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ENERGY SAVINGS AND INDUSTRIAL COMPETITIVENESS ACT OF 2015

SEPTEMBER 9, 2015.—Ordered to be printed

Ms. MURKOWSKI, from the Committee on Energy and Natural Resources, submitted the following

R E P O R T

[To accompany S. 720]

The Committee on Energy and Natural Resources, to which was referred the bill (S. 720) to promote energy savings in residential 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.

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The amendments are as follows:

1. Strike subtitles D and E of title I.
2. Strike subtitle C of title IV.
3. Strike section 441 and insert the following:

SEC. 431. VOLUNTARY VERIFICATION PROGRAMS FOR AIR CONDITIONING, FURNACE, BOILER, HEAT PUMP, AND WATER HEATER PRODUCTS.

Section 326(b) of the Energy Policy and Conservation Act (42 U.S.C. 6296(b)) is amended by adding at the end the following:

"(6) VOLUNTARY VERIFICATION PROGRAMS FOR AIR CONDITIONING, FURNACE, BOILER, HEAT PUMP, AND WATER HEATER PRODUCTS.—

"(A) RELIANCE ON VOLUNTARY PROGRAMS.—For the purpose of periodic testing to verify compliance with energy conservation standards and Energy Star specifications established under sections 324A, 325, and 342 for covered products described in paragraphs (3), (4), (5), (9), and (11) of section 322(a) and covered equipment described in subparagraphs (B), (C), (D), (F), (I), (J), and (K) of section 340(1), the Secretary and the Administrator of the Environmental Protection Agency shall rely on testing conducted by voluntary verification programs that are recognized by the Secretary in accordance with subparagraph (B).

"(B) RECOGNITION OF VOLUNTARY VERIFICATION PROGRAMS.—

"(i) IN GENERAL.—Not later than 180 days after the date of enactment of this paragraph, the Secretary shall initiate a negotiated rulemaking in accordance with subchapter III of chapter 5 of title 5, United States Code (commonly known as the 'Negotiated Rulemaking Act of 1990') to develop criteria that have consensus support for achieving recognition by the Secretary as an approved voluntary verification program.

"(ii) MINIMUM REQUIREMENTS.—The criteria developed under clause (i) shall, at a minimum, ensure that the voluntary verification program—

"(I) is nationally recognized;

"(II) is operated by a third party and not directly operated by a program participant;

"(III) satisfies any applicable elements of—

"(aa) International Organization for Standardization standard numbered 17025; and

"(bb) any other relevant International Organization for Standardization standards identified and agreed to through the negotiated rulemaking under clause (i);

"(IV) at least annually tests independently obtained products following the test procedures established under this title to verify the certified rating of a representative sample of products and equipment within the scope of the program;

"(V) maintains a publicly available list of all ratings of products subject to verification;

"(VI) requires the changing of the performance rating or removal of the product or equipment from the program if testing determines that the performance rating does not meet the levels the manufacturer has certified to the Secretary;

"(VII) requires new program participants to substantiate ratings through test data generated in accordance with DOE regulations;

"(VIII) allows for challenge testing of products and equipment within the scope of the program;

"(IX) requires program participants to disclose the performance rating of all covered products and equipment within the scope of the program for the covered product or equipment;

"(X) provides to the Secretary—

"(aa) an annual report of all test results, the contents of which shall be determined through the negotiated rulemaking process under clause (i); and

"(bb) test reports, on the request of the Secretary or the Administrator of the Environmental Protection Agency, that note any instructions specified by the manufacturer or the representative of the manufacturer for the purpose of conducting the verification testing, to be exempted from disclosure to the extent provided under section 552(b)(4) of title 5, United States Code (commonly known as the 'Freedom of Information Act'); and

"(XI) satisfies any additional requirements or standards that the Secretary and Administrator of the Environmental Protection Agency shall establish consistent with this subparagraph.

"(iii) FINDING REQUIRED FOR CESSATION OF RECOGNITION.—The Secretary may only cease recognition of a voluntary verification program as an approved program described in subparagraph (A) on a finding that the program is not meeting its obligations for compliance through program review criteria established under this subparagraph.

"(iv) REVISIONS.—

"(I) IN GENERAL.—Major revisions to voluntary verification program criteria established under this subparagraph shall only be made pursuant to a subsequent negotiated rulemaking in accordance with subchapter III of chapter 5 of title 5, United States Code (commonly known as the 'Negotiated Rulemaking Act of 1990').

"(II) NONMAJOR REVISIONS.—

"(aa) IN GENERAL.—The Secretary may make all other nonmajor criteria revisions by initiating a direct final rule in accordance with section 553(b)(3)(B) of title 5, United States Code, on a determination published in the Federal Register that revisions to the criteria are necessary and that substantive opposition to the proposed revisions is not expected.

"(bb) CONDITIONS FOR EFFECTIVENESS.—If the Secretary does not receive adversarial comments with respect to the determination published under item (aa) during the 30-day-period following publication of that determination in the Federal Register, the direct final rule shall have the force and effect of law.

"(cc) WITHDRAWAL OF FINAL RULE.—Receipt of any adversarial comment with respect to the determination published under item (aa) shall require the Secretary to withdraw the direct final rule and publish—

"(AA) a notice of proposed rulemaking pursuant to section 553 of title 5, United States Code; or

"(BB) a notice of proposed rulemaking pursuant to section 553 of title 5, United States Code, that includes a determination that revisions to the criteria are necessary.

"(C) ADMINISTRATION.—

"(i) IN GENERAL.—The Secretary and the Administrator of the Environmental Protection Agency shall not require—

"(I) manufacturers to participate in a voluntary verification program described in subparagraph (A); or

"(II) participating manufacturers to provide information that has already been provided to the Secretary or the Administrator.

"(ii) LIST OF COVERED PRODUCTS.—The Secretary or the Administrator of the Environmental Protection Agency may maintain a publicly available list of covered products and equipment that distinguishes between products that are, and are not covered products and equipment verified through a voluntary verification program described in subparagraph (A);

"(iii) PERIODIC VERIFICATION TESTING.—

"(I) IN GENERAL.—The Secretary—

"(aa) shall not subject products or equipment that have been verification tested under a voluntary verification program described in subparagraph (A) to periodic verification testing that verifies the accuracy of the certified performance rating of the products or equipment; but

"(bb) may test products or equipment described in subclause (I) if the testing is necessary—

"(AA) to assess the overall performance of a voluntary verification program;

"(BB) to address specific performance issues;

"(CC) for use in updating test procedures and standards; or

"(DD) for other purposes consistent with this title.

"(II) ADDITIONAL TESTING.—The Secretary may subject products or equipment described in subclause (I) to periodic verification testing outside the restrictions of subclause (I)(bb), if agreed to during the rulemaking described in subparagraph (B).

"(D) EFFECT ON OTHER AUTHORITY.—Nothing in this paragraph limits the authority of the Secretary or the Administrator of the Environmental Protection Agency to enforce compliance with any law."

PURPOSE

To promote energy savings in residential buildings and industry.

BACKGROUND AND NEED

Since the 1973 oil embargo and every subsequent energy crisis, studies have shown that the U.S. could save energy and money by investing in energy efficiency measures. Today, efficient energy use and the deployment of more efficient technologies are critical to U.S. economic competitiveness and job creation. In addition, efficient energy use reduces pollution that would be associated with energy production. Nevertheless, many existing energy efficiency technologies and programs have yet to be installed or implemented.

The National Academies released a study in 2010 on the potential for energy efficiency in commercial and residential buildings, transportation, and manufacturing (Real Prospects for Energy Efficiency in the United States). The study found that energy efficiency could more than offset the Energy Information Administration's projected increase in U.S. energy consumption through 2030.

The Energy Savings and Industrial Competitiveness Act (ESIC) of 2015 proposes a national strategy to increase energy efficiency in the residential, commercial, federal, and industrial sectors of our economy. The legislation would use a variety of low-cost tools to reduce barriers to private sector efficiency investments and to promote the adoption of "off-the-shelf" technologies that will save money for consumers and businesses, make America more energy independent, the economy more competitive, and reduce environmental impacts. For most energy consuming appliances and equipment, more efficient models or technologies are commercially available today. Increased deployment of these alternatives would pay for themselves through energy savings and yield long-term benefits to consumers and to the nation.

The Energy Information Administration reports that commercial and residential buildings combined consumed 41 percent of all energy used in 2011. The U.S. industrial sector consumes more energy than any other sector of our economy and the Federal Government is the largest single energy consumer in the U.S. ESIC's provisions target these sectors for energy-efficiency upgrades, which will promote economic growth in all regions of the country.

LEGISLATIVE HISTORY

S. 720 was introduced by Senators Portman, Shaheen, Ayotte, Bennet, Cantwell, Collins, Coons, Franken, Heller, Hoeven, Manchin, Murkowski, Warner, and Wicker on March 11, 2015. The Senate Committee on Energy and Natural Resources (Committee) held a legislative hearing on S. 720 on April 30, 2015.

In the 113th Congress, four similar bills, S. 2262, S. 1392, S. 2074, and S. 761, were introduced by Senators Shaheen and Portman. S. 2262 was introduced on April 28, 2014 and S. 1392 was introduced on July 30, 2013. Cloture to end debate on S. 2262 was not invoked in the Senate by a yea-nay vote of 55–36 on May 12, 2014. S. 1392 was considered by the Senate on September 19, 2013. Companion legislation, H.R. 1616, was introduced in the House by Representative McKinley on April 18, 2013. S. 2074 and S. 761, were introduced by Senators Shaheen and Portman on February 27, 2014 and April 18, 2013, respectively. The Committee held a hearing on S. 761 on April 23, 2013 (S. Hrg. 113–24), and it was favorably reported by the Committee on June 3, 2013 (S.

