	2017	2018	2014–2018
CHANGES IN SPENDING SUBJECT TO APPROPRIATION						
New Authorizations:						
Estimated Authorization Level .....	490	30	20	20	20	580
Estimated Outlays .....	151	164	136	79	45	575

	By fiscal year, in millions of dollars—					
	2014	2015	2016	2017	2018	2014–2018
<b>Reduced Authorizations:</b>						
Authorization Level .....	–70	–100	–100	–100	–200	–570
Estimated Outlays .....	–20	–50	–76	–91	–128	–365
<b>Total Proposed Changes:</b>						
Estimated Authorization Level .....	420	–70	–80	–80	–180	10
Estimated Outlays .....	131	114	60	–12	–83	210
<b>CHANGES IN DIRECT SPENDING <sup>a</sup></b>						
Estimated Budget Authority .....	30	30	30	35	35	160
Estimated Outlays .....	30	30	30	35	35	160

<sup>a</sup> CBO estimates that enacting S. 761 would increase direct spending by \$350 million over the 2014–2023 period.

**Basis of estimate:** For this estimate, CBO assumes that S. 761 will be enacted near the start of fiscal year 2014. Assuming appropriation action consistent with the bill, CBO estimates that implementing S. 761 would have a net discretionary cost of \$210 million over the next five years. CBO also estimates that enacting S. 761 would increase direct spending by \$350 million over the next 10 years.

#### *Spending subject to appropriation*

S. 761 would authorize appropriations for a variety of programs and activities aimed at promoting energy efficiency, particularly within residential and commercial buildings and the industrial sector. The bill also would reduce existing authorizations of appropriations for related activities.

**New Authorizations.** S. 761 would specifically authorize appropriations totaling \$480 million over the 2014–2018 period for DOE to carry out a variety of activities directed toward improving the energy efficiency of buildings and industrial systems. (By comparison, DOE received an appropriation of roughly \$317 million for activities related to building and industrial technologies in 2013.) Those specified authorizations include:

- \$250 million for grants to states to establish or expand programs to finance energy-efficient retrofits at certain privately owned buildings;
- \$200 million for technical assistance to states, tribes, and other organizations to improve and implement energy standards for residential and commercial buildings and to update model building codes;
- \$20 million to provide rebates to purchasers of certain energy-efficient transformers and devices that reduce energy consumed by motors; and
- \$10 million for grants and initiatives to promote efforts to enhance the energy efficiency of supply chains involved in commercial manufacturing processes.

In addition, CBO estimates that implementing other provisions of S. 761 that would direct DOE to expand ongoing efforts by DOE and the General Services Administration (GSA) related to building technologies and industrial energy efficiency would require appropriations totaling \$100 million over the 2014–2018 period. Those amounts would support programs to provide outreach and technical assistance to industrial manufacturers, carry out research and development on energy-efficient technologies and practices within the



industrial manufacturing sector, and to update and implement designs for projects at federal buildings that meet certain energy-efficiency requirements.

In total, assuming appropriation of amounts specified and estimated to be necessary, CBO estimates that implementing newly authorized activities in S. 761 would have a gross cost of \$575 million over the 2014–2018 period. That estimate is based on historical spending patterns for activities similar to those that would be authorized by S. 761.

Reduced Authorizations. To offset a portion of new discretionary spending authorized by the bill, section 501 of S. 761 would reduce existing authorizations of appropriations for a program aimed at developing and disseminating technologies to reduce the quantity of energy consumed by commercial buildings. In total, S. 761 would reduce amounts authorized to be appropriated for that program by \$570 million over the 2014–2018 period. Assuming future appropriations are reduced accordingly, CBO estimates that implementing S. 761 would result in \$365 million less in discretionary outlays for that program over the next five years.

#### *Direct spending*

S. 761 would expand federal agencies' authority to enter into energy savings performance contracts (ESPCs) and utility energy service contracts (UESCs), which are specific types of long-term contracts used to procure certain energy services. Such agreements are a form of third-party financing, in which private parties fund projects on behalf of the federal government.<sup>1</sup> Upon signing such contracts, the government effectively commits to make payments to a vendor in future years to cover the costs of equipment and services as well as interest costs on the vendor's borrowing to finance upfront costs. In CBO's view, the authority to enter into such contractual agreements is a form of direct spending.<sup>2</sup>

Specifically, S. 761 would authorize federal agencies to use ESPCs and UESCs to procure vehicles that operate on natural gas or electricity or to install infrastructure related to such vehicles. CBO expects that, under the bill, agencies would use such contracts to invest in such vehicles and infrastructure in order to meet certain energy-related requirements pertaining to the federal fleet. For example, executive orders and provisions of current law specify goals and requirements for certain agencies to reduce greenhouse gas emissions, reduce petroleum use, and increase the use of alternative fuels.

CBO anticipates that additional spending through long-term contracts under S. 761 would vary widely from year to year depending on the magnitude of federal acquisitions of eligible vehicles and infrastructure. Based on information from DOE, GSA, and the Department of Defense (DOD), CBO estimates that increased spending through such contracts would total \$350 million over the 2014–2023 period. CBO estimates that \$100 million of that amount—

<sup>1</sup>For more on third-party financing see Congressional Budget Office, *Third-Party Financing of Federal Projects* (June 1, 2005).

<sup>2</sup>For further details of the principles that govern CBO's analyses of long-term contracts such as ESPCs and UESCs, see Congressional Budget Office, letter to the Honorable Fred Upton on the Budgetary Impact of Energy Savings Performance Contracts (July 1, 2011) and Congressional Budget Office, letter to the Honorable Jeff Bingaman and the Honorable Christopher Coons on the Budgetary Impact of Power Purchase Agreements (November 29, 2011).

an average of \$10 million annually—would cover upfront costs to acquire commercially available electric and natural gas vehicles and to construct related fueling and charging stations. (By comparison, CBO estimates that total federal expenditures for vehicle leases and fuel for all agencies totaled about \$2 billion in 2011.)

CBO’s estimate also reflects the expectation that some agencies would use long-term contracts authorized under S. 761 to pursue cutting-edge technology such as “vehicle-to-grid” systems. Such systems would enable advanced electric vehicles to communicate and share power with the electric grid. Under S. 761, CBO estimates that agencies would pursue additional vehicle-to-grid projects for a total cost of roughly \$250 million over the 2014–2023 period. That estimate includes costs to build necessary infrastructure across roughly 50 military installations and federal campuses and to acquire 3,500 advanced electric vehicles. The estimate is also based on information from DOD about nascent efforts to develop and field vehicle-to-grid technology.

Agencies’ total energy-related costs would be affected by the long-term contracts that would be authorized by S. 761. Such costs are typically paid from annual discretionary appropriations; thus, S. 761 would result in changes in the need for appropriations in future years after contracts are fully paid. For example, if investments in eligible vehicles and infrastructure reduce energy use, and if such reductions continue beyond the period of time covered by contracts, those savings would accrue to the government and federal spending for such costs would be less if future appropriations are reduced accordingly. Because of the length of time likely to be involved in contracts under S. 761, however, CBO expects that most of those changes in the need for future appropriations would not occur until after the period covered by this estimate.

Pay-As-You-Go considerations: The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. The net changes in outlays that are subject to those pay-as-you-go procedures are shown in the following table.

CBO ESTIMATE OF PAY-AS-YOU-GO EFFECTS FOR S. 761 AS ORDERED REPORTED BY THE SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES ON MAY 8, 2013

	By fiscal year, in millions of dollars—												
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2013–2018	2013–2023
NET INCREASE OR DECREASE (–) IN THE DEFICIT													
Statutory Pay-As-You-Go Impact .....	0	30	30	30	35	35	35	35	40	40	40	160	350

Estimated impact on state, local, and tribal governments: S. 761 would impose an intergovernmental mandate, as defined in UMRA, by requiring states and tribal governments to certify to DOE whether or not they have updated residential and commercial building codes to meet standards developed by building efficiency organizations. Because states can certify that they have not updated their building codes, CBO estimates that the cost of that mandate would fall well below the annual threshold established in UMRA (\$75 million in 2013, adjusted annually for inflation).

The bill would authorize funding and technical assistance to states and Indian tribes to implement the certification requirement. Such funding could also be used for implementing and enforcing new building codes and training state and local officials. In addition, states may benefit from federal grants to establish or expand programs to promote retrofit projects for reducing energy costs, and public institutions of higher learning may benefit from federal funding for outreach activities in industrial research and assessment centers. Any costs to states and public universities associated with receiving such assistance would be incurred voluntarily as conditions of federal assistance.

Estimated impact on the private sector: S. 761 would impose no new private-sector mandates as defined in UMRA.

Estimate prepared by: Federal costs: Megan Carroll, David Newman, and Matthew Pickford; Impact on state, local, and tribal governments: J'nell L. Blanco; Impact on the private sector: Amy Petz.

Estimate approved by: Theresa Gullo, Deputy Assistant Director for Budget Analysis.

#### REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in carrying out S. 761.

S. 761 directs the Secretary of Energy to support the development of national model building energy codes and encourage and support States and Indian tribes to adopt building codes that meet or exceed the national model building energy codes. But the measure does not require individuals or businesses to comply with the national model codes.

No personal information would be collected in administering the program. Therefore, there would be no impact on personal privacy.

S. 761 requires States and Indian tribes to certify their compliance or progress toward meeting the national model building energy codes, and imposes various reporting and data collecting requirements on the Secretary of Energy and federal energy managers. The Secretary may also require applicants for loans and rebates established under the measure to provide such information as the Secretary may require to implement those programs, but the Committee does not expect the bill's information collecting requirements to impose substantial additional paperwork or recordkeeping burdens, in either time or financial cost, on private individuals or businesses.

#### CONGRESSIONALLY DIRECTED SPENDING

S. 761, as ordered reported, does not contain any congressionally directed spending items, limited tax benefits, or limited tariff benefits as defined in rule XLIV of the Standing Rules of the Senate.

#### EXECUTIVE COMMUNICATIONS

The testimony provided by the Department of Energy at the April 23, 2013, Full Committee hearing on S. 761 follows:

STATEMENT OF DR. KATHLEEN HOGAN, DEPUTY ASSISTANT  
SECRETARY FOR ENERGY EFFICIENCY, OFFICE OF ENERGY  
EFFICIENCY AND RENEWABLE ENERGY, DEPARTMENT OF  
ENERGY

Chairman Wyden, Ranking Member Murkowski, and Members of the Committee: thank you for inviting me to testify today on behalf of the Department of Energy (DOE) regarding energy efficiency.

The Energy Savings and Industrial Competitiveness Act of 2013 outlines new provisions for building codes, financing building upgrades, industrial energy efficiency, and efficiency of Federal buildings among other areas. The legislation would increase DOE's role in providing technical assistance to building code bodies and would expand the type of support that DOE provides to States. It would also establish DOE-administered rebate programs for more energy efficient electric motors and transformers. The Administration is still reviewing the Energy Savings and Industrial Competitiveness Act of 2013 (S. 761) and does not have a position on the bill at this time.