Rpt. 113–37). The bill was similar to S. 1000 (112th Congress) as introduced on May 16, 2011, as heard by the Committee on June 9, 2011 (S. Hrg. 112–273), and as favorably reported by the Committee on September 6, 2011 (S. Rpt. 112–71). Parts of S. 761 were similar to other bills that were considered by the Committee in the 111th Congress including: the building energy codes provisions of S. 1462, the American Clean Energy Leadership Act of 2009; the commercial building financing provisions of the Recovery Through Building Renovation Act of 2010; the manufacturing efficiency provisions of S. 1462; and the provisions of the Supply Star Act of 2010.

Since the introduction of S. 720, S. 535, a bill comprised of sections 131–133 (Better Buildings), section 141 (Energy Information for Commercial Buildings), and section 421 (Grid-enabled Water Heaters) of S. 720 was introduced by Senators Portman and Shaheen. It passed by the Senate on March 27, 2015, and the House on April 21, 2015. It was signed by the President on April 30, 2015 (Public Law 114–11).

Section 121 of S. 720 (Coordination of Information on Assistance for Schools) was introduced as S. 600. Section 431 (Requirements for Federal Buildings) and Section 432 (Certification Systems for Federal Green Buildings) of S. 720 were introduced as S. 869. These two bills are also on the agenda for the April 30, 2015 hearing.

The Committee on Energy and Natural Resources met in an open business session on July 30, 2015 and ordered S. 720 favorably reported with amendments.

COMMITTEE RECOMMENDATION AND TABULATION OF VOTES

The Committee on Energy and Natural Resources, in an open business session on July 28, 2015, by a majority voice vote of a quorum present, recommended that the Senate pass S. 720 with amendments, if amended as described herein.

The roll call vote on reporting the measure was 20 yeas, 2 nays, as follows:

YEAS	NAYS
Ms. Murkowski	Mr. Lee*
Mr. Barrasso	Mr. Flake*
Mr. Risch	
Mr. Daines	
Mr. Cassidy*	
Mr. Gardner	
Mr. Portman	
Mr. Hoeven	
Mr. Alexander*	
Mrs. Capito	
Ms. Cantwell	
Mr. Wyden*	
Mr. Sanders*	
Ms. Stabenow	
Mr. Franken	
Mr. Manchin	
Mr. Heinrich	
Ms. Hirono	

Mr. King
Ms. Warren
*Indicates vote by proxy.

COMMITTEE AMENDMENTS

During its consideration of S. 720, the Committee adopted amendments that make three primary changes to the bill as introduced by striking subtitles D, relating to better buildings and striking subtitle E of title I, relating to energy information for commercial buildings; striking subtitle C of title IV, relating to water heaters; and substituting the language in section 441 relating to voluntary verification programs for air conditioning, furnace, boiler, heat pump, and water heater products in response to technical assistance received from the Department of Energy.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title; table of contents

Section 1 provides a short title for the measure and the table of contents.

Section 2. Definition of Secretary

Section 2 provides the definition of Secretary.

TITLE I: BUILDINGS

SUBTITLE A: BUILDING ENERGY CODES

Section 101. Greater energy efficiency in building codes

Section 101(a) amends section 303 of the Energy Conservation and Production Act (ECPA) to add certain definitions. Section 101(b) amends section 304 of ECPA to require that the Secretary of Energy encourage and support the adoption of building energy codes by States, local governments, or Indian tribes that meet or exceed model building energy codes. Section 101(d) amends section 307 of ECPA to require that the Secretary of Energy support the updating of model building energy codes.

SUBTITLE B: WORKER TRAINING AND CAPACITY BUILDING

Section 111. Building training and assessment centers

Section 111 directs the Secretary of Energy (Secretary) to provide grants to institutions of higher education and Tribal Colleges or Universities to establish building training and assessment centers.

Section 112. Career skills training

Section 112 directs the Secretary to provide grants to eligible entities to cover a portion of the cost of career skills training programs that lead to students receiving an industry-related certification for the installation of energy efficient building technologies.

SUBTITLE C: SCHOOL BUILDINGS

Section 121. Coordination of energy retrofitting assistance for schools

Section 121 directs the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) to coordinate and disseminate information on existing Federal programs that may be used to help initiate, develop, and finance energy efficiency, renewable energy, and energy retrofitting projects for schools.

TITLE II: INDUSTRIAL EFFICIENCY AND COMPETITIVENESS

SUBTITLE A: MANUFACTURING ENERGY EFFICIENCY

Section 201. Purposes

Section 201 provides the purpose of this subtitle.

Section 202. Future of Industry program

Section 202(a) amends the heading of section 452 of Energy Independence and Security Act (EISA) of 2007 to add the "Future of Industry Program". Section 202(b) amends section 452(a) of EISA 2007 to add a definition of "energy service provider." Section 202(c) amends section 452(e) of the EISA 2007 to direct Industrial Assessment Centers (IACs) to coordinate with the Manufacturing Extension Partnership Centers of the National Institute of Standards and Technology and DOE's Building Technologies Program, and to increase partnerships with the national laboratories and energy service and technology providers and directs the Secretary to establish an Advanced Manufacturing Steering Committee.

Section 203. Sustainable manufacturing initiative

Section 203 amends part E of title II of the Energy Policy and Conservation Act (EPCA) to add a Sustainable Manufacturing Initiative which requires DOE's EERE to provide onsite technical assessments to manufacturers seeking efficiency opportunities and requires the Secretary to carry out a joint industry-government partnership program to research, develop, and demonstrate new sustainable manufacturing and industrial technologies and processes.

Section 204. Conforming Amendments

Section 204 makes conforming changes to the Energy Policy Act (EPACT) of 2005.

SUBTITLE B: SUPPLY STAR

Section 211. Supply Star

Section 211 amends section 324A of the EPCA to establish a DOE pilot program in coordination with Energy Star to promote practices that maximize supply chain efficiency.

SUBTITLE C: EXTENDED PRODUCT REBATE PROGRAM

Section 221. Extended product system rebate program

Section 221 directs the Secretary to establish a rebate program to encourage the replacement of energy inefficient electric motors.

SUBTITLE D: TRANSFORMER REBATE PROGRAM

Section 231. Energy efficient transformer rebate program

Section 231 directs the Secretary to establish a rebate program to encourage the replacement of energy inefficient transformers.

TITLE III: FEDERAL AGENCY ENERGY EFFICIENCY

Section 301. Energy-efficient and energy-saving information technologies

Section 301 amends section 543 of the National Energy Conservation Policy Act (NECPA) by adding a section that directs the Director of the Office of Management and Budget (OMB) to collaborate with each Federal agency to develop an implementation strategy for the maintenance, purchase, and use of energy-efficient and energy-saving information technologies.

Section 302. Availability of funds for design updates

Section 302 amends section 3307 of title 40 of the U.S. Code to allow the Administrator of General Services to use appropriated funds to update the design of a building for which the design has been substantially completed but on which construction has not begun to meet Federal building energy efficiency standards.

Section 303. Energy efficient data centers

Section 303 amends section 453 of EISA 2007 to update the Voluntary National Information Program. It requires the Secretary to develop a metric for data center energy efficiency, and directs the Secretary, in consultation with the Director of OMB, to maintain a data center energy practitioner program and open data initiative for Federal data center energy usage.

Section 304. Budget-neutral demonstration program for energy and water conservation improvements at multifamily residential units

Section 304 directs the Secretary of Housing and Urban Development (HUD) to conduct a pilot project that demonstrates the use of budget-neutral, performance-based agreements for energy or water conservation improvements in HUD multifamily housing.

TITLE IV: REGULATORY PROVISIONS

SUBTITLE A: THIRD-PARTY CERTIFICATION UNDER ENERGY STAR PROGRAM

Section 401. Third-party certification under Energy Star program

Section 401 amends section 324A of EPCA by directing the Administrator to revise the certification requirements for Energy Star program partners that manufacture consumer, home, and office electronic products and have complied with all program requirements for at least 18 months.

SUBTITLE B: FEDERAL GREEN BUILDINGS

Section 411. High-performance green Federal buildings

Section 411 amends section 436(h) of EISA 2007 to require the Federal Director of the Office of Federal High-Performance Green Buildings, within the General Services Administration, to conduct an ongoing review of private sector green building certification systems and provide the Secretary with a list of certification systems most likely to encourage a comprehensive and environmentally sound approach to certification of green buildings.

SUBTITLE C: ENERGY PERFORMANCE REQUIREMENT FOR FEDERAL BUILDINGS

Section 421. Energy performance requirements for Federal buildings

Section 421 amends section 543 of NECPA to extend existing federal building energy efficiency improvement targets. As amended, section 543(a)(2) will provide for exclusions from the targets for buildings with energy intensive activities and creates reporting requirements for excluded buildings. Section 543(f)(3) will require federal energy managers to complete comprehensive energy and water evaluation and recommissioning or retrocommissioning for 25 percent of the facilities of each agency for excluded buildings for which reporting is required by section 2(b) to ensure that federal buildings are performing at their optimal level of energy efficiency. Not later than 2 years after the date of completion of each evaluation, each energy manager may implement energy- or water-saving measures identified in the evaluation or shall explain why the measures were not implemented.

Section 422. Federal building energy efficiency performance standards; certification system and level for green buildings

Section 422 amends section 303 of ECPA to expand the scope of existing energy standards for new federal buildings to cover major renovations.

Section 423. Enhanced energy efficiency underwriting

Section 423 requires the Secretary of Housing and Urban Development to develop and issue updated underwriting and appraisal guidelines for borrowers who voluntarily submit a qualified home energy report. The provision would cover any loan issued, insured, purchased, or securitized by the Federal Housing Administration (FHA) and other federal agencies, or their successors. The updated guidelines would adjust underwriting criteria and valuation guidelines to account for expected energy cost savings as an offset to other expenses and to account for present value of expected energy savings. If no qualified energy report is provided, no adjustment would be made. Lenders would be required to inform loan applicants of the costs and benefits of improving the energy efficiency of a home.

SUBTITLE D: VOLUNTARY VERIFICATION PROGRAMS FOR AIR CONDITIONING, FURNACE, BOILER, HEAT PUMP, AND WATER HEATER PRODUCTS

Section 431. Voluntary verification programs for air conditioning, furnace, boiler, heat pump, and water heater products

Section 431 requires DOE to recognize certain qualified voluntary, independent certification programs for the energy performance of air conditioning, furnace, boiler, heat pump, and water heater products. It requires the DOE to rely on these programs to verify the performance rating of these products, provide annual reports of all test results, and maintain a publicly available list of all certified models.

TITLE V: MISCELLANEOUS

Section 501. Budgetary effects

Section 501 states that for the purpose of complying with the Statutory Pay-As-You-Go Act of 2010, the budgetary effect of this legislation shall be determined by reference to the latest statement titled "Budgetary Effects of PAYGO Legislation" for this Act.

Section 502. Advance appropriations required

Section 502 provides that authorization of amounts under this Act and the amendments made by this Act shall be effective for any fiscal year only to the extent and in the amount provided in advance in appropriations Acts.

COST AND BUDGETARY CONSIDERATIONS

The Congressional Budget Office estimate of the costs of this measure has been requested but was not received at the time the report was filed. When the report is available, the Chairman will request it to be printed in the Congressional Record for the advice of the Senate.

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 the bill.

The bill is not a regulatory measure in the sense of imposing Government-established standards or significant economic responsibilities on private individuals and businesses. Also, compliance with voluntary programs, such as those designed to increase energy efficiency efforts, will require commitments of resources. Various grant and other assistance programs will require submission of documentation or plans as a condition for the assistance. The Committee believes that the effects are not undue and are reasonable in light of the benefits of the programs.

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

Little, if any, additional paperwork would result from the enactment of the bill, as ordered reported.

CONGRESSIONALLY DIRECTED SPENDING

S. 720, 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 Office of Energy Efficiency and Renewable Energy at the April 30, 2015 hearing on S. 720 follows:

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

INTRODUCTION

Chairman Murkowski, Ranking Member Cantwell, and Members of the Committee, thank you for the opportunity to testify today on behalf of the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) regarding energy efficiency.

In support of the Administration's all-of-the-above approach to energy and the Climate Action Plan, EERE leads DOE efforts as the U.S. Government's primary clean energy and energy efficiency technology organization—working with some of the Nation's best innovators and businesses to support high-impact applied research, development, and demonstration (RD&D) activities in the three sectors under our purview: sustainable transportation, renewable power, and energy efficiency. With Congress's support, we implement a range of strategies aimed at reducing U.S. reliance on oil, saving American families and businesses money, creating jobs, and reducing pollution. We work to ensure that the clean energy and energy efficiency technologies of today and tomorrow are invented and manufactured in America.

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. The Building Technologies, Advanced Manufacturing, Weatherization and Intergovernmental Programs, and Federal Energy Management Program Offices develop and help provide businesses, consumers, and government agencies with innovative, cost-effective energy-saving solutions to improve their energy efficiency—from higher-efficiency products, to new ways of designing homes and buildings, to new ways of improving the energy intensity and competitiveness of American manufacturers. EERE's energy efficiency portfolio also supports better integrating the built environment with our energy system to combat costly peaks in energy demand and to increase the capabilities and value of buildings and facilities.

Energy efficiency is a large, low-cost, and underutilized U.S. energy resource. Increased energy efficiency offers savings on energy bills, opportunities for more jobs, and improved industrial competitiveness, and it will lower air pollution. I am pleased to be here today and look forward to working with Congress, and this Committee in particular, to talk about how we can use energy efficiency as a tool to help address our Nation's energy challenges. My statement today will address the energy efficiency bills currently before the Committee, and provide an update on DOE's energy efficiency portfolio, the challenges we are working to address, and the progress we are making.

ENERGY EFFICIENCY LEGISLATION

I have been asked to testify on 22 energy efficiency bills currently before the Committee. In my testimony, I will address:

- S. 720—Energy Savings and Industrial Competitiveness Act of 2015;
- S. 703—Weatherization Enhancement and Local Energy Efficiency Investment and Accountability Act. This bill reauthorizes the Weatherization Assistance Program from fiscal year 2016 through fiscal year 2020, and seeks to establish a competitive grant program to expand the number of low-income, single-family and multifamily homes that receive energy efficiency retrofits; and
- S. 858—Energy Savings Through Public-Private Partnerships Act of 2015. This bill seeks to encourage the use of Energy Savings performance contracts and Utility Energy Service Contracts in federal government buildings.

The Administration continues to review all of the legislation on the docket today and I am happy to answer questions more specifically on the 22 bills for the record. However, I will reiterate my appreciation for ongoing bipartisan efforts to promote energy efficiency and look forward to continuing to work with the Committee and the range of bill sponsors as legislation works its way through Congress.

The Administration continues its support for the underlying goals of S. 720—as many of the sections of S. 720 match those in S. 1392, the similar 2013 bill that the Administration supported. However, there are sufficient changes in S. 720 that warrant further review before a position on the full bill can be established. Many provisions of S. 720 would support the Administration's efforts to strengthen U.S. competitiveness through significant research and development investments in manufacturing innovation and productivity, such as the Department of Energy's Clean Energy Manufacturing Initiative, and complement key energy efficiency dimensions of the President's Climate Action Plan. The Department continues to review the changes in S. 720 and looks forward to working

with the bill sponsors and this Committee to cut carbon pollution and begin to slow the effects of climate change.

In addition, the Department is still reviewing S. 703 and S. 858, and does not have a position on them at this time. DOE does, however, support the overall objective of S. 703 to reauthorize DOE's existing Weatherization Assistance Program (WAP) and the State Energy Program (SEP) and recommends that authorization also be provided for the Local Energy Program (LEP), as outlined in the FY 2016 Budget. WAP provides grants to states, territories, and some Indian tribes to improve the energy efficiency of the homes of low-income families. SEP provides funding and technical assistance to state and territory energy offices to help them advance their clean energy economy while contributing to national energy goals. The proposed LEP compliments these programs, serving as a catalyst for developing creative and effective solutions through local-level projects. While DOE supports the reauthorization of WAP and SEP, we note that existing law authorizes appropriations for SEP at $125 million per year. S. 703 would change the amount to $75 million per year for Fiscal Years 2016 through 2020. The lowered amount for authorization for SEP may not be sufficient for States to complete projects contemplated under SEP, given the significant role of states in energy efficiency, renewable energy, and energy emergency planning across the U.S. In addition, DOE supports the intent of S. 858 to encourage the use of Energy Savings performance contracts and Utility Energy Service Contracts which permit federal agencies to implement energy efficiency, renewable energy and water-efficiency projects that save energy, reduce greenhouse gas emissions and save taxpayer dollars.

EERE'S ENERGY EFFICIENCY PORTFOLIO

EERE's program offices are implementing a variety of strategies to improve the efficiency of our homes, buildings and manufacturers, similar to the activities highlighted in the legislation before the Committee today.

Building technologies

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. Residential and commercial buildings consume more than 40 percent of the Nation's total energy and more than 73 percent of its electrical energy,[1] resulting in an estimated annual national buildings energy bill of more than $430 billion.[2] This energy bill can be reduced by 20–50 percent through a variety of existing and emerging building energy efficiency technologies and techniques once

[1] Monthly Energy Review, Energy Information Administration, U.S. Department of Energy, November 2014, *http://www.eia.gov/totalenergy/data/monthly/pdf/mer.pdf.*

[2] Annual Energy Outlook, Energy Information Administration, U.S. Department of Energy, April 2014, *http://www.eia.gov/forecasts/aeo/pdf/0383(2014).pdf.*

these solutions are successfully developed, commercialized, and proven to be cost effective.

EERE's Building Technologies Program (BTO) will continue to develop and demonstrate advanced building efficiency technologies and practices to make buildings in the U.S. more efficient, affordable, and comfortable. Key recent EERE accomplishments in BTO include the following:

• Helping American commercial, industrial, and multifamily buildings become at least 20 percent more energy efficient by 2020. Through the Better Buildings Challenge, more than 250 partners are achieving average energy savings of 2.5% annually. These partners are on track to achieve the goal of more than 20% energy savings over 10 years and have saved 36 trillion Btus and $300 million since the Challenge began in 2011.