The Administration does, however, support the objectives of improving energy efficiency in the residential, commercial, and industrial sectors and in the Federal government. Energy efficiency is a large, low-cost, but underutilized U.S. energy resource. Increased energy efficiency offers savings on energy bills, opportunities for more jobs, improved industrial competitiveness, and lower air pollution. This year's State of the Union address included a goal to cut the energy wasted by our homes and businesses by half over the next 20 years.

The President also called on us to build on the success of existing partnerships as well as to establish new partnerships, in particular with the States. This includes his call for a new Race to the Top for Energy Efficiency and Grid Modernization challenge. Modeled after the successful Administration approach to education reform to promote forward-leaning policies at the State-level, the President's budget includes \$200 million in one-time funding for Race to the Top awards to support State governments that implement effective policies to cut energy waste and modernize the grid.

As Deputy Assistant Secretary for Energy Efficiency in the Office of Energy Efficiency and Renewable Energy (EERE), I am responsible for overseeing DOE's portfolio of energy efficiency research, development, demonstration, and deployment activities. I am pleased to be here today and look forward to working with Congress, and this Committee in particular, and discussing how we can catalyze greater energy efficiency to help address our Nation's energy challenges. My statement today will provide an update on DOE's energy efficiency portfolio, the challenges we are working to address, and the progress we are making.

## HOMES AND COMMERCIAL BUILDINGS

Improving energy efficiency in our homes and buildings offers a tremendous opportunity to create well-paying jobs, save money for businesses and consumers, and make our air cleaner. In the U.S., homes and buildings consume 40 percent of the Nation's total energy with an annual energy bill of more than \$400 billion.<sup>1</sup> DOE estimates that these energy bills can be cost-effectively reduced by 20–50%, or more, through various energy efficiency approaches.<sup>2</sup>

DOE uses a portfolio approach to pursue the potential energy savings in buildings. Research and development (R&D) on next-generation building technologies will lead to advances in end-uses representing the majority of building energy consumption, including efficient lighting that is cost-competitive in today's market, new technologies in heating and cooling, and windows that decrease energy demands and improve comfort. Some highlights from DOE's project portfolio include:

- DOE's R&D on solid-state lighting has the potential to reduce lighting energy usage by one-fourth, saving businesses and consumers \$15 billion annually.<sup>3</sup> Already, new technology developed with DOE support has led to a solid state bulb with lower life-cycle costs that lasts roughly 25 times longer than traditional incandescent bulbs.
- New heat pump water heaters offer households large savings on water heating, more than 50% in many cases. As a Nation, we spend \$34 billion<sup>4</sup> each year on energy for water heating,<sup>5</sup> and heat pump water heaters could free a large percentage of that cost to meet other household expenses. The first of these innovative water heaters that use a hybrid of electric heating and heat pump technologies are being commercially produced here in the United States.
- Efficient windows, pioneered with EERE funding, have played a critical role in the market shift toward double-pane windows with low-emittance coatings, which insulate three times better than typical single-pane windows. More recently, EERE has helped develop and commercialize technology to create better, more efficient windows for cold climates that will allow in more energy than they lose.

DOE also invests in whole building R&D that demonstrates how new energy efficient technologies can function together to create an efficient system, achieve greater overall savings, and inspire the next-generation of buildings. For homes, this will translate into a new generation

<sup>1</sup>*Buildings Energy Data Book*, U.S. Department of Energy, March 2012, <http://buildings.databook.eren.doe.gov/TableView.aspx?table=1.2.3>.

<sup>2</sup>See, for example, DOE/ASHRAE's *Advanced Energy Design Guides* for commercial buildings (<http://www1.eere.energy.gov/buildings/commercial/aedg.html>) and DOE's Building America program ([http://www1.eere.energy.gov/buildings/residential/ba\\_index.html](http://www1.eere.energy.gov/buildings/residential/ba_index.html)).

<sup>3</sup>BTP ET Program Information Sheet: Solid-State Lighting, August 10, 2011.

<sup>4</sup>"Annual Energy Review." EERE Buildings Data Book, 2011, <http://buildings.databook.eren.doe.gov/TableView.aspx?table=2.3.5>.

<sup>5</sup>"Saving Energy." EERE Buildings Technology Program, 2012, [http://www.eere.energy.gov/buildings/saving\\_energy\\_ge.html](http://www.eere.energy.gov/buildings/saving_energy_ge.html).

of housing stock that is durable, uses smarter energy management systems, and offers substantial energy savings. Our recently introduced Challenge Home program is a new and compelling way to recognize builders for their leadership in increasing home energy efficiency, improving indoor air quality, and making homes zero net-energy ready. DOE Challenge Homes are verified by a qualified third party and are at least 40–50% more energy efficient than a typical new home.<sup>6</sup>

In addition to creating energy efficiency opportunities in the new buildings market, DOE invests in activities that target the large savings potential that exists across the stock of existing homes, many built before modern codes. Here, the Department is working with organizations in communities across the country to demonstrate upgrade programs that offer savings of 20% or more for single family and multi-family residences. Within this market space, effective programs are the ones that include three elements: clear, compelling information for homeowners on potential energy savings; skilled workers; and access to financing. To help improve these programs, we are developing new rating tools to help consumers understand the efficiency of their buildings and the opportunities for improvement.

In addition, in late September 2012, EERE reached the major milestone of weatherizing more than one million homes across the country since 2009, while supporting tens of thousands of jobs in local communities. These efforts save eligible families hundreds on their heating and cooling bills in the first year alone. Each year, these programs train thousands of workers in both the public and private sectors, boosting their ability to serve the home retrofit market and helping to grow the clean energy workforce. To ensure the consistency and quality of this growing U.S. workforce, the Department is leading efforts to define Standard Work Specifications for Energy Efficiency Upgrades in residential weatherization and building a foundation for the home energy industry through professional training and certification.

We have similar efforts targeting energy efficiency opportunities for commercial buildings. Two particular efforts to highlight are the Energy Efficient Buildings Hub and the Better Buildings Challenge. To accelerate the development and deployment of energy-saving solutions for commercial buildings, DOE established the Energy Efficient Buildings Hub, a Regional Innovation Cluster headquartered at the Navy Yard in Philadelphia. A key feature of the Hub is the availability of a unique set of buildings as a test bed, including a 30,000-square-foot building that will be used to demonstrate advanced energy retrofits of commercial buildings. The tools developed, lessons learned and best practices from the Hub will ulti-

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<sup>6</sup>A typical new home as built to recent model energy codes. For more information on DOE Challenge Home methodology, see [http://www1.eere.energy.gov/buildings/residential/pdfs/ch\\_label\\_methodology\\_101.2.pdf](http://www1.eere.energy.gov/buildings/residential/pdfs/ch_label_methodology_101.2.pdf).

mately help enable wide-scale deployment in similar climate zones and building types nationwide.

The Better Buildings Challenge (BBC) is a signature partnership effort, with over 110 partners across the commercial, industrial, and public sectors. Together, these partners represent approximately 2 billion square feet of commercial and industrial space, 300 manufacturing plants, and \$2 billion in private sector financing. As partners advance toward meeting their individual goals, the BBC website<sup>7</sup> will highlight their commitment and progress, including information on showcase projects and hundreds of replicable implementation models. To date, more than \$1 billion of the commitment from private sector financial firms has been extended to projects, and we are continuing to look for ways to expand access to private-sector financing, as this remains an important barrier cited by commercial building owners.

Further, DOE assists with the adoption and implementation of state and local building codes for both commercial and residential buildings. Building codes take advantage of the broader set of efficiency measures available during construction and major renovations. The Department emphasizes updating codes based on cost-effective savings opportunities and assisting state and local governments with ensuring code compliance so that savings are realized. To accomplish its objectives in this area, DOE has developed a suite of assistance tools it routinely provides to state and local authorities.

#### ADVANCED MANUFACTURING

The U.S. manufacturing sector also offers important opportunities for cutting energy waste, while improving our industrial competitiveness and promoting economic growth. In the United States, manufacturing represents about 12% of the gross domestic product and nearly 12 million jobs.<sup>8</sup> The Department's investments in advanced manufacturing are geared toward developing next-generation technologies, processes, and materials that offer substantial improvements in efficiency across a product life-cycle and at costs competitive with current technologies. We are also assisting industry with strategic energy management and combined heat and power (CHP). This portfolio will enhance the competitiveness of U.S. manufacturing now and for the longer term.

In the State of the Union address, President Obama called for a network of manufacturing innovation institutes that will help to support investment in U.S. manufacturers' competitiveness and accelerate innovation in manufacturing. The Department of Energy is a partner in the pilot

<sup>7</sup>The BBC website address is [www.betterbuildings.energy.gov/challenge](http://www.betterbuildings.energy.gov/challenge).

<sup>8</sup>Full-time and Part-time employees by industry, U.S. Department of Commerce, <http://www.bea.gov/iTable/iTable.cfm?reqid=5&step=4&isuri=1&402=43&403=1#reqid=5&step=4&isuri=1&402=43&403=1> Value added by industry as percentage of GDP, U.S. Department of Commerce, <http://www.bea.gov/iTable/iTable.cfm?reqid=5&step=4&isuri=1&402=5&403=1#reqid=5&step=4&isuri=1&402=5&403=1>

institute, the National Additive Manufacturing Innovation Institute (NAMII), located in Youngstown, Ohio. NAMII is bridging the gap between basic research and product development for additive manufacturing, providing shared assets to help companies (particularly small manufacturers) access cutting-edge capabilities and equipment, and creating an environment to educate and train workers in advanced additive manufacturing skills. Additive manufacturing techniques create 3-D objects directly from computer models, depositing material only where required. These new techniques, while still evolving, are projected to exert a profound impact on manufacturing for high-value products. They can give industry new design flexibility, reduce energy use, and shorten time to market. To realize the full potential of additive manufacturing, the technology will need to be integrated into broad manufacturing solutions. In applications where additive manufacturing is competitive, DOE estimates that 50% or more energy savings could be realized.

In January, the Department announced the selection of Ames Laboratory to establish an Energy Innovation Hub that will develop solutions to help address the domestic shortages of rare earth metals and other materials critical for U.S. energy security. The Critical Materials Institute (CMI) will bring together leading researchers from academia, Department of Energy National Laboratories, and the private sector. CMI will focus on technologies that will enable the U.S. to make better use of available materials as well as eliminate the need for materials that generally must be imported from overseas and are subject to supply disruptions. These critical materials, including many rare earth elements, or the development of feasible substitute technologies are essential for American competitiveness in the clean energy industry; many materials deemed critical by the Department are used in modern clean energy technologies such as wind turbines, solar panels, electric vehicles, and energy-efficient lighting.