• Curbing greenhouse gas emissions with advanced refrigeration systems. Through the Building Technologies Office's Emerging Technologies R&D program, a leading commercial refrigeration manufacturer worked with Oak Ridge National Laboratory to design a refrigeration system with 25% lower energy consumption and 78% lower GHG emissions than existing systems.

• Providing consumers billions of dollars in energy savings. As part of President Obama's Climate Action Plan, the Energy Department finalized ten energy efficiency standards in 2014. Altogether, those ten standards will help reduce carbon dioxide emissions by over 435 million metric tons and save American families and businesses $78 billion in electricity bills through 2030.

The program uses a three-pronged strategy: (1) High Impact Technology Research and Development—research and development (R&D) targeting the greatest opportunities to develop high-impact new cost-effective energy efficiency products and solutions (i.e., the highest potential market and energy efficiency impact); (2) Technology-to-Market—validating and driving these technology products and solutions into the market by verifying and improving performance and cost, providing improved data and information, and partnering with manufacturers and users; and (3) Lock In Savings—where a government role is appropriate and justified, locking in the savings through market based (e.g., working with the Environmental Protection Agency on the ENERGY STAR Program) and regulatory (i.e., codes and standards) efforts that provide clear public and net economic benefits to both producers and consumers. The program invests in a balanced portfolio of activities that are determined to contribute optimally to national energy efficiency goals.

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. 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 of housing stock that is durable, uses smarter energy management systems, and offers substantial energy savings.

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 to reduce U.S. building-related energy use in existing homes by 20 percent by 2020 and 40 percent by 2030 through applied research (e.g. how builder/retrofitters can more cost effectively install technical solutions into homes) to: resolve the major technology to market challenges to achieving these goals, develop infrastructure to support the construction or improvement of homes to meet higher performance levels, and demonstrate and then promote higher energy efficiency home retrofit and model homes for new construction that may be implemented at the state and local level.

The Better Buildings Challenge is a signature partnership effort to make our Nation's buildings 20% more energy efficient over the next ten years, with over 250 partners across the commercial, industrial, residential, and public sectors. Together, these partners account for approximately 3.5 billion square feet of building floor space, more than 600 manufacturing facilities, and $5.5 billion in private sector financing. As partners advance toward meeting their individual goals, the Better Buildings Challenge website [3] will highlight their commitment and progress, including the sharing of showcase projects and hundreds of replicable implementation models that other organizations can adopt. To date, more than $3 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.

In addition, the Department sets minimum energy efficiency standards for approximately 60 categories of appliances and equipment used in homes, businesses, and other applications, as required by existing law. For most products, Congress passed laws that set initial federal energy efficiency standards and test procedures, and that established schedules for DOE to review and update these standards and test procedures. The Appliance and Equipment Standards Program reduces manufacturers' regulatory burden and costs, and therefore costs to consumers, by providing single national standards in place of a patchwork of state-by-state standards. Since 2009, 25 new or updated standards, covering more than 30 products, have been issued and will ensure annual energy savings over the coming years. The Program is highly effective, achiev-

[3] The BBC website address is *www.better buildings.energy.gov/challenge*.

ing dramatic bang-for-the-buck in energy savings. The cumulative utility bill savings to consumers from energy efficiency standards is estimated to be nearly $1.8 trillion by 2030.

Further, DOE assists with the adoption and implementation of state and local building codes for both commercial and residential buildings. Building energy codes are an existing solution that can provide between 20–30 percent whole building energy savings. The program assists states and localities in adopting, complying with, and enforcing energy codes for residential and commercial buildings, resulting in higher-performing buildings that maximize cost-effective energy savings. Pacific Northwest National Laboratory estimates the annual impact of these activities to be over 100 trillion Btu of primary energy savings and almost $780 million in energy cost savings. To accomplish its objectives in this area, DOE has developed a suite of assistance tools it routinely provides to state and local authorities.

In FY2016, DOE has requested $264,000,000 for the Building Technologies Office.

Advanced manufacturing

The U.S. manufacturing sector 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.[4] While being a key sector underlying long-term economic growth, manufacturing also has an annual energy bill of about $200 billion and uses roughly one-third of the primary energy (and related GHG emissions) in the U.S.[5] U.S. manufacturing can particularly benefit from technologies for energy efficiency across the board, as industry must continually improve productivity and efficiency to remain globally competitive.

EERE's Advanced Manufacturing Office (AMO) partners with industry, small business, universities, and other stakeholders to identify and invest in emerging technologies with the potential to create high-quality manufacturing jobs, enhance global competitiveness of the United States, and reduce energy use by encouraging a culture of continuous enrichment in corporate energy management. Key recent AMO accomplishments include:

• Pushing the boundaries of additive manufacturing. The EERE-supported Manufacturing Demonstration Facility (MDF) at Oak Ridge National Laboratory collaborated with private sector partners to design and prototype a 3D-printed car—all in just six months. This project was en-

[4] 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*

[5] Annual Energy Outlook 2014: Reference Case Data, U.S. Energy Information Administration, available from: *http://www.eia.gov/forecasts/aeo/data.cfm*

abled through a partnership between the MDF and industry stakeholders, which developed breakthrough additive manufacturing processes and allowed industry to print more efficiently and on a larger scale than similar commercially available processes.

• Assuring supply chains of materials critical to clean energy technologies. The Critical Materials Institute (CMI), an Energy Innovation Hub for the U.S. Department of Energy (DOE), celebrated its second anniversary with twenty-seven invention disclosures. Critical materials, including some rare earth elements that possess unique magnetic, catalytic, and luminescent properties, are key resources needed to manufacture products for the clean energy economy.

• Saving manufacturers money across the U.S. Industrial Assessment Centers located within accredited engineering programs at 24 universities across the country conduct energy audit assessments at manufacturers' sites. According to analyses done by the program, on average, each manufacturer identifies about $140,000 in potential annual energy savings. Almost 17,000 manufacturers have benefited from the program and implemented savings resulting in approximately 5 million metric tons of carbon dioxide emission reductions.[6]

AMO's research, development, demonstration, and deployment investments advance high-impact technologies for energy efficiency in the manufacturing sector in addition to foundational, cross-cutting manufacturing and materials technologies critical to efficient and competitive domestic manufacturing of clean energy products. AMO's investments in foundational technologies are anticipated to have a high impact in helping save energy and improve competitiveness and that will benefit multiple industries in the installed industrial base. When R&D investments are approached in this manner, the extensive supply chains associated with manufacturing multiply the government's initial investments from one industry to multiple applications in other industries and end-use products.

The Program addresses these clean energy manufacturing challenges using three primary modalities of support: research and development of early stage manufacturing technologies through the support of individual R&D projects, pre-commercial technology development through facilities and manufacturing consortia, and technology assistance through manufacturing partnership participation, assessment and evaluation tools.

EERE leads the Department of Energy's *Clean Energy Manufacturing Initiative* which is a Department-wide approach to increase U.S. competitiveness in clean energy manufacturing while advancing progress toward the nation's energy goals. EERE-supported Clean Energy Manufacturing Innovation Institutes are public-private partner-

[6] Internal analysis based on data from the Industrial Assessment Centers Database, *http://iac.rutgers.edu/database.*

ships focusing on RD&D of foundational technologies that are broadly applicable and prevalent in multiple industries and markets within the energy sector and that have potentially transformational technical and productivity impacts for the U.S. manufacturing sector more broadly. All institutes will be actively managed through cooperative agreements with well-defined milestones, and oriented toward clearly stated research objectives and outcomes to ensure timely achievement of all technical, operational, organizational and partnership goals. Also, within 5 years of its launch, each institute is expected to be financially independent and sustainable using only private-sector and other sources of funding without further federal financial assistance.

One example of the Department's efforts in this area include our recently selected Institute for Advanced Composites Manufacturing Innovation, led by the University of Tennessee and headquartered in Knoxville, already has 122 committed partners united toward the common goal of lowering overall costs for manufacturing advanced composites by 50 percent, reducing the energy use to do so by 75 percent, and increasing the ability to recycle composites by more than 95 percent. Advanced composites have the potential to deliver clean energy products with better performance and lower costs, such as lighter and longer wind turbines blades; high pressure tanks for natural gas- and hydrogen-fueled cars; lighter, highly energy-efficient industrial equipment; and lightweight vehicles.

In addition, the Department has released a Notice of Intent to issue a competitive solicitation in 2015 to fund a Clean Energy Manufacturing Innovation Institute focused on smart manufacturing. Smart manufacturing utilizes a suite of tools to enable real-time operational energy efficiency improvements in manufacturing ranging from unit processes to factory-wide integration to enterprise-wide energy management.

The Department also 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. One example is the 24 existing Industrial Assessment Centers (IACs), situated at universities with major engineering programs, which conduct energy efficiency, productivity improvement, and waste reduction assessments for small- and medium-sized manufacturer at no cost to them. DOE technical assistance also supports the achievement of the national goal set by President Obama 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.

In FY2016, DOE has requested $404,000,000 for the Advanced Manufacturing Office.

Weatherization and Intergovernmental Programs

For decades, states have demonstrated leadership through their unique authorities to develop and implement energy efficiency and renewable energy policies and programs. State governments wield considerable influence in the building sector through upgraded building codes and incentives; in the utility sector through energy efficiency and renewable energy targets and customer programs; and in the industrial sector with policies that encourage energy efficiency through activities such as energy audits and combined heat and power.

EERE's Office of Weatherization and Intergovernmental Programs (WIP) partners with its national network of state and local organizations to significantly accelerate the deployment of energy efficiency and renewable energy technologies and practices by a wide range of government, community, and business stakeholders.