In addition to investments in advanced process and materials R&D, the Department has active technical assistance programs aimed at reducing manufacturing energy intensity by 25% over ten years by engaging a diverse set of industry partners in effective business models, continuous improvement in energy efficiency, modeling key processes, and supporting standards and certifications for third-party services. DOE technical assistance also supports the achievement of the national goal set by President Obama in an Executive Order last August of developing 40 gigawatts of new, cost-effective industrial CHP by 2020. And, DOE provides tools to support improvements in a number of common systems in manufacturing facilities, including motor, steam, compressed air, and pumping systems.



## APPLIANCE AND EQUIPMENT STANDARDS

In addition, the Department implements minimum energy conservation standards for more than 60 categories of appliances and equipment. As a result of these standards, energy users across all sectors are estimated to have saved tens of billions of dollars on their utility bills in 2010. Since 2009, 17 new or updated standards have been issued, which will help increase annual savings even further over the coming years.

Most recently DOE finalized a standard for three types of distribution transformers that take effect in 2016. The standard for low-voltage dry-type transformers, which are typically used by commercial and industrial users, represents 30% savings over the prior standard and provides estimated net benefits of up to \$11.8 billion on equipment sold through 2045.<sup>9</sup> The two other types of distribution transformers that were subject to this rulemaking, liquid-immersed and medium-voltage dry-type transformers, are used primarily by electric utilities in outdoor settings as opposed to inside buildings. These two standards combined provide estimated net benefits of up to \$5.7 billion on equipment sold through 2045.

## FEDERAL LEAD-BY-EXAMPLE

Finally, DOE plays a critical role in providing technical assistance to Federal agencies to increase understanding and accelerate cost-effective adoption of energy-saving technologies and strategies. The U.S. Federal government is the Nation's single largest user of energy and has both a tremendous opportunity and an acknowledged responsibility to lead by example in saving energy. In December 2011, President Obama signed a Presidential Memorandum directing the Federal government to enter into a minimum of \$2 billion in performance-based contracts over the next two years for energy retrofits on Federal buildings. Agencies have identified a pipeline of over \$2 billion in energy efficiency projects for Federal buildings that will be contract awards by December 31, 2013. These projects will use energy savings to pay for project implementation costs, achieving substantial energy savings at no net cost to the American taxpayer. More than \$500 million in projects have already been awarded, which will also help agencies meet the government's goals to reduce Federal building energy consumption per gross square foot by 30% from 2003 through 2015; increase renewable energy use to 7.5% annually; reduce water use intensity by 26% from 2007 through 2020; reduce vehicle petroleum use by 2% annually; and reduce greenhouse gas emissions by 28% from 2008 through 2020.

Federal data center optimization and closures, the use of Energy Star and EPEAT-registered computers and power

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<sup>9</sup>Net present value of net benefits, in 2011 dollars, estimated at a 3% discount rate.

management also remain important opportunities for energy savings.

CONCLUSION

Through R&D, deployment, and collaborations at all levels of government and the private sector, the Department of Energy aims to capitalize on the opportunities that energy efficiency affords. The Department's efforts to lead in next-generation buildings and advanced manufacturing will result in a more secure, resilient, and competitive energy economy. While we are making progress, continued efforts are necessary to capture the full set of opportunities.

Thank you again for the opportunity to speak to this important issue, and I would be happy to answer any questions.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill S. 761, as ordered reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

**TABLE OF LAWS AFFECTED**

- Energy Policy and Conservation Act
- Energy Conservation and Production Act
- National Energy Conservation Policy Act
- Energy Policy Act of 1992
- Energy Policy Act of 2005
- Energy Independence and Security Act of 2007
- Title 40—Public Buildings, Property and Works

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**ENERGY POLICY AND CONSERVATION ACT**

Public Law 94–163, as Amended

AN ACT To increase domestic energy supplies and availability; to restrain energy demand; to prepare for energy emergencies; and for other purposes.

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- Sec. 376. *Sustainable manufacturing initiative.*

\* \* \* \* \*

**TITLE III—IMPROVING ENERGY EFFICIENCY**

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**PART B—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS OTHER THAN AUTOMOBILES**

\* \* \* \* \*

**ENERGY STAR PROGRAM**

SEC. 324A. (a) **IN GENERAL.**—There is established within the Department of Energy and the Environmental Protection Agency a voluntary program to identify and promote energy-efficient products and buildings in order to reduce energy consumption, improve energy security, and reduce pollution through voluntary labeling of, or other forms of communication about, products and buildings that meet the highest energy conservation standards.

\* \* \* \* \*

**SEC. 324B. SUPPLY STAR PROGRAM.**

(a) **IN GENERAL.**—*There is established within the Department of Energy a Supply Star program to identify and promote practices, recognize companies, and, as appropriate, recognize products that use highly efficient supply chains in a manner that conserves energy, water, and other resources.*

(b) **COORDINATION.**—*In carrying out the program described in subsection (a), the Secretary shall—*

- (1) *consult with other appropriate agencies; and*
- (2) *coordinate efforts with the Energy Star program established under section 324A.*

(c) **DUTIES.**—*In carrying out the Supply Star program described in subsection (a), the Secretary shall—*

- (1) *promote practices, recognize companies, and, as appropriate, recognize products that comply with the Supply Star program as the preferred practices, companies, and products in the marketplace for maximizing supply chain efficiency;*
- (2) *work to enhance industry and public awareness of the Supply Star program;*
- (3) *collect and disseminate data on supply chain energy resource consumption;*
- (4) *develop and disseminate metrics, processes, and analytical tools (including software) for evaluating supply chain energy resource use;*
- (5) *develop guidance at the sector level for improving supply chain efficiency;*

(6) *work with domestic and international organizations to harmonize approaches to analyzing supply chain efficiency, including the development of a consistent set of tools, templates, calculators, and databases; and*

(7) *work with industry, including small businesses, to improve supply chain efficiency through activities that include—*

*(A) developing and sharing best practices; and*

*(B) providing opportunities to benchmark supply chain efficiency.*

(d) *EVALUATION.—In any evaluation of supply chain efficiency carried out by the Secretary with respect to a specific product, the Secretary shall consider energy consumption and resource use throughout the entire lifecycle of a product, including production, transport, packaging, use, and disposal.*

(e) *GRANTS AND INCENTIVES.—*

*(1) IN GENERAL.—The Secretary may award grants or other forms of incentives on a competitive basis to eligible entities, as determined by the Secretary, for the purposes of—*

*(A) studying supply chain energy resource efficiency; and*

*(B) demonstrating and achieving reductions in the energy resource consumption of commercial products through changes and improvements to the production supply and distribution chain of the products.*

*(2) USE OF INFORMATION.—Any information or data generated as a result of the grants or incentives described in paragraph (1) shall be used to inform the development of the Supply Star Program.*

(f) *TRAINING.—The Secretary shall use funds to support professional training programs to develop and communicate methods, practices, and tools for improving supply chain efficiency.*

(g) *EFFECT OF IMPACT ON CLIMATE CHANGE.—For purposes of this section, the impact on climate change shall not be a factor in determining supply chain efficiency.*

(h) *EFFECT OF OUTSOURCING OF AMERICAN JOBS.—For purposes of this section, the outsourcing of American jobs in the production of a product shall not count as a positive factor in determining supply chain efficiency.*

(i) *AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section \$10,000,000 for the period of fiscal years 2014 through 2023.*

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**PART E—INDUSTRIAL ENERGY EFFICIENCY**

**SEC. 371. DEFINITIONS.**

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**SEC. 375. CLEAN ENERGY APPLICATION CENTERS.**

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**SEC. 376. SUSTAINABLE MANUFACTURING INITIATIVE.**

(a) *IN GENERAL.—As part of the Office of Energy Efficiency and Renewable Energy, the Secretary, on the request of a manufacturer, shall conduct onsite technical assessments to identify opportunities for—*

- (1) maximizing the energy efficiency of industrial processes and cross-cutting systems;
- (2) preventing pollution and minimizing waste;
- (3) improving efficient use of water in manufacturing processes;
- (4) conserving natural resources; and
- (5) achieving such other goals as the Secretary determines to be appropriate.

(b) *COORDINATION.*—The Secretary shall carry out the initiative in coordination with the private sector and appropriate agencies, including the National Institute of Standards and Technology, to accelerate adoption of new and existing technologies and processes that improve energy efficiency.

(c) *RESEARCH AND DEVELOPMENT PROGRAM FOR SUSTAINABLE MANUFACTURING AND INDUSTRIAL TECHNOLOGIES AND PROCESSES.*—As part of the industrial efficiency programs of the Department of Energy, the Secretary shall carry out a joint industry-government partnership program to research, develop, and demonstrate new sustainable manufacturing and industrial technologies and processes that maximize the energy efficiency of industrial plants, reduce pollution, and conserve natural resources.

**PART F—OTHER FEDERAL ENERGY CONSERVATION MEASURES**

\* \* \* \* \*

**ENERGY CONSERVATION AND PRODUCTION ACT**

Public Law 94–385, as Amended

AN ACT To amend the Federal Energy Administration Act of 1974 to extend the duration of authorities under such Act; to provide an incentive for domestic production; to provide for electric utility rate design initiatives; to provide for energy conservation standards for new buildings; to provide for energy conservation assistance for existing buildings and industrial plants; and for other purposes.

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**TITLE III—ENERGY CONSERVATION STANDARDS FOR NEW BUILDINGS**

\* \* \* \* \*

**DEFINITIONS**

SEC. 303. As used in this title:

(1) The term “Administrator” means the Administrator of the Federal Energy Administration; except that after such Administration ceases to exist, such term means any officer of the United States designated by the President for purposes of this title.

\* \* \* \* \*

[(14) The term “voluntary building energy code” means a building energy code developed and updated through a consensus process among interested persons, such as that used by

the Council of American Building Officials; the American Society of Heating, Refrigerating, and Air-Conditioning Engineers; or other appropriate organizations.】

(14) *MODEL BUILDING ENERGY CODE.*—*The term “model building energy code” means a voluntary building energy code and standards developed and updated through a consensus process among interested persons, such as the IECC or the code used by—*

(A) *the Council of American Building Officials;*

(B) *the American Society of Heating, Refrigerating, and Air-Conditioning Engineers; or*

(C) *other appropriate organizations;*

(15) The term “CABO” means the Council of American Building Officials.

(16) The term “ASHRAE” means the American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

(17) *IECC.*—*The term “IECC” means the International Energy Conservation Code.*

(18) *INDIAN TRIBE.*—*The term “Indian tribe” has the meaning given the term in section 4 of the Native American Housing Assistance and Self-Determination Act of 1996 (25 U.S.C. 4103).*

#### **SEC. 304. UPDATING STATE BUILDING ENERGY EFFICIENCY CODES.**

【(a) CONSIDERATION AND DETERMINATION RESPECTING RESIDENTIAL BUILDING ENERGY CODES.—(1) Not later than 2 years after the date of the enactment of the Energy Policy Act of 1992, each State shall certify to the Secretary that it has reviewed the provisions of its residential building code regarding energy efficiency and made a determination as to whether it is appropriate for such State to revise such residential building code provisions to meet or exceed CABO Model Energy Code, 1992.

【(2) The determination referred to in paragraph (1) shall be—

【(A) made after public notice and hearing;

【(B) in writing;

【(C) based upon findings included in such determination and upon the evidence presented at the hearing; and

【(D) available to the public.

【(3) Each State may, to the extent consistent with otherwise applicable State law, revise the provisions of its residential building code regarding energy efficiency to meet or exceed CABO Model Energy Code, 1992, or may decline to make such revisions.

【(4) If a State makes a determination under paragraph (1) that it is not appropriate for such State to revise its residential building code, such State shall submit to the Secretary, in writing, the reasons for such determination, and such statement shall be available to the public.

【(5)(A) Whenever CABO Model Energy Code, 1992, (or any successor of such code) is revised, the Secretary shall, not later than 12 months after such revision, determine whether such revision would improve energy efficiency in residential buildings. The Secretary shall publish notice of such determination in the Federal Register.

【(B) If the Secretary makes an affirmative determination under subparagraph (A), each State shall, not later than 2 years after the date of the publication of such determination, certify that it has reviewed the provisions of its residential building code regarding en-

ergy efficiency and made a determination as to whether it is appropriate for such State to revise such residential building code provisions to meet or exceed the revised code for which the Secretary made such determination.

[(C) Paragraphs (2), (3), and (4) shall apply to any determination made under subparagraph (B).

[(b) CERTIFICATION OF COMMERCIAL BUILDING ENERGY CODE UPDATES.—(1) Not later than 2 years after the date of the enactment of the Energy Policy Act of 1992, each State shall certify to the Secretary that it has reviewed and updated the provisions of its commercial building code regarding energy efficiency. Such certification shall include a demonstration that such State's code provisions meet or exceed the requirements of ASHRAE Standard 90.1–1989.

[(2)(A) Whenever the provisions of ASHRAE Standard 90.1–1989 (or any successor standard) regarding energy efficiency in commercial buildings are revised, the Secretary shall, not later than 12 months after the date of such revision, determine whether such revision will improve energy efficiency in commercial buildings. The Secretary shall publish a notice of such determination in the Federal Register.

[(B)(i) If the Secretary makes an affirmative determination under subparagraph (A), each State shall, not later than 2 years after the date of the publication of such determination, certify that it has reviewed and updated the provisions of its commercial building code regarding energy efficiency in accordance with the revised standard for which such determination was made. Such certification shall include a demonstration that the provisions of such State's commercial building code regarding energy efficiency meet or exceed such revised standard.

[(ii) If the Secretary makes a determination under subparagraph (A) that such revised standard will not improve energy efficiency in commercial buildings, State commercial building code provisions regarding energy efficiency shall meet or exceed ASHRAE Standard 90.1–1989, or if such standard has been revised, the last revised standard for which the Secretary has made an affirmative determination under subparagraph (A).

[(c) EXTENSIONS.—The Secretary shall permit extensions of the deadlines for the certification requirements under subsections (a) and (b) if a State can demonstrate that it has made a good faith effort to comply with such requirements and that it has made significant progress in doing so.

[(d) TECHNICAL ASSISTANCE.—The Secretary shall provide technical assistance to States to implement the requirements of this section, and to improve and implement State residential and commercial building energy efficiency codes or to otherwise promote the design and construction of energy efficient buildings.

[(e) AVAILABILITY OF INCENTIVE FUNDING.—(1) The Secretary shall provide incentive funding to States to implement the requirements of this section, and to improve and implement State residential and commercial building energy efficiency codes, including increasing and verifying compliance with such codes. In determining whether, and in what amount, to provide incentive funding under this subsection, the Secretary shall consider the actions proposed by the State to implement the requirements of this section, to improve and implement residential and commercial building energy

efficiency codes, and to promote building energy efficiency through the use of such codes.

[(2) Additional funding shall be provided under this subsection for implementation of a plan to achieve and document at least a 90 percent rate of compliance with residential and commercial building energy efficiency codes, based on energy performance—

[(A) to a State that has adopted and is implementing, on a statewide basis—

[(i) a residential building energy efficiency code that meets or exceeds the requirements of the 2004 International Energy Conservation Code, or any succeeding version of that code that has received an affirmative determination from the Secretary under subsection (a)(5)(A); and

[(ii) a commercial building energy efficiency code that meets or exceeds the requirements of the ASHRAE Standard 90.1–2004, or any succeeding version of that standard that has received an affirmative determination from the Secretary under subsection (b)(2)(A); or

[(B) in a State in which there is no statewide energy code either for residential buildings or for commercial buildings, to a local government that has adopted and is implementing residential and commercial building energy efficiency codes, as described in subparagraph (A).

[(3) Of the amounts made available under this subsection, the Secretary may use \$500,000 for each fiscal year to train State and local officials to implement codes described in paragraph (2).

[(4)(A) There are authorized to be appropriated to carry out this subsection—

[(i) \$25,000,000 for each of fiscal years 2006 through 2010; and

[(ii) such sums as are necessary for fiscal year 2011 and each fiscal year thereafter.

[(B) Funding provided to States under paragraph (2) for each fiscal year shall not exceed one-half of the excess of funding under this subsection over \$5,000,000 for the fiscal year.]

(a) *IN GENERAL.—The Secretary shall—*

(1) *encourage and support the adoption of building energy codes by States, Indian tribes, and, as appropriate, by local governments that meet or exceed the model building energy codes, or achieve equivalent or greater energy savings; and*

(2) *support full compliance with the State and local codes.*

(b) *STATE AND INDIAN TRIBE CERTIFICATION OF BUILDING ENERGY CODE UPDATES.—*

(1) *REVIEW AND UPDATING OF CODES BY EACH STATE AND INDIAN TRIBE.—*

(A) *IN GENERAL.—Not later than 2 years after the date on which a model building energy code is updated, each State or Indian tribe shall certify whether or not the State or Indian tribe, respectively, has reviewed and updated the energy provisions of the building code of the State or Indian tribe, respectively.*

(B) *DEMONSTRATION.—The certification shall include a demonstration of whether or not the energy savings for the*



code provisions that are in effect throughout the State or Indian tribal territory meet or exceed—

(i) the energy savings of the updated model building energy code; or

(ii) the targets established under section 307(b)(2).

(C) **NO MODEL BUILDING ENERGY CODE UPDATE.**—If a model building energy code is not updated by a target date established under section 307(b)(2)(D), each State or Indian tribe shall, not later than 2 years after the specified date, certify whether or not the State or Indian tribe, respectively, has reviewed and updated the energy provisions of the building code of the State or Indian tribe, respectively, to meet or exceed the target in section 307(b)(2).

(2) **VALIDATION BY SECRETARY.**—Not later than 90 days after a State or Indian tribe certification under paragraph (1), the Secretary shall—

(A) determine whether the code provisions of the State or Indian tribe, respectively, meet the criteria specified in paragraph (1); and

(B) if the determination is positive, validate the certification.

(c) **IMPROVEMENTS IN COMPLIANCE WITH BUILDING ENERGY CODES.**—

(1) **REQUIREMENT.**—

(A) **IN GENERAL.**—Not later than 3 years after the date of a certification under subsection (b), each State and Indian tribe shall certify whether or not the State and Indian tribe, respectively, has—

(i) achieved full compliance under paragraph (3) with the applicable certified State and Indian tribe building energy code or with the associated model building energy code; or

(ii) made significant progress under paragraph (4) toward achieving compliance with the applicable certified State and Indian tribe building energy code or with the associated model building energy code.

(B) **REPEAT CERTIFICATIONS.**—If the State or Indian tribe certifies progress toward achieving compliance, the State or Indian tribe shall repeat the certification until the State or Indian tribe certifies that the State or Indian tribe has achieved full compliance, respectively.

(2) **MEASUREMENT OF COMPLIANCE.**—A certification under paragraph (1) shall include documentation of the rate of compliance based on—

(A) independent inspections of a random sample of the buildings covered by the code in the preceding year; or

(B) an alternative method that yields an accurate measure of compliance.

(3) **ACHIEVEMENT OF COMPLIANCE.**—A State or Indian tribe shall be considered to achieve full compliance under paragraph (1) if—

(A) at least 90 percent of building space covered by the code in the preceding year substantially meets all the requirements of the applicable code specified in paragraph

- (1), or achieves equivalent or greater energy savings level;  
or
- (B) the estimated excess energy use of buildings that did not meet the applicable code specified in paragraph (1) in the preceding year, compared to a baseline of comparable buildings that meet this code, is not more than 5 percent of the estimated energy use of all buildings covered by this code during the preceding year.
- (4) **SIGNIFICANT PROGRESS TOWARD ACHIEVEMENT OF COMPLIANCE.**—A State or Indian tribe shall be considered to have made significant progress toward achieving compliance for purposes of paragraph (1) if the State or Indian tribe—
- (A) has developed and is implementing a plan for achieving compliance during the 8-year-period beginning on the date of enactment of this paragraph, including annual targets for compliance and active training and enforcement programs; and
- (B) has met the most recent target under subparagraph (A).
- (5) **VALIDATION BY SECRETARY.**—Not later than 90 days after a State or Indian tribe certification under paragraph (1), the Secretary shall—
- (A) determine whether the State or Indian tribe has demonstrated meeting the criteria of this subsection, including accurate measurement of compliance; and
- (B) if the determination is positive, validate the certification.
- (d) **STATES OR INDIAN TRIBES THAT DO NOT ACHIEVE COMPLIANCE.**—
- (1) **REPORTING.**—A State or Indian tribe that has not made a certification required under subsection (b) or (c) by the applicable deadline shall submit to the Secretary a report on—
- (A) the status of the State or Indian tribe with respect to meeting the requirements and submitting the certification; and
- (B) a plan for meeting the requirements and submitting the certification.
- (2) **FEDERAL SUPPORT.**—For any State or Indian tribe for which the Secretary has not validated a certification by a deadline under subsection (b) or (c), the lack of the certification may be a consideration for Federal support authorized under this section for code adoption and compliance activities.
- (3) **LOCAL GOVERNMENT.**—In any State or Indian tribe for which the Secretary has not validated a certification under subsection (b) or (c), a local government may be eligible for Federal support by meeting the certification requirements of subsections (b) and (c).
- (4) **ANNUAL REPORTS BY SECRETARY.**—
- (A) **IN GENERAL.**—The Secretary shall annually submit to Congress, and publish in the Federal Register, a report on—
- (i) the status of model building energy codes;
- (ii) the status of code adoption and compliance in the States and Indian tribes;
- (iii) implementation of this section; and

(iv) improvements in energy savings over time as a result of the targets established under section 307(b)(2).