Key recent WIP accomplishments include:

• Provided critical funding for states to weatherize homes. In FY 2014 alone, EERE helped improve the energy performance and comfort in the homes of 37,831 American low-income families across the Nation, resulting in an estimated 1.1 trillion Btu of first-year energy savings and $16 million in first-year energy cost savings.

• Maintained strict certification and auditing requirements to protect taxpayers. In FY2014, WAP implemented national certifications and work specifications for residential retrofit worker training, energy audits and weatherization methods.

Included within the Office of Weatherization and Intergovernmental Programs are the Weatherization Assistance Program (WAP) and the State Energy Program (SEP).

The Weatherization Assistance Program provides funding through formula grants to increase the energy efficiency of dwellings owned or occupied by low-income persons, reduce their total residential energy expenditures, and improve their health and safety. Through retrofitting residential buildings, WAP activities reduce the cost of low-income household energy bills, which are significantly disproportionately higher relative to higher income households. Up to 40 million low-income households in the U.S. are eligible for low-income housing energy assistance. In FY2014, the Weatherization Assistance Program funding weatherized approximately 38,000 homes, exceeding its fiscal year goal of 24,600 homes retrofits for low income families by approximately 50 percent. The Weatherization Assistance Program also provides training and technical assistance to improve program effectiveness, service deliver, resource accountability, and operation efficiency. Specifically, training and technical assistance funding supports the development and implementation of a variety of tools

needed to implement work quality, training accreditation, and worker certification.

The State Energy Program assists states through competitive and formula funding in establishing and implementing energy efficiency and renewable energy plans, policies, and programs to reduce energy costs, increase competitiveness, enhance economic competitiveness, improve emergency planning, and improve the environment. States have purview over many of the policy and program levers that can catalyze greater investment in clean energy and help the country realize the suite of economic and environmental benefits associated with clean energy. The State Energy Program provides states with capacity building resources, technical assistance, and best practice sharing networks to facilitate the adoption of plans, policies, and programs that are appropriate based on state and regional circumstances.

In addition, the Local Energy Program, proposed as part of the Department's FY2016 Budget Request, is a new program that will provide support to local governments for energy planning, program development and implementation, analysis, and other related efforts through technical assistance and competitively awarded grants. Local energy efficiency policies, implemented at this scale, in a municipality, county or metropolitan area will lower energy costs, reduce greenhouse gas emissions, and support economic development goals. The objective of the Local Energy Program is to serve as a catalyst for developing creative and effective solutions through projects that improve local energy code implementation; expansion of energy upgrades in commercial buildings and residential buildings, upgrades to the energy efficiency of their own public facilities and operations; development of sustainable funding and financing resources.

In FY2016, DOE has requested $318,499,000 for the Office of Weatherization and Intergovernmental Programs.

Federal Energy Management

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. Since 1975, the Federal Government has reduced its energy intensity by 46.2 percent, and 20.6 percent from 2003. Federal GHG emissions have also dropped 17.2 percent since 2008. Additionally, the Federal Government is credited with using 9.2 percent of its electricity from renewable sources. Federal Agencies have also made progress on a number of other fronts, like reducing water use by 19 percent since 2007.[7]

A number of energy efficiency goals for the federal government were recently extended through 2025 by Execu-

[7] White House Fact Sheet: Reducing Greenhouse Gas Emissions in the Federal Government and Across the Supply Chain. *https://www.whitehouse.gov/the-press-office/2015/03/19/fact-sheet-reducing-greenhouse-gas-emissions-federal-government-and-acro*

tive Order 13693 [8] signed in March 2015. It set goals to cut the Federal Government's greenhouse gas (GHG) emissions by 40 percent below 2008 levels by 2025—saving tax payers up to $18 billion in avoided energy costs—and increase the share of electricity the Federal Government consumes from renewable sources to 30 percent. The new E.O. builds off of the strong progress the federal government has already made.

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. DOE's Federal Energy Management Program (FEMP) has developed strategic programs to identify high impact opportunities with public-private sector partnerships as well as technical approaches to address critical barriers across the Federal Government.

FEMP activities contribute to reducing the energy intensity at Federal facilities, lowering their energy bills, and providing environmental benefits through:

- Interagency coordination to align interagency efforts surrounding Federal energy management planning and legislation compliance;
- Training federal agency managers about the latest energy requirements, best practices, and technologies;
- Reporting/tracking tools that provide centralized reporting, data collection, and strategic communication;
- Financial resources and technical assistance to increase Federal agencies' investments in energy efficiency, water conservation, and renewable energy; and
- Data Center Assistance to help agencies develop and implement data center efficiency projects through technical assistance, tools, and training that increase adaptation of measurement protocols, reporting mechanisms, and best practices.

Key recent FEMP accomplishments include:

- Federal Energy Efficiency Fund. The First Federal Energy Efficiency Fund Solicitation in FY 2014 was awarded $5 million to 9 projects worth a total investment of $120 million in renewable energy and combined heat and power projects (a 24:1 leveraging ratio). Many of the projects are first-time projects for particular agencies, offering the potential of more in the future. The effort also brought forward a broad set of projects through which FEMP can provide other assistance to federal agencies.
- New Better Buildings Challenge and Accelerator for Data Centers. FEMP spearheaded a new Better Buildings Challenge and Accelerator for Data Centers announced in fall 2014, in coordination with EERE's Building Technologies Office. This Challenge has engaged federal agencies, national laboratories, and the

[8] Executive Order 13693 is accessible at *https://www.whitehouse.gov/the-press-office/2015/03/19/executive-order-planning-federal-sustainability-next-decade.*

private sector, including eBay and Staples, in efforts to greatly improve data center efficiency. Data center energy consumption is significant nationally and across the federal sector, and it can be reduced 20%–40% by applying best management energy efficiency measures and strategies typically with short returns on investment.

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 Federal building energy efficiency. In May of 2014, the president announced the expansion and extension of the President's Performance Contracting Challenge (PPCC) to $4 billion by 2016. In FY 2016, DOE's Federal Energy Management Program will continue to support the PPCC by assisting agencies to successfully meet the $4 billion goal, and helping agencies to continue their acceleration of using performance contracts to meet future energy investment needs and goals. FEMP will also share and rely on best practices from the PPCC to partner with other government and private sector stakeholders/partners to accelerate their use of performance contracts. As of March 15th, 2015, federal agencies have developed a pipeline of about $4.74 billion in projects, which exceeds the $3.97 billion commitment. Agencies are working with FEMP and to date have awarded a total of 199 projects with an investment value of $2.01 billion and an estimate pipeline of $2.7 billion.

In FY2016, DOE has requested $43,088,000 for the Federal Energy Management Program.

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.

The Administration looks forward to continuing to work with the Congress on bipartisan legislation to support energy efficiency and boost U.S. competitiveness and job creation. From partnering with companies and businesses to reduce their energy bills through the Better Buildings Initiative, to Federal administrative actions to cut energy use across Federal facilities, the Department is committed to winning the future by catalyzing a homegrown, clean energy economy in the United States.

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 original bill, as 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):

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ENERGY CONSERVATION AND PRODUCTION ACT

Public Law 94–385, as amended

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TITLE III—ENERGY CONSERVATION STANDARDS FOR NEW BUILDINGS

* * * * * * *

DEFINITIONS

SEC. 303. AS USED IN THIS TITLE

* * * * * * *

(6) The term "Federal building" means any building [to be constructed] *constructed or* altered by, or for the use of, any Federal agency. Such term shall include buildings built for the purpose of being leased by a Federal agency, and privatized military housing.

* * * * * * *

(13) The term "Federal building energy standards" means energy consumption objectives to be met without specification of the methods, materials, or equipment to be employed in achieving those objectives, but including statements of the requirements, criteria, and evaluation methods to be used, and any necessary commentary.

[(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, or its legal successor, International Code Council, Inc.;

(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).

(19) MAJOR RENOVATION.—The term "major renovation" means a modification of building energy systems sufficiently extensive that the whole building can meet energy standards for new buildings, based on criteria to be established by the Secretary through notice and comment rulemaking.

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[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 Sec-

retary 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 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 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 residen-

tial 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.]

SEC. 304. UPDATING STATE BUILDING ENERGY EFFICIENCY CODES.

(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 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 or Indian tribe 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.

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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 Conservation 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.

⌊(3)(A) Not later than 1 year after the date of enactment of this paragraph, the Secretary shall establish, by rule, revised Federal building energy efficiency performance standards that require that—

⌊(i) if life-cycle cost-effective for new Federal buildings—

⌊(I) the buildings be designed to achieve energy consumption levels that are at least 30 percent below the levels established in the version of the ASHRAE Standard or the International Energy Conservation Code, as appropriate, that is in effect as of the date of enactment of this paragraph; and

⌊(II) sustainable design principles are applied to the siting, design, and construction of all new and replacement buildings;

⌊(ii) if water is used to achieve energy efficiency, water conservation technologies shall be applied to the extent that the technologies are life-cycle cost-effective; and

⌊(iii) if lifecycle cost-effective, as compared to other reasonably available technologies, not less than 30 percent of the hot water demand for each new Federal building or Federal building undergoing a major renovation be met through the installation and use of solar hot water heaters.