(B) *IMPACTS.*—The report shall include estimates of impacts of past action under this section, and potential impacts of further action, on—

(i) upfront financial and construction costs, cost benefits and returns (using investment analysis), and lifetime energy use for buildings;

(ii) resulting energy costs to individuals and businesses; and

(iii) resulting overall annual building ownership and operating costs.

(e) *TECHNICAL ASSISTANCE TO STATES AND INDIAN TRIBES.*—The Secretary shall provide technical assistance to States and Indian tribes to implement the goals and requirements of this section, including procedures and technical analysis for States and Indian tribes—

(1) to improve and implement State residential and commercial building energy codes;

(2) to demonstrate that the code provisions of the States and Indian tribes achieve equivalent or greater energy savings than the model building energy codes and targets;

(3) to document the rate of compliance with a building energy code; and

(4) to otherwise promote the design and construction of energy efficient buildings.

(f) *AVAILABILITY OF INCENTIVE FUNDING.*—

(1) *IN GENERAL.*—The Secretary shall provide incentive funding to States and Indian tribes—

(A) to implement the requirements of this section;

(B) to improve and implement residential and commercial building energy codes, including increasing and verifying compliance with the codes and training of State, tribal, and local building code officials to implement and enforce the codes; and

(C) to promote building energy efficiency through the use of the codes.

(2) *ADDITIONAL FUNDING.*—Additional funding shall be provided under this subsection for implementation of a plan to achieve and document full compliance with residential and commercial building energy codes under subsection (c)—

(A) to a State or Indian tribe for which the Secretary has validated a certification under subsection (b) or (c); and

(B) in a State or Indian tribe that is not eligible under subparagraph (A), to a local government that is eligible under this section.

(3) *TRAINING.*—Of the amounts made available under this subsection, the State may use amounts required, but not to exceed \$750,000 for a State, to train State and local building code officials to implement and enforce codes described in paragraph (2).

(4) *LOCAL GOVERNMENTS.*—States may share grants under this subsection with local governments that implement and enforce the codes.

(g) *STRETCH CODES AND ADVANCED STANDARDS.*—

(1) *IN GENERAL.*—The Secretary shall provide technical and financial support for the development of stretch codes and advanced standards for residential and commercial buildings for use as—

(A) an option for adoption as a building energy code by local, tribal, or State governments; and

(B) guidelines for energy-efficient building design.

(2) *TARGETS.*—The stretch codes and advanced standards shall be designed—

(A) to achieve substantial energy savings compared to the model building energy codes; and

(B) to meet targets under section 307(b), if available, at least 3 to 6 years in advance of the target years.

(h) *STUDIES.*—The Secretary, in consultation with building science experts from the National Laboratories and institutions of higher education, designers and builders of energy-efficient residential and commercial buildings, code officials, and other stakeholders, shall undertake a study of 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 after initial construction, as advances are achieved in energy-saving technologies;

(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.

(i) *EFFECT ON OTHER LAWS.*—Nothing in this section or section 307 supersedes or modifies the application of sections 321 through 346 of the Energy Policy and Conservation Act (42 U.S.C. 6291 et seq.).

(j) *AUTHORIZATION OF APPROPRIATIONS.*—There are authorized to be appropriated to carry out this section and section 307 \$200,000,000, to remain available until expended.

#### **SEC. 305. FEDERAL BUILDING ENERGY EFFICIENCY STANDARDS.**

(a)(1) *IN GENERAL.*—Not later than 2 years after the date of the enactment of the Energy Policy Act of 1992, the Secretary, after consulting with appropriate Federal agencies, CABO, ASHRAE, the National Association of Home Builders, the Illuminating Engineering Society, the American Institute of Architects, the National Conference of the States on Building Codes and Standards, and other appropriate persons, shall establish, by rule, Federal building energy standards that require in new Federal buildings those energy efficiency measures that are technologically feasible and economically justified. Such standards shall become effective no later than 1 year after such rule is issued.

(2) The standards established under paragraph (1) shall—

(A) contain energy saving and renewable energy specifications that meet or exceed the energy saving and renewable energy specifications of the 2004 International Energy Conserva-

tion Code (in the case of residential buildings) or ASHRAE Standard 90.1-2004 (in the case of commercial buildings);

(B) to the extent practicable, use the same format as the appropriate [voluntary building energy code] *model building energy code*; and

(C) consider, in consultation with the Environmental Protection Agency and other Federal agencies, and where appropriate contain, measures with regard to radon and other indoor air pollutants.

\* \* \* \* \*

(b) REPORT ON COMPARATIVE STANDARDS.—The Secretary shall identify and describe, in the report required under section 308, the basis for any substantive difference between the Federal building energy standards established under this section (including differences in treatment of energy efficiency and renewable energy) and the appropriate [voluntary building energy code] *model building energy code*.

\* \* \* \* \*

**SEC. 307. SUPPORT FOR VOLUNTARY BUILDING ENERGY CODES.**

[(a) IN GENERAL.—Not later than 1 year after the date of the enactment of the Energy Policy Act of 1992, the Secretary, after consulting with the Secretary of Housing and Urban Development, the Secretary of Veterans Affairs, other appropriate Federal agencies, CABO, ASHRAE, the National Conference of States on Building Codes and Standards, and any other appropriate building codes and standards organization, shall support the upgrading of voluntary building energy codes for new residential and commercial buildings. Such support shall include—

[(1) a compilation of data and other information regarding building energy efficiency standards and codes in the possession of the Federal Government, State and local governments, and industry organizations;

[(2) assistance in improving the technical basis for such standards and codes;

[(3) assistance in determining the cost-effectiveness and the technical feasibility of the energy efficiency measures included in such standards and codes; and

[(4) assistance in identifying appropriate measures with regard to radon and other indoor air pollutants.

[(b) REVIEW.—The Secretary shall periodically review the technical and economic basis of voluntary building energy codes and, based upon ongoing research activities—

[(1) recommend amendments to such codes including measures with regard to radon and other indoor air pollutants;

[(2) seek adoption of all technologically feasible and economically justified energy efficiency measures; and

[(3) otherwise participate in any industry process for review and modification of such codes.]

**SEC. 307. SUPPORT FOR MODEL BUILDING ENERGY CODES.**

(a) IN GENERAL.—The Secretary shall support the updating of model building energy codes.

(b) TARGETS.—

(1) *IN GENERAL.*—The Secretary shall support the updating of the model building energy codes to enable the achievement of aggregate energy savings targets established under paragraph (2).

(2) *TARGETS.*—

(A) *IN GENERAL.*—The Secretary shall work with State, Indian tribes, local governments, nationally recognized code and standards developers, and other interested parties to support the updating of model building energy codes by establishing one or more aggregate energy savings targets to achieve the purposes of this section.

(B) *SEPARATE TARGETS.*—The Secretary may establish separate targets for commercial and residential buildings.

(C) *BASELINES.*—The baseline for updating model building energy codes shall be the 2009 IECC for residential buildings and ASHRAE Standard 90.1–2010 for commercial buildings.

(D) *SPECIFIC YEARS.*—(i) *IN GENERAL.*—Targets for specific years shall be established and revised by the Secretary through rulemaking and coordinated with nationally recognized code and standards developers at a level that—

(I) is at the maximum level of energy efficiency that is technologically feasible and life-cycle cost effective, while accounting for the economic considerations under paragraph (4);

(II) is higher than the preceding target; and

(III) promotes the achievement of commercial and residential high-performance buildings through high performance energy efficiency (within the meaning of section 401 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17061)).

(ii) *INITIAL TARGETS.*—Not later than 1 year after the date of enactment of this clause, the Secretary shall establish initial targets under this subparagraph.

(iii) *DIFFERENT TARGET YEARS.*—Subject to clause (i), prior to the applicable year, the Secretary may set a later target year for any of the model building energy codes described in subparagraph (A) if the Secretary determines that a target cannot be met.

(iv) *SMALL BUSINESS.*—When establishing targets under this paragraph through rulemaking, the Secretary shall ensure compliance with the Small Business Regulatory Enforcement Fairness Act of 1996 (5 U.S.C. 601 note; Public Law 104–121).

(3) *APPLIANCE STANDARDS AND OTHER FACTORS AFFECTING BUILDING ENERGY USE.*—In establishing building code targets under paragraph (2), the Secretary shall develop and adjust the targets in recognition of potential savings and costs relating to—

(A) efficiency gains made in appliances, lighting, windows, insulation, and building envelope sealing;

(B) advancement of distributed generation and on-site renewable power generation technologies;

(C) equipment improvements for heating, cooling, and ventilation systems;

(D) building management systems and SmartGrid technologies to reduce energy use; and

(E) other technologies, practices, and building systems that the Secretary considers appropriate regarding building plug load and other energy uses.

(4) *ECONOMIC CONSIDERATIONS.*—In establishing and revising building code targets under paragraph (2), the Secretary shall consider the economic feasibility of achieving the proposed targets established under this section and the potential costs and savings for consumers and building owners, including a return on investment analysis.

(c) *TECHNICAL ASSISTANCE TO MODEL BUILDING ENERGY CODE-SETTING AND STANDARD DEVELOPMENT ORGANIZATIONS.*—

(1) *IN GENERAL.*—The Secretary shall, on a timely basis, provide technical assistance to model building energy code-setting and standard development organizations consistent with the goals of this section.

(2) *ASSISTANCE.*—The assistance shall include, as requested by the organizations, technical assistance in—

(A) evaluating code or standards proposals or revisions;

(B) building energy analysis and design tools;

(C) building demonstrations;

(D) developing definitions of energy use intensity and building types for use in model building energy codes to evaluate the efficiency impacts of the model building energy codes;

(E) performance-based standards;

(F) evaluating economic considerations under subsection

(b)(4); and

(G) developing model building energy codes by Indian tribes in accordance with tribal law.

(3) *AMENDMENT PROPOSALS.*—The Secretary may submit timely model building energy code amendment proposals to the model building energy code-setting and standard development organizations, with supporting evidence, sufficient to enable the model building energy codes to meet the targets established under subsection (b)(2).

(4) *ANALYSIS METHODOLOGY.*—The Secretary shall make publicly available the entire calculation methodology (including input assumptions and data) used by the Secretary to estimate the energy savings of code or standard proposals and revisions.