⌊(B) Not later than 1 year after the date of approval of each subsequent revision of the ASHRAE Standard or the International Energy Conservation Code, as appropriate, the Secretary shall determine, based on the cost-effectiveness of the requirements under the amendment, whether the revised standards established under this paragraph should be updated to reflect the amendment.⌋

(3) REVISED FEDERAL BUILDING ENERGY EFFICIENCY PERFORMANCE STANDARDS; CERTIFICATION FOR GREEN BUILDINGS.—

(A) REVISED FEDERAL BUILDING ENERGY EFFICIENCY PERFORMANCE STANDARDS.—

(i) IN GENERAL.—Not later than 1 year after the date of enactment of the Energy Savings and Industrial Competitiveness Act of 2015, the Secretary shall establish, by rule, revised Federal building energy efficiency performance standards that require that—

(I) new Federal buildings and alterations and additions to existing Federal buildings—

(aa) meet or exceed the most recent revision of the International Energy Conservation Code (in the case of residential buildings) or ASHRAE Standard 90.1 (in the case of commercial buildings) as of the date of enactment of the Energy Savings and Industrial Competitiveness Act of 2015; and

(bb) meet or exceed the energy provisions of State and local building codes applicable to the building, if the codes are more stringent than the International Energy Conservation Code or ASHRAE Standard 90.1, as applicable;

(II) unless demonstrated not to be life-cycle cost effective for new Federal buildings and Federal buildings with major renovations—

(aa) the buildings be designed to achieve energy consumption levels that are at least 30 percent below the levels established in the version of the ASHRAE Standard or the International Energy Conservation Code, as appropriate, that is applied under subclause (I)(aa), including updates under subparagraph (B); and

(bb) sustainable design principles are applied to the location, siting, design, and construction of all new Federal buildings and replacement Federal buildings;

(III) if water is used to achieve energy efficiency, water conservation technologies shall be applied to the extent that the technologies are life-cycle cost effective; and

(IV) if life-cycle cost effective, as compared to other reasonably available technologies, not less than 30 percent of the hot water demand for each new Federal building or Federal building undergoing a major renovation be met through the installation and use of solar hot water heaters.

(ii) LIMITATION.—Clause (i)(I) shall not apply to unaltered portions of existing Federal buildings and systems that have been added to or altered.

(B) UPDATES.—Not later than 1 year after the date of approval of each subsequent revision of the ASHRAE Standard or the International Energy Conservation Code, as appropriate, the Secretary shall determine whether the revised standards established under subparagraph (A) should be updated to reflect the revisions, based on the energy savings and life-cycle cost-effectiveness of the revisions.

[(C) In the budget request**]** *(C) BUDGET REQUEST.—In the budget request* of the Federal agency for each fiscal year and each report submitted by the Federal agency under section 548(a) of the National Energy Conservation Policy Act (42 U.S.C. 8258(a)), the head of each Federal agency shall include—

* * * * * * *

‘‘(D) Not later than 1 year after the date of enactment of the Energy Independence and Security Act of 2007, the Secretary shall establish, by rule, revised Federal building energy efficiency performance standards that require that—

‘‘(i) For new Federal buildings and Federal buildings undergoing major renovations, with respect to which the Administrator of General Services is required to transmit a prospectus to Congress under section 3307 of title 40, United States Code, in the case of public buildings (as defined in section 3301 of title 40, United States Code), or of at least $2,500,000 in costs adjusted annually for inflation for other buildings:

‘‘(I) The buildings shall be designed so that the fossil fuel-generated energy consumption of the buildings is reduced, as compared with such energy consumption by a similar building in fiscal year 2003 (as measured by Commercial Buildings Energy Consumption Survey or Residential Energy Consumption Survey data from the Energy Information Agency), by the percentage specified in the following table:

‘‘Fiscal Year	Percentage Reduction
‘‘2010	55
‘‘2015	65
‘‘2020	80
‘‘2025	90
‘‘2030	100

‘‘(II) Upon petition by an agency subject to this subparagraph, the Secretary may adjust the applicable numeric requirement under subclause (I) downward with respect to a specific building, if the head of the agency designing the building certifies in writing that meeting such requirement would be technically impracticable in light of the agency's specified functional needs for that building and the Secretary concurs with the agency's conclusion. This subclause shall not apply to the General Services Administration.

‘‘(III) Sustainable design principles shall be applied to the siting, design, and construction of such buildings. Not later than 90 days after the date of enactment of the Energy Independence and Security Act of 2007, the Secretary, after reviewing the findings of the Federal Director under section 436(h) of that Act, in consultation with the Administrator of General Services, and in consultation with the Secretary of Defense for considerations relating to those facilities under the custody and control of the Department of Defense, shall identify a certification system and level for green buildings that the Secretary determines to be the most likely to encourage a comprehensive and environmentally-sound approach to certification of green buildings. The identification of the certification system and level shall be based on a review of the Federal Director's findings under section 436(h) of the Energy Independence and Security Act of 2007 and the cri-

teria specified in clause (iii), shall identify the highest level the Secretary determines is appropriate above the minimum level required for certification under the system selected, and shall achieve results at least comparable to the system used by and highest level referenced by the General Services Administration as of the date of enactment of the Energy Independence and Security Act of 2007. Within 90 days of the completion of each study required by clause (iv), the Secretary, in consultation with the Administrator of General Services, and in consultation with the Secretary of Defense for considerations relating to those facilities under the custody and control of the Department of Defense, shall review and update the certification system and level, taking into account the conclusions of such study.

[(ii) In establishing criteria for identifying major renovations that are subject to the requirements of this subparagraph, the Secretary shall take into account the scope, degree, and types of renovations that are likely to provide significant opportunities for substantial improvements in energy efficiency.

[(iii) In identifying the green building certification system and level, the Secretary shall take into consideration—

[(I) the ability and availability of assessors and auditors to independently verify the criteria and measurement of metrics at the scale necessary to implement this subparagraph;

[(II) the ability of the applicable certification organization to collect and reflect public comment;

[(III) the ability of the standard to be developed and revised through a consensus-based process;

[(IV) an evaluation of the robustness of the criteria for a high-performance green building, which shall give credit for promoting—

[(aa) efficient and sustainable use of water, energy, and other natural resources;

[(bb) use of renewable energy sources;

[(cc) improved indoor environmental quality through enhanced indoor air quality, thermal comfort, acoustics, day lighting, pollutant source control, and use of low-emission materials and building system controls; and

[(dd) such other criteria as the Secretary determines to be appropriate; and

[(V) national recognition within the building industry.

[(iv) At least once every 5 years, and in accordance with section 436 of the Energy Independence and Security Act of 2007, the Administrator of General Services shall conduct a study to evaluate and compare available third-party green building certification systems and levels, taking into account the criteria listed in clause (iii).

[(v) The Secretary may by rule allow Federal agencies to develop internal certification processes, using certified professionals, in lieu of certification by the certification entity identified under clause (i)(III). The Secretary shall include in any such rule guidelines to ensure that the certification process results in buildings meeting the applicable certification system and level identified under clause (i)(III). An agency employing an internal certification process must continue to obtain external certification by the certification entity identified under clause (i)(III) for at least 5 percent of the total number of buildings certified annually by the agency.

[(vi) With respect to privatized military housing, the Secretary of Defense, after consultation with the Secretary may, through rulemaking, develop alternative criteria to those established by subclauses (I) and (III) of clause (i) that achieve an equivalent result in terms of energy savings, sustainable design, and green building performance.

[(vii) In addition to any use of water conservation technologies otherwise required by this section, water conservation technologies shall be applied to the extent that the technologies are life-cycle cost-effective.]

(D) CERTIFICATION FOR GREEN BUILDINGS.—

(i) SUSTAINABLE DESIGN PRINCIPLES.—Sustainable design principles shall be applied to the siting, design, and construction of buildings covered by this subparagraph.

(ii) SELECTION OF CERTIFICATION SYSTEMS.—The Secretary, after reviewing the findings of the Federal Director under section 436(h) of the Energy Independence and Security Act of 2007 (42 U.S.C. 17092(h)), in consultation with the Administrator of General Services, and in consultation with the Secretary of Defense relating to those facilities under the custody and control of the Department of Defense, shall determine those certification systems for green commercial and residential buildings that the Secretary determines to be the most likely to encourage a comprehensive and environmentally sound approach to certification of green buildings.

(iii) BASIS FOR SELECTION.—The determination of the certification systems under clause (ii) shall be based on ongoing review of the findings of the Federal Director under section 436(h) of the Energy Independence and Security Act of 2007 (42 U.S.C. 17092(h)) and the criteria described in clause (v).

(iv) ADMINISTRATION.—In determining certification systems under this subparagraph, the Secretary shall—

(I) make a separate determination for all or part of each system;

(II) confirm that the criteria used to support the selection of building products, materials, brands, and technologies are fair and neutral (meaning that such criteria are based on an objective assessment of relevant technical data), do not prohibit, disfavor, or discriminate against selection based on technically inadequate information to inform human or environmental

risk, and are expressed to prefer performance measures whenever performance measures may reasonably be used in lieu of prescriptive measures; and

(III) use environmental and health criteria that are based on risk assessment methodology that is generally accepted by the applicable scientific disciplines.