(d) *DETERMINATION.*—

(1) *REVISION OF MODEL BUILDING ENERGY CODES.*—If the provisions of the IECC or ASHRAE Standard 90.1 regarding building energy use are revised, the Secretary shall make a preliminary determination not later than 90 days after the date of the revision, and a final determination not later than 15 months after the date of the revision, on whether or not the revision will—

(A) improve energy efficiency in buildings compared to the existing model building energy code; and

(B) meet the applicable targets under subsection (b)(2).

(2) *CODES OR STANDARDS NOT MEETING TARGETS.*—

(A) *IN GENERAL.*—If the Secretary makes a preliminary determination under paragraph (1)(B) that a code or stand-

ard does not meet the targets established under subsection (b)(2), the Secretary may at the same time provide the model building energy code or standard developer with proposed changes that would result in a model building energy code that meets the targets and with supporting evidence, taking into consideration—

- (i) whether the modified code is technically feasible and life-cycle cost effective;
- (ii) available appliances, technologies, materials, and construction practices; and
- (iii) the economic considerations under subsection (b)(4).

**(B) INCORPORATION OF CHANGES.—**

(i) **IN GENERAL.**—On receipt of the proposed changes, the model building energy code or standard developer shall have an additional 270 days to accept or reject the proposed changes of the Secretary to the model building energy code or standard for the Secretary to make a final determination.

(ii) **FINAL DETERMINATION.**—A final determination under paragraph (1) shall be on the modified model building energy code or standard.

(e) **ADMINISTRATION.**—In carrying out this section, the Secretary shall—

(1) publish notice of targets and supporting analysis and determinations under this section in the Federal Register to provide an explanation of and the basis for such actions, including any supporting modeling, data, assumptions, protocols, and cost-benefit analysis, including return on investment; and

(2) provide an opportunity for public comment on targets and supporting analysis and determinations under this section.

(f) **VOLUNTARY CODES AND STANDARDS.**—Notwithstanding any other provision of this section, any model building code or standard established under section 304 shall not be binding on a State, local government, or Indian tribe as a matter of Federal law.

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**NATIONAL ENERGY CONSERVATION POLICY ACT**

Public Law 95–619, as Amended

An Act for the relief of Jack R. Misner.

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**TITLE V—FEDERAL ENERGY INITIATIVES**

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**PART III—FEDERAL ENERGY MANAGEMENT**

\* \* \* \* \*

**SEC. 546. INCENTIVES FOR AGENCIES.**

(a) **CONTRACTS.**—(1) Each agency shall establish a program of incentives for conserving, and otherwise making more efficient use of,



energy as a result of entering into contracts under title VIII of this Act.

(2) The Secretary shall, not later than 18 months after the date of the enactment of the Energy Policy Act of 1992 and after consultation with the Director of the Office of Management and Budget, the Secretary of Defense, and the Administrator of General Services, develop appropriate procedures and methods for use by agencies to implement the incentives referred to in paragraph (1).

(b) FEDERAL ENERGY EFFICIENCY FUND.—(1) The Secretary shall establish a Federal Energy Efficiency Fund to provide grants to agencies to assist them in meeting the requirements of section 543.

(2) Not later than June 30, 1993, the Secretary shall issue guidelines to be followed by agencies submitting proposals for such grants. All agencies shall be eligible to submit proposals for grants under the Fund.

(3) The Secretary shall award grants from the Fund after a competitive assessment of the technical and economic effectiveness of each agency proposal. The Secretary shall consider the following factors in determining whether to provide funding under this subsection:

(A) The cost-effectiveness of the project.

(B) The amount of energy and cost savings anticipated to the Federal Government.

(C) The amount of funding committed to the project by the agency requesting financial assistance.

(D) The extent that a proposal leverages financing from other non-Federal sources.

(E) Any other factor which the Secretary determines will result in the greatest amount of energy and cost savings to the Federal Government.

(4) There are authorized to be appropriated, to remain available to be expended, to carry out this subsection not more than \$10,000,000 for fiscal year 1994, \$50,000,000 for fiscal year 1995, and such sums as may be necessary for fiscal years thereafter.

(c) UTILITY INCENTIVE PROGRAMS.—(1) Agencies are authorized and encouraged to participate in programs to increase energy efficiency and for water conservation or the management of electricity demand (*including measures to support the use of natural gas vehicles and electric vehicles or the fueling or charging infrastructure necessary for natural gas vehicles and electric vehicles*) conducted by gas, water, or electric utilities and generally available to customers of such utilities.

(2) Each agency may accept any financial incentive, goods, or services generally available from any such utility, to increase energy efficiency or to conserve water or manage electricity demand.

(3) Each agency is encouraged to enter into negotiations with electric, water, and gas utilities to design cost-effective demand management and conservation incentive programs to address the unique needs of facilities utilized by such agency.

(4) If an agency satisfies the criteria which generally apply to other customers of a utility incentive program, such agency may not be denied collection of rebates or other incentives.

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## TITLE VIII—ENERGY SAVINGS PERFORMANCE CONTRACTS

\* \* \* \* \*

### SEC. 804. DEFINITIONS.

For purposes of this title, the following definitions apply:

(1) The term “Federal agency” means each authority of the Government of the United States, whether or not it is within or subject to review by another agency.

(2) The term “energy savings” means—

(A) a reduction in the cost of energy, water, or wastewater treatment, from a base cost established through a methodology set forth in the contract, used in an existing federally owned building or buildings or other federally owned facilities as a result of—

(i) the lease or purchase of operating equipment, improvements, altered operation and maintenance, or technical services;

(ii) the increased efficient use of existing energy sources by cogeneration or heat recovery, excluding any cogeneration process for other than a federally owned building or buildings or other federally owned facilities; or

(iii) the increased efficient use of existing water sources in either interior or exterior applications;

(B) the increased efficient use of an existing energy source by cogeneration or heat recovery;

(C) if otherwise authorized by Federal or State law (including regulations), the sale or transfer of electrical or thermal energy generated on-site from renewable energy sources or cogeneration, but in excess of Federal needs, to utilities or non-Federal energy users; and

(D) the increased efficient use of existing water sources in interior or exterior applications.

(3) The terms “energy savings contract” and “energy savings performance contract” mean a contract that provides for the performance of services for the design, acquisition, installation, testing, and, where appropriate, operation, maintenance, and repair, of an identified energy or water conservation measure or series of measures at 1 or more locations. Such contracts shall, with respect to an agency facility that is a public building (as such term is defined in section 3301 of title 40, United States Code), be in compliance with the prospectus requirements and procedures of section 3307 of title 40, United States Code.

(4) The term “energy or water conservation measure” means—

(A) an energy conservation measure, as defined in section 551; **[or]**

(B) a water conservation measure that improves the efficiency of water use, is life-cycle cost-effective, and involves water conservation, water recycling or reuse, more efficient treatment of wastewater or storm water, improvements in operation or maintenance efficiencies, retrofit activities, or other related activities, not at a Federal hydroelectric facility~~【.】~~; or

(C) a measure to support the use of natural gas vehicles and electric vehicles or the fueling or charging infrastructure nec-

*essary for natural gas vehicles and electric vehicles, including the use of utility energy service contracts to support those vehicles or infrastructure.*

\* \* \* \* \*

**ENERGY POLICY ACT OF 1992**

Public Law 102-486, as Amended

To provide for improved energy efficiency.

\* \* \* \* \*

**TITLE I—ENERGY EFFICIENCY**

\* \* \* \* \*

**Subtitle D—Industrial**

**[(SEC. 131. ENERGY EFFICIENCY IN INDUSTRIAL FACILITIES.**

**[(a) GRANT PROGRAM.—**

**[(1) IN GENERAL.—**The Secretary shall make grants to industry associations to support programs to improve energy efficiency in industry. In order to be eligible for a grant under this subsection, an industry association shall establish a voluntary energy efficiency improvement target program.

**[(2) AWARDING OF GRANTS.—**The Secretary shall request project proposals and provide annual grants on a competitive basis. In evaluating grant proposals under this subsection, the Secretary shall consider—

- [(A)** potential energy savings;
- [(B)** potential environmental benefits;
- [(C)** the degree of cost sharing;
- [(D)** the degree to which new and innovative technologies will be encouraged;
- [(E)** the level of industry involvement;
- [(F)** estimated project cost-effectiveness; and
- [(G)** the degree to which progress toward the energy improvement targets can be monitored.

**[(3) ELIGIBLE PROJECTS.—**Projects eligible for grants under this subsection may include the following:

- [(A)** Workshops.
- [(B)** Training seminars.
- [(C)** Handbooks.
- [(D)** Newsletters.
- [(E)** Data bases.
- [(F)** Other activities approved by the Secretary.

**[(4) LIMITATION ON COST SHARING.—**Grants provided under this subsection shall not exceed \$250,000 and each grant shall not exceed 75 percent of the total cost of the project for which the grant is made.

**[(5) AUTHORIZATION.—**There are authorized to be appropriated such sums as are necessary to carry out this subsection.

[(b) AWARD PROGRAM.—The Secretary shall establish an annual award program to recognize those industry associations or individual industrial companies that have significantly improved their energy efficiency.

[(c) REPORT ON INDUSTRIAL REPORTING AND VOLUNTARY TARGETS.—Not later than one year after the date of the enactment of this Act, the Secretary shall, in consultation with affected industries, evaluate and report to the Congress regarding the establishment of Federally mandated energy efficiency reporting requirements and voluntary energy efficiency improvement targets for energy intensive industries. Such report shall include an evaluation of the costs and benefits of such reporting requirements and voluntary energy efficiency improvement targets, and recommendations regarding the role of such activities in improving energy efficiency in energy intensive industries.

**[(SEC. 132. PROCESS-ORIENTED INDUSTRIAL ENERGY EFFICIENCY.]**

[(a) DEFINITIONS.—For the purposes of this section—

[(1) the term “covered industry” means the food and food products industry, lumber and wood products industry, petroleum and coal products industry, and all other manufacturing industries specified in Standard Industrial Classification Codes 20 through 39 (or successor classification codes);

[(2) the term “process-oriented industrial assessment” means—

[(A) the identification of opportunities in the production process (from the introduction of materials to final packaging of the product for shipping) for—

[(i) improving energy efficiency;

[(ii) reducing environmental impact; and

[(iii) designing technological improvements to increase competitiveness and achieve cost-effective product quality enhancement;

[(B) the identification of opportunities for improving the energy efficiency of lighting, heating, ventilation, air conditioning, and the associated building envelope; and

[(C) the identification of cost-effective opportunities for using renewable energy technology in the production process and in the systems described in subparagraph (B); and

[(3) the term “utility” means any person, State agency (including any municipality), or Federal agency, which sells electric or gas energy to retail customers.

[(b) GRANT PROGRAM.—

[(1) USE OF FUNDS.—The Secretary shall, to the extent funds are made available for such purpose, make grants to States which, consistent with State law, shall be used for the following purposes:

[(A) To promote, through appropriate institutions such as universities, nonprofit organizations, State and local government entities, technical centers, utilities, and trade organizations, the use of energy-efficient technologies in covered industries.