(v) CONSIDERATIONS.—In determining the green building certification systems under this subparagraph, the Secretary shall take into consideration—

(I) the ability and availability of assessors and auditors to independently verify the criteria and measurement of metrics at the scale necessary to implement this subparagraph;

(II) the ability of the applicable certification organization to collect and reflect public comment;

(III) the ability of the standard to be developed and revised through a consensus-based process;

(IV) an evaluation of the robustness of the criteria for a high-performance green building, which shall give credit for promoting—

(aa) efficient and sustainable use of water, energy, and other natural resources;

(bb) use of renewable energy sources;

(cc) improved indoor environmental quality through enhanced indoor air quality, thermal comfort, acoustics, day lighting, pollutant source control, and use of low-emission materials and building system controls; and

(dd) such other criteria as the Secretary determines to be appropriate; and

(V) national recognition within the building industry.

(vi) REVIEW.—The Secretary, in consultation with the Administrator of General Services and the Secretary of Defense, shall conduct an ongoing review to evaluate and compare private sector green building certification systems, taking into account—

(I) the criteria described in clause (v); and

(II) the identification made by the Federal Director under section 436(h) of the Energy Independence and Security Act of 2007 (42 U.S.C. 17092(h)).

(vii) EXCLUSIONS.—

(I) IN GENERAL.—Subject to subclause (II), if a certification system fails to meet the review requirements of clause (v), the Secretary shall—

(aa) identify the portions of the system, whether prerequisites, credits, points, or otherwise, that meet the review criteria of clause (v);

(bb) determine the portions of the system that are suitable for use; and

(cc) exclude all other portions of the system from identification and use.

(II) ENTIRE SYSTEMS.—The Secretary shall exclude an entire system from use if an exclusion under subclause (I)—

(aa) impedes the integrated use of the system;

(bb) creates disparate review criteria or unequal point access for competing materials; or

(cc) increases agency costs of the use.

(viii) INTERNAL CERTIFICATION PROCESSES.—The Secretary may by rule allow Federal agencies to develop internal certification processes, using certified professionals, in lieu of certification by certification entities identified under clause (ii).

(ix) PRIVATIZED MILITARY HOUSING.—With respect to privatized military housing, the Secretary of Defense, after consultation with the Secretary may, through rulemaking, develop alternative certification systems and levels than the systems and levels identified under clause (ii) that achieve an equivalent result in terms of energy savings, sustainable design, and green building performance.

(x) WATER CONSERVATION TECHNOLOGIES.—In addition to any use of water conservation technologies otherwise required by this section, water conservation technologies shall be applied to the extent that the technologies are life-cycle cost-effective.

(xi) EFFECTIVE DATE.—

(I) DETERMINATIONS MADE AFTER DECEMBER 31, 2015.—The amendments made by section 432(b)(1)(C) of Energy Savings and Industrial Competitiveness Act of 2015 shall apply to any determination made by a Federal agency after December 31, 2015.

(II) DETERMINATIONS MADE ON OR BEFORE DECEMBER 31, 2015.—This subparagraph (as in effect on the day before the date of enactment of Energy Savings and Industrial Competitiveness Act of 2015) shall apply to any use of a certification system for green commercial and residential buildings by a Federal agency on or before December 31, 2015.

(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*.

[(c) PERIODIC REVIEW.—The Secretary shall periodically, but not less than once every 5 years, review the Federal building energy standards established under this section and shall, if significant energy savings would result, upgrade such standards to include all new energy efficiency and renewable energy measures that are technologically feasible and economically justified.**]**

[(d) INTERIM STANDARDS.—Interim energy performance standards for new Federal buildings issued by the Secretary under this title as it existed before the date of the enactment of the Energy Policy Act of 1992 shall remain in effect until the standards established under subsection (a) become effective.**]**

(c) PERIODIC REVIEW.—The Secretary shall—

(1) once every 5 years, review the Federal building energy standards established under this section; and

(2) on completion of a review under paragraph (1), if the Secretary determines that significant energy savings would result, upgrade the standards to include all new energy efficiency and renewable energy measures that are technologically feasible and economically justified.

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[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 standard 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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ENERGY INDEPENDENCE AND SECURITY ACT OF 2007

Public Law 110–140, as amended

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SEC. 436. HIGH PERFORMANCE GREEN FEDERAL BUILDINGS.

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(h) IDENTIFICATION OF CERTIFICATION [SYSTEM] *SYSTEMS.*—

[(1) In general.—For the purpose of this section, not later than 60 days after the date of enactment of this Act, the Federal Director shall identify and shall provide to the Secretary pursuant to section 305(a)(3)(D) of the Energy Conservation and Production Act (42 U.S.C. 6834(a)(3)(D)), a certification system that the Director determines to be the most likely to encourage a comprehensive and environmentally-sound approach to certification of green buildings.]

(1) IN GENERAL.—Based on an ongoing review, the Federal Director shall identify and shall provide to the Secretary pursuant to section 305(a)(3)(D) of the Energy Conservation and Production Act (42 U.S.C. 6834(a)(3)(D)), a list of those certification systems that the Director identifies as the most likely to encourage a comprehensive and environmentally sound approach to certification of green buildings.

(2) BASIS.—The [system] *systems* identified under paragraph (1) shall be based on—

[(A) a study completed every 5 years and provided to the Secretary pursuant to section 305(a)(3)(D) of that Act, which shall be carried out by the Federal Director to compare and evaluate standards;]

(A) an ongoing review provided to the Secretary pursuant to section 305(a)(3)(D) of the Energy Conservation and Production Act (42 U.S.C. 6834(a)(3)(D)), which shall—

(i) be carried out by the Federal Director to compare and evaluate standards; and

(ii) allow any developer or administrator of a rating system or certification system to be included in the review;

(B) the ability and availability of assessors and auditors to independently verify the criteria and measurement of metrics at the scale necessary to implement this subtitle;

(C) the ability of the applicable standard-setting organization to collect and reflect public comment;

(D) the ability of the standard to be developed and revised through a consensus-based process;

(E) an evaluation of the robustness of the criteria for a high-performance green building, which shall give credit for promoting—(i) efficient and sustainable use of water, energy, and other natural resources; (ii) use of renewable energy sources; (iii) improved indoor environmental quality through enhanced indoor air quality, thermal comfort, acoustics, day lighting, pollutant source control, and use of low-emission materials and building system controls; (iv) reduced impacts from transportation through building location and site design that promote access by public transportation; and (v) such other criteria as the Federal Director determines to be appropriate; [and]

(F) national recognition within the building industry[.]*;*

(G) a finding that, for all credits addressing grown, harvested, or mined materials, the system does not discriminate against the use of domestic products that have obtained certifications of responsible sourcing; and

(H) a finding that the system incorporates life-cycle assessment as a credit pathway.

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

(a) DEFINITIONS.—In this section:

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(3) ENERGY SERVICE PROVIDER.—The term "energy service provider" means any business providing technology or services to improve the energy efficiency, water 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.

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(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 feedstocks 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.—To increase the value and capabilities of the industrial research and assessment centers, the centers shall—

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

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

(C) 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;

(D) 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;

(E) identify opportunities for reducing greenhouse gas emissions; and

(F) 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.

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SEC. 453. ENERGY EFFICIENCY FOR DATA CENTER BUILDINGS.

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(b) VOLUNTARY NATIONAL INFORMATION PROGRAM.—

(1) IN GENERAL.—Not later than 90 days after the date of enactment of this Act, the Secretary and the Administrator of the Environmental Protection Agency shall, after consulting with information technology industry and other interested parties, initiate a voluntary national information program for those types of data centers and data center equipment and facilities that are widely used and for which there is a potential for significant data center energy savings as a result of the program.

(2) REQUIREMENTS.—The program described in paragraph (1) shall—

(A) address data center efficiency holistically, reflecting the total energy consumption of data centers as whole systems, including both equipment and facilities;

(B) consider prior work and studies undertaken in this area, including by the Environmental Protection Agency and the Department of Energy;

(C) consistent with the objectives described in paragraph (1), determine the type of data center and data H. R. 6—147 center equipment and facilities to be covered under the program;

(D) produce specifications, measurements, best practices, and benchmarks that will enable data center operators to make more informed decisions about the energy efficiency and costs of data centers, and that take into account—

(i) the performance and use of servers, data storage devices, and other information technology equipment;

(ii) the efficiency of heating, ventilation, and air conditioning, cooling, and power conditioning systems, provided that no modification shall be required of a standard then in effect under the Energy Policy and Conservation Act (42 U.S.C. 6201 et seq.) for any covered heating, ventilation, air-conditioning, cooling or power-conditioning product;

(iii) energy savings from the adoption of software and data management techniques; and

(iv) other factors determined by [the organization] *an organization* described in subsection (c);

(E) allow for creation of separate specifications, measurements, and benchmarks based on data center size and function, as well as other appropriate characteristics;

(F) advance the design and implementation of efficiency technologies to the maximum extent economically practical;

(G) provide to data center operators in the private sector and the Federal Government information about best practices and purchasing decisions that reduce the energy consumption of data centers; and

(H) publish the information described in subparagraph (G), which may be disseminated through catalogs, trade publications, the Internet, or other mechanisms, that will allow data center operators to assess the energy consumption and potential cost savings of alternative data centers and data center equipment and facilities.

[(3) PROCEDURES.—The program described in paragraph (1) shall be developed in consultation with and coordinated by the organization described in subsection (c) according to commonly accepted procedures for the development of specifications, measurements, and benchmarks.]

[(c) DATA CENTER EFFICIENCY ORGANIZATION.—

[(1) IN GENERAL.—After the establishment of the program described in subsection (b), the Secretary and the Administrator shall jointly designate an information technology industry organization to consult with and to coordinate the program.

[(2) REQUIREMENTS.—The organization designated under paragraph (1), whether preexisting or formed specifically for the purposes of subsection (b), shall—

[(A) consist of interested parties that have expertise in energy efficiency and in the development, operation, and functionality of computer data centers, information technology equipment, and software, as well as representatives of hardware manufacturers, data center operators, and facility managers;

[(B) obtain and address input from Department of Energy National Laboratories or any college, university, research institution, industry association, company, or public interest group with applicable expertise in any of the areas listed in paragraph (1);

[(C) follow commonly accepted procedures for the development of specifications and accredited standards development processes;

[(D) have a mission to develop and promote energy efficiency for data centers and information technology; and

[(E) have the primary responsibility to consult in the development and publishing of the information, measurements, and benchmarks described in subsection (b) and transmission of the information to the Secretary and the Administrator for consideration under subsection (d).

[(d) MEASUREMENTS AND SPECIFICATIONS.—

[(1) IN GENERAL.—The Secretary and the Administrator shall consider the specifications, measurements, and benchmarks described in subsection (b) for use by the Federal Energy Management Program, the Energy Star Program, and other efficiency programs of the Department of Energy and Environmental Protection Agency, respectively.

[(2) REJECTIONS.—If the Secretary or the Administrator rejects 1 or more specifications, measurements, or benchmarks described in subsection (b), the rejection shall be made consistent with section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note; Public Law 104–113).

[(3) DETERMINATION OF IMPRACTICABILITY.—A determination that a specification, measurement, or benchmark described in subsection (b) is impractical may include consideration of the maximum efficiency that is technologically feasible and economically justified.

[(e) MONITORING.—The Secretary and the Administrator shall—

[(1) monitor and evaluate the efforts to develop the program described in subsection (b); and

[(2) not later than 3 years after the date of enactment of this Act, make a determination as to whether the program is consistent with the objectives of subsection (b).

[(f) ALTERNATIVE SYSTEM.—If the Secretary and the Administrator make a determination under subsection (e) that a voluntary national information program for data centers consistent with the objectives of subsection (b) has not been developed, the Secretary and the Administrator shall, after consultation with the National Institute of Standards and Technology and not later than 2 years

after the determination, develop and implement the program under subsection (b).

[(g) PROTECTION OF PROPRIETARY INFORMATION.—The Secretary, the Administrator, or the data center efficiency organization shall not disclose any proprietary information or trade secrets provided by any individual or company for the purposes of carrying out this section or the program established under this section.]

(c) STAKEHOLDER INVOLVEMENT.—

(1) IN GENERAL.—The Secretary and the Administrator shall carry out subsection (b) in consultation with the information technology industry and other key stakeholders, with the goal of producing results that accurately reflect the best knowledge in the most pertinent domains.

(2) CONSIDERATIONS.—In carrying out consultation described in paragraph (1), the Secretary and the Administrator shall pay particular attention to organizations that—

(A) have members with expertise in energy efficiency and in the development, operation, and functionality of data centers, information technology equipment, and software, including representatives of hardware manufacturers, data center operators, and facility managers;

(B) obtain and address input from the National Laboratories (as that term is defined in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801)) or any institution of higher education, research institution, industry association, company, or public interest group with applicable expertise;

(C) follow—

(i) commonly accepted procedures for the development of specifications; and

(ii) accredited standards development processes; or

(D) have a mission to promote energy efficiency for data centers and information technology.

(d) MEASUREMENTS AND SPECIFICATIONS.—The Secretary and the Administrator shall consider and assess the adequacy of the specifications, measurements, and benchmarks described in subsection (b) for use by the Federal Energy Management Program, the Energy Star Program, and other efficiency programs of the Department of Energy or the Environmental Protection Agency.

(e) STUDY.—The Secretary, in consultation with the Administrator, not later than 18 months after the date of enactment of the Energy Policy Modernization Act of 2015, shall make available to the public an update to the report submitted to Congress pursuant to section 1 of the Act of December 20, 2006 (Public Law 109–431; 120 Stat. 2920), entitled 'Report to Congress on Server and Data Center Energy Efficiency' and dated August 2, 2007, that provides—

(1) a comparison and gap analysis of the estimates and projections contained in the original report with new data regarding the period from 2007 through 2014;

(2) an analysis considering the impact of information technologies, including virtualization and cloud computing, in the public and private sectors;

(3) an evaluation of the impact of the combination of cloud platforms, mobile devices, social media, and big data on data center energy usage;

(4) an evaluation of water usage in data centers and recommendations for reductions in such water usage; and

(5) updated projections and recommendations for best practices through fiscal year 2020.

(f) DATA CENTER ENERGY PRACTITIONER PROGRAM.—

(1) IN GENERAL.—The Secretary, in consultation with key stakeholders and the Director of the Office of Management and Budget, shall maintain a data center energy practitioner program that provides for the certification of energy practitioners qualified to evaluate the energy usage and efficiency opportunities in Federal data centers.

(2) EVALUATIONS.—Each Federal agency shall consider having the data centers of the agency evaluated once every 4 years by energy practitioners certified pursuant to the program, whenever practicable using certified practitioners employed by the agency.

(g) OPEN DATA INITIATIVE.—

(1) IN GENERAL.—The Secretary, in consultation with key stakeholders and the Director of the Office of Management and Budget, shall establish an open data initiative for Federal data center energy usage data, with the purpose of making the data available and accessible in a manner that encourages further data center innovation, optimization, and consolidation.

(2) CONSIDERATION.—In establishing the initiative under paragraph (1), the Secretary shall consider using the online Data Center Maturity Model.

(h) INTERNATIONAL SPECIFICATIONS AND METRICS.—The Secretary, in consultation with key stakeholders, shall actively participate in efforts to harmonize global specifications and metrics for data center energy and water efficiency.

(i) DATA CENTER UTILIZATION METRIC.—The Secretary, in collaboration with key stakeholders, shall facilitate in the development of an efficiency metric that measures the energy efficiency of a data center (including equipment and facilities).

(j) PROTECTION OF PROPRIETARY INFORMATION.—The Secretary and the Administrator shall not disclose any proprietary information or trade secrets provided by any individual or company for the purposes of carrying out this section or the programs and initiatives established under this section.

ENERGY POLICY ACT OF 2005

Public Law 1–58, as amended

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[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 POLICY ACT OF 1992

Public Law 102–486, as amended

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[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 Manufacturing 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 INSULATING.—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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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 sections 376 of the Energy Policy and Conservation Act* and 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.]

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[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 AND CONSERVATION ACT

Public Law 94–163, as amended

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ENERGY STAR PROGRAM

SEC. 324a. (a) IN GENERAL.— * * *

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(e) THIRD-PARTY CERTIFICATION.—

(1) IN GENERAL.—Subject to paragraph (2), not later than 180 days after the date of enactment of this subsection, the Administrator shall revise the certification requirements for the labeling of consumer, home, and office electronic products for program partners that have complied with all requirements of the Energy Star program for a period of at least 18 months.

(2) ADMINISTRATION.—In the case of a program partner described in paragraph (1), the new requirements under paragraph (1)—

(A) shall not require third-party certification for a product to be listed; but

(B) may require that test data and other product information be submitted to facilitate product listing and performance verification for a sample of products.

(3) THIRD PARTIES.—Nothing in this subsection prevents the Administrator from using third parties in the course of the administration of the Energy Star program.

(4) TERMINATION.—

(A) IN GENERAL.—Subject to subparagraph (B), an exemption from third-party certification provided to a program partner under paragraph (1) shall terminate if the program partner is found to have violated program require-

ments with respect to at least 2 separate models during a 2-year period.

(B) RESUMPTION.—A termination for a program partner under subparagraph (A) shall cease if the program partner complies with all Energy Star program requirements for a period of at least 3 years.

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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 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.

(h) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section $10,000,000 for the period of fiscal years 2015 through 2024.

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REQUIREMENTS OF MANUFACTURERS

SEC. 326. (a) IN GENERAL.— * * *

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(b) NOTIFICATION.—(1) Each manufacturer of a covered product to which a rule under section 324 applies shall notify the Secretary or the Commission—

(A) not later than 60 days after the date such rule takes effect, of the models in current production (and starting serial numbers of those models) to which such rule applies; and

(B) prior to commencement of production, of all models subsequently produced (and starting serial numbers of those models) to which such rule applies.

(2) If requested by the Secretary or Commission, the manufacturer of a covered product to which a rule under section 324 applies shall provide, within 30 days of the date of the request, the data from which the information included on the label and required by the rule was derived. Data shall be kept on file by the manufacturer for a period specified in the rule.

(3) When requested—

(A) by the Secretary for purposes of ascertaining whether a product subject to a standard established in or prescribed under section 325 is in compliance with that standard, or

(B) by the Commission for purposes of ascertaining whether the information set out on a label of a product, as required under section 324, is accurate, each manufacturer of such a product shall supply at his expense a reasonable number of such covered products to any laboratory designated by the Secretary or the Commission, as the case may be. Any reasonable charge levied by the laboratory for such testing shall be borne by the United States, if and to the extent provided in appropriation Acts.

(4) Each manufacturer of a covered product to which a rule under section 324 applies shall annually, at a time specified by the Commission, supply to the Commission relevant data respecting energy consumption or water use developed in accordance with the test procedures applicable to such product under section 323.

(5) A rule under section 323, 324, or 325 may require the manufacturer or his agent to permit a representative designated by the Commission or the Secretary to observe any testing required by this part and inspect