[(B) To establish programs to train individuals (on an industry-by-industry basis) in conducting process-oriented industrial assessments and to encourage the use of such trained assessors.

[(C) To assist utilities in developing, testing, and evaluating energy efficiency programs and technologies for industrial customers in covered industries.

[(2) CONSULTATION.—States receiving grants under this subsection shall consult with utilities and representatives of affected industries, as appropriate, in determining the most effective use of such funds consistent with the requirements of paragraph (1).

[(3) ELIGIBILITY CRITERIA.—Not later than 1 year after the date of the enactment of this Act, the Secretary shall establish eligibility criteria for grants made pursuant to this subsection. Such criteria shall require a State applying for a grant to demonstrate that such State—

[(A) pursuant to section 111(a) of the Public Utility and Regulatory Policies Act of 1978 (16 U.S.C. 2621(a)), has considered and made a determination regarding the implementation of the standards specified in paragraphs (7) and (8) of section 111(d) of such Act (with respect to integrated resources planning and investments in conservation and demand management); and

[(B) by legislation or regulation—

[(i) allows utilities to recover the costs prudently incurred in providing process-oriented industrial assessments; and

[(ii) encourages utilities to provide to covered industries—

[(I) process-oriented industrial assessments; and

[(II) financial incentives for implementing energy efficiency improvements.

[(4) ALLOCATION OF FUNDS.—Grants made pursuant to this subsection shall be allocated each fiscal year among States meeting the criteria specified in paragraph (3) who have submitted applications 60 days before the first day of such fiscal year. Such allocation shall be made in accordance with a formula to be prescribed by the Secretary based on each State's share of value added in industry (as determined by the Census of Manufacturers) as a percentage of the value added by all such States.

[(5) RENEWAL OF GRANTS.—A grant under this subsection may continue to be renewed after 2 consecutive fiscal years during which a State receives a grant under this subsection, subject to the availability of funds, if—

[(A) the Secretary determines that the funds made available to the State during the previous 2 years were used in a manner required under paragraph (1); and

[(B) such State demonstrates, in a manner prescribed by the Secretary, utility participation in programs established pursuant to this subsection.

[(6) COORDINATION WITH OTHER FEDERAL PROGRAMS.—In carrying out the functions described in paragraph (1), States shall, to the extent practicable, coordinate such functions with activities and programs conducted by the Energy Analysis and Diagnostic Centers of the Department of Energy and the Man-

ufacturing Technology Centers of the National Institute of Standards and Technology.

**[(c) OTHER FEDERAL ASSISTANCE.—**

**[(1) ASSESSMENT CRITERIA.—**Not later than 2 years after the date of the enactment of this Act, the Secretary shall, by contract with nonprofit organizations with expertise in process-oriented industrial energy efficiency technologies, establish and, as appropriate, update criteria for conducting process-oriented industrial assessments on an industry-by-industry basis. Such criteria shall be made available to State and local government, public utility commissions, utilities, representatives of affected process-oriented industries, and other interested parties.

**[(2) DIRECTORY.—**The Secretary shall establish a nationwide directory of organizations offering industrial energy efficiency assessments, technologies, and services consistent with the purposes of this section. Such directory shall be made available to State governments, public utility commissions, utilities, industry representatives, and other interested parties.

**[(3) AWARD PROGRAM.—**The Secretary shall establish an annual award program to recognize utilities operating outstanding or innovative industrial energy efficiency technology assistance programs.

**[(4) MEETINGS.—**In order to further the purposes of this section, the Secretary shall convene annual meetings of parties interested in process-oriented industrial assessments, including representatives of State government, public utility commissions, utilities, and affected process-oriented industries.

**[(d) AUTHORIZATION OF APPROPRIATIONS.—**There are authorized to be appropriated such sums as may be necessary to carry out the purposes of this section.

**[SEC. 133. INDUSTRIAL INSULATION AND AUDIT GUIDELINES.**

**[(a) VOLUNTARY GUIDELINES FOR ENERGY EFFICIENCY AUDITING AND INSTULATING.—**Not later than 18 months after the date of the enactment of this Act, the Secretary, after consultation with utilities, major industrial energy consumers, and representatives of the insulation industry, shall establish voluntary guidelines for—

**[(1)** the conduct of energy efficiency audits of industrial facilities to identify cost-effective opportunities to increase energy efficiency; and

**[(2)** the installation of insulation to achieve cost-effective increases in energy efficiency in industrial facilities.

**[(b) EDUCATIONAL AND TECHNICAL ASSISTANCE.—**The Secretary shall conduct a program of educational and technical assistance to promote the use of the voluntary guidelines established under subsection (a).]

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**TITLE XXI—ENERGY AND ENVIRONMENT**

**SEC. 2101. GENERAL IMPROVED ENERGY EFFICIENCY.**

(a) PROGRAM DIRECTION.—The Secretary shall conduct a 5-year program, in accordance with sections 3001 and 3002 of this Act, on cost effective technologies to improve energy efficiency and increase the use of renewable energy in the buildings, industrial, and utility

sectors. Such program shall include a broad range of technological approaches, and shall include field demonstrations of sufficient scale and number to prove technical and economic viability to meet the goals stated in section 2001. Such program shall include the activities required under sections [2102, 2103, 2104, 2105, 2106, 2107, and 2108] *sections 2102, 2104, 2105, 2106 and 2108 of this Act and section 376 of the Energy Policy and Conservation Act* ongoing activities of a similar nature at the Department of Energy. Such program shall also include the activities conducted pursuant to the Steel and Aluminum Energy Conservation and Technology Competitiveness Act of 1988 (Public Law 100-680) and the Department of Energy Metal Casting Competitiveness Research Act of 1990 (Public Law 101-425).

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**[SEC. 2103. PULP AND PAPER.**

[(a) PROGRAM DIRECTION.—The Secretary shall conduct a 5-year program, in accordance with sections 3001 and 3002 of this Act, on advanced pulp and paper technologies. Such program shall include activities on energy generation technologies, boilers, combustion processes, pulping processes (excluding de-inking), chemical recovery, causticizing, source reduction processes, and other related technologies that can improve the energy efficiency of, and reduce the adverse environmental impacts of, pulp and papermaking operations. This section does not authorize projects involving the combustion of waste paper, other than gasification.

[(b) PROPOSALS.—Within 180 days after the date of enactment of this Act, the Secretary shall solicit proposals for conducting activities under this section.]

\* \* \* \* \*

**[SEC. 2107. IMPROVING EFFICIENCY IN ENERGY-INTENSIVE INDUSTRIES.**

[(a) SECRETARIAL ACTION.—The Secretary, in accordance with sections 3001 and 3002 of this Act, shall—

[(1) pursue a research, development, demonstration and commercial application program intended to improve energy efficiency and productivity in energy-intensive industries and industrial processes; and

[(2) undertake joint ventures to encourage the commercialization of technologies developed under paragraph (1).

[(b) JOINT VENTURES.—(1) The Secretary shall—

[(A) conduct a competitive solicitation for proposals from private firms and investors for such joint ventures under subsection (a)(2); and

[(B) provide financial assistance to at least five such joint ventures.

[(2) The purpose of the joint ventures shall be to design, test, and demonstrate changes to industrial processes that will result in improved energy efficiency and productivity. The joint ventures may also demonstrate other improvements of benefit to such industries so long as demonstration of energy efficiency improvements is the principal objective of the joint venture.

[(3) In evaluating proposals for financial assistance and joint ventures under this section, the Secretary shall consider—

[(A) whether the activities conducted under this section improve the quality and energy efficiency of industries or industrial processes;

[(B) the regional distribution of the energy-intensive industries and industrial processes; and

[(C) whether the proposed joint venture project would be located in the region which has the energy-intensive industry and industrial processes that would benefit from the project.]

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## ENERGY POLICY ACT OF 2005

Public Law 109–58, as Amended

AN ACT To ensure jobs for our future with secure, affordable, and reliable energy.

\* \* \* \* \*

### TITLE I—ENERGY EFFICIENCY

#### Subtitle A—Federal Programs

\* \* \* \* \*

#### [(SEC. 106. VOLUNTARY COMMITMENTS TO REDUCE INDUSTRIAL ENERGY INTENSITY.

[(a) DEFINITION OF ENERGY INTENSITY.—In this section, the term “energy intensity” means the primary energy consumed for each unit of physical output in an industrial process.

[(b) VOLUNTARY AGREEMENTS.—The Secretary may enter into voluntary agreements with one or more persons in industrial sectors that consume significant quantities of primary energy for each unit of physical output to reduce the energy intensity of the production activities of the persons.

[(c) GOAL.—Voluntary agreements under this section shall have as a goal the reduction of energy intensity by not less than 2.5 percent each year during the period of calendar years 2007 through 2016.

[(d) RECOGNITION.—The Secretary, in cooperation with other appropriate Federal agencies, shall develop mechanisms to recognize and publicize the achievements of participants in voluntary agreements under this section.

[(e) TECHNICAL ASSISTANCE.—A person that enters into an agreement under this section and continues to make a good faith effort to achieve the energy efficiency goals specified in the agreement shall be eligible to receive from the Secretary a grant or technical assistance, as appropriate, to assist in the achievement of those goals.

[(f) REPORT.—Not later than each of June 30, 2012, and June 30, 2017, the Secretary shall submit to Congress a report that—

[(1) evaluates the success of the voluntary agreements under this section; and



[(2) provides independent verification of a sample of the energy savings estimates provided by participating firms.]

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**ENERGY INDEPENDENCE AND SECURITY ACT OF 2007**

Public Law 110–140, as Amended

AN ACT To move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings and vehicles, to promote research on energy and deploy greenhouse capture and storage options, and to improve the energy performance of the Federal government, and for other purposes.

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**TITLE IV—ENERGY SAVINGS IN BUILDINGS AND INDUSTRY**

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**Subtitle B—High-Performance Commercial Buildings**

\* \* \* \* \*

**SEC. 422. ZERO NET ENERGY COMMERCIAL BUILDINGS INITIATIVE.**

\* \* \* \* \*

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section—

- (1) \$20,000,000 for fiscal year 2008;
- (2) \$50,000,000 for each of fiscal years 2009 and 2010;
- (3) \$100,000,000 for each of fiscal years 2011 and 2012; [and
- [(4) \$200,000,000 for each of fiscal years 2013 through 2018.]
- (4) \$200,000,000 for fiscal year 2013;
- (5) \$130,000,000 for fiscal year 2014; and
- (6) \$100,000,000 for each of fiscal years 2015 through 2017.

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**SEC. 452. [ENERGY-INTENSIVE INDUSTRIES PROGRAM] FUTURE OF INDUSTRY PROGRAM.**

(a) DEFINITIONS.—In this section:

- (1) ELIGIBLE ENTITY.—The term “eligible entity” means—
  - (A) an energy-intensive industry;
  - (B) a national trade association representing an energy-intensive industry; or
  - (C) a person acting on behalf of 1 or more energy-intensive industries or sectors, as determined by the Secretary.
- (2) ENERGY-INTENSIVE INDUSTRY.—The term “energy-intensive industry” means an industry that uses significant quantities of energy as part of its primary economic activities, including—

(A) information technology, including data centers containing electrical equipment used in processing, storing, and transmitting digital information;

(B) consumer product manufacturing;

(C) food processing;

(D) materials manufacturers, including—

(i) aluminum;

(ii) chemicals;

(iii) forest and paper products;

(iv) metal casting;

(v) glass;

(vi) petroleum refining;

(vii) mining; and

(viii) steel;

(E) other energy-intensive industries, as determined by the Secretary.

(3) *ENERGY SERVICE PROVIDER.*—The term “energy service provider” means any business providing technology or services to improve the energy efficiency, power factor, or load management of a manufacturing site or other industrial process in an energy-intensive industry, or any utility operating under a utility energy service project.

(~~3~~4) *FEEDSTOCK.*—The term “feedstock” means the raw material supplied for use in manufacturing, chemical, and biological processes.

(~~4~~5) *PARTNERSHIP.*—The term “partnership” means an energy efficiency partnership established under subsection (c)(1)(A).

(~~5~~6) *PROGRAM.*—The term “program” means the energy-intensive industries program established under subsection (b).

(b) *ESTABLISHMENT OF PROGRAM.*—The Secretary shall establish a program under which the Secretary, in cooperation with energy-intensive industries and national industry trade associations representing the energy-intensive industries, shall support, research, develop, and promote the use of new materials processes, technologies, and techniques to optimize energy efficiency and the economic competitiveness of the United States’ industrial and commercial sectors.

\* \* \* \* \*

(e) *INSTITUTION OF HIGHER EDUCATION-BASED INDUSTRIAL RESEARCH AND ASSESSMENT CENTERS.*—**[The Secretary]** (1) *IN GENERAL.*—The Secretary shall provide funding to institution of higher education-based industrial research and assessment centers, whose purpose shall be—

(~~1~~A) to identify opportunities for optimizing energy efficiency and environmental performance *including assessments of sustainable manufacturing goals and the implementation of information technology advancements for supply chain analysis, logistics, system monitoring, industrial and manufacturing processes, and other purposes;*

(~~2~~B) to promote applications of emerging concepts and technologies in small- and medium-sized manufacturers;

(~~3~~C) to promote research and development for the use of alternative energy sources to supply heat, power, and new feed stocks for energy-intensive industries;

(~~4~~)D) to coordinate with appropriate Federal and State research offices, and provide a clearinghouse for industrial process and energy efficiency technical assistance resources; and

(~~5~~)E) to coordinate with State-accredited technical training centers and community colleges, while ensuring appropriate services to all regions of the United States.

(2) COORDINATION.—

(A) IN GENERAL.—*To increase the value and capabilities of the industrial research and assessment centers, the centers shall—*

(i) *coordinate with Manufacturing Extension Partnership Centers of the National Institute of Standards and Technology;*

(ii) *coordinate with the Building Technologies Program of the Department of Energy to provide building assessment services to manufacturers;*

(iii) *increase partnerships with the National Laboratories of the Department of Energy to leverage the expertise and technologies of the National Laboratories for national industrial and manufacturing needs;*

(iv) *increase partnerships with energy service providers and technology providers to leverage private sector expertise and accelerate deployment of new and existing technologies and processes for energy efficiency, power factor, and load management;*

(v) *identify opportunities for reducing greenhouse gas emissions; and*

(vi) *promote sustainable manufacturing practices for small- and medium-sized manufacturers.*

(3) OUTREACH.—*The Secretary shall provide funding for—*

(A) *outreach activities by the industrial research and assessment centers to inform small- and medium-sized manufacturers of the information, technologies, and services available; and*

(B) *coordination activities by each industrial research and assessment center to leverage efforts with—*

(i) *Federal and State efforts;*

(ii) *the efforts of utilities and energy service providers;*

(iii) *the efforts of regional energy efficiency organizations; and*

(iv) *the efforts of other industrial research and assessment centers.*

(4) WORKFORCE TRAINING.—

(A) IN GENERAL.—*The Secretary shall pay the Federal share of associated internship programs under which students work with or for industries, manufacturers, and energy service providers to implement the recommendations of industrial research and assessment centers.*

(B) FEDERAL SHARE.—*The Federal share of the cost of carrying out internship programs described in subparagraph (A) shall be 50 percent.*

(5) SMALL BUSINESS LOANS.—*The Administrator of the Small Business Administration shall, to the maximum extent practicable, expedite consideration of applications from eligible small business concerns for loans under the Small Business Act (15 U.S.C. 631 et*

seq.) to implement recommendations of industrial research and assessment centers established under paragraph (1).

(6) *ADVANCED MANUFACTURING STEERING COMMITTEE.*—The Secretary shall establish an advisory steering committee to provide recommendations to the Secretary on planning and implementation of the Advanced Manufacturing Office of the Department of Energy.

(f) AUTHORIZATION OF APPROPRIATIONS.—

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**TITLE 40—PUBLIC BUILDINGS, PROPERTY,  
AND WORKS**

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**Subtitle II. Public Buildings and Works**

**PART A.—GENERAL**

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**CHAPTER 33. ACQUISITION, CONSTRUCTION, AND  
ALTERATION**

\* \* \* \* \*

**SEC. 3307. CONGRESSIONAL APPROVAL OF PROPOSED PROJECTS.**

(a) **RESOLUTIONS REQUIRED BEFORE APPROPRIATIONS MAY BE MADE.**—The following appropriations may be made only if the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives adopt resolutions approving the purpose for which the appropriation is made:

(1) An appropriation to construct, alter, or acquire any building to be used as a public building which involves a total expenditure in excess of \$1,500,000, so that the equitable distribution of public buildings throughout the United States with due regard for the comparative urgency of need for the buildings, except as provided in section 3305(b) of this title, is ensured.

(2) An appropriation to lease any space at an average annual rental in excess of \$1,500,000 for use for public purposes.

(3) An appropriation to alter any building, or part of the building, which is under lease by the Federal Government for use for a public purpose if the cost of the alteration will exceed \$750,000.

(b) **TRANSMISSION TO CONGRESS OF PROSPECTUS OF PROPOSED PROJECT.**—To secure consideration for the approval referred to in subsection (a), the Administrator of General Services shall transmit to Congress a prospectus of the proposed facility, including—

(1) a brief description of the building to be constructed, altered, or acquired, or the space to be leased, under this chapter;

(2) the location of the building or space to be leased and an estimate of the maximum cost to the Government of the facility

to be constructed, altered, or acquired, or the space to be leased;

(3) a comprehensive plan for providing space for all Government officers and employees in the locality of the proposed facility or the space to be leased, having due regard for suitable space which may continue to be available in existing Government-owned or occupied buildings, especially those buildings that enhance the architectural, historical, social, cultural, and economic environment of the locality;

(4) with respect to any project for the construction, alteration, or acquisition of any building, a statement by the Administrator that suitable space owned by the Government is not available and that suitable rental space is not available at a price commensurate with that to be afforded through the proposed action;

(5) a statement by the Administrator of the economic and other justifications for not acquiring a building identified to the Administrator under section 3303(c) of this title as suitable for the public building needs of the Government;

(6) a statement of rents and other housing costs currently being paid by the Government for federal agencies to be housed in the building to be constructed, altered, or acquired, or the space to be leased; and

(7) with respect to any prospectus for the construction, alteration, or acquisition of any building or space to be leased, an estimate of the future energy performance of the building or space and a specific description of the use of energy efficient and renewable energy systems, including photovoltaic systems, in carrying out the project.

(c) INCREASE OF ESTIMATED MAXIMUM COST.—The estimated maximum cost of any project approved under this section as set forth in any prospectus may be increased by an amount equal to any percentage increase, as determined by the Administrator, in construction or alteration costs from the date the prospectus is transmitted to Congress. The increase authorized by this subsection may not exceed 10 percent of the estimated maximum cost.

(d) AVAILABILITY OF FUNDS FOR DESIGN UPDATES.—

(1) IN GENERAL.—*Subject to paragraph (2), for any project for which congressional approval is received under subsection (a) and for which the design has been substantially completed but construction has not begun, the Administrator of General Services may use appropriated funds to update the project design to meet applicable Federal building energy efficiency standards established under section 305 of the Energy Conservation and Production Act (42 U.S.C. 6834) and other requirements established under section 3312.*

(2) LIMITATION.—*The use of funds under paragraph (1) shall not exceed 125 percent of the estimated energy or other cost savings associated with the updates as determined by a life cycle cost analysis under section 544 of the National Energy Conservation Policy Act (42 U.S.C. 8254).*

([d]e) RESCISSION OF APPROVAL.—If an appropriation is not made within one year after the date a project for construction, alteration, or acquisition is approved under subsection (a), the Committee on Environment and Public Works of the Senate or the

Committee on Transportation and Infrastructure of the House of Representatives by resolution may rescinds its approval before an appropriation is made.

**([e]f) EMERGENCY LEASES BY THE ADMINISTRATOR.**—This section does not prevent the Administrator from entering into emergency leases during any period declared by the President to require emergency leasing authority. An emergency lease may not be for more than 180 days without approval of a prospectus for the lease in accordance with subsection (a).

**([f]g) MINIMUM PERFORMANCE REQUIREMENTS FOR LEASED SPACE.**—With respect to space to be leased, the Administrator shall include, to the maximum extent practicable, minimum performance requirements requiring energy efficiency and the use of renewable energy.

**([g]h) LIMITATION ON LEASING CERTAIN SPACE.**—

(1) **IN GENERAL.**—The Administrator may not lease space to accommodate any of the following if the average rental cost of leasing the space will exceed \$1,500,000:

(A) Computer and telecommunications operations.

(B) Secure or sensitive activities related to the national defense or security, except when it would be inappropriate to locate those activities in a public building or other facility identified with the Government.

(C) A permanent courtroom, judicial chamber, or administrative office for any United States court.

(2) **EXCEPTION.**—The Administrator may lease space with respect to which paragraph (1) applies if the Administrator—

(A) decides, for reasons set forth in writing, that leasing the space is necessary to meet requirements which cannot be met in public buildings; and

(B) submits the reasons to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

**([h]i) DOLLAR AMOUNT ADJUSTMENT.**—The Administrator annually may adjust any dollar amount referred to in this section to reflect a percentage increase or decrease in construction costs during the prior calendar year, as determined by the composite index of construction costs of the Department of Commerce. Any adjustment shall be expeditiously reported to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

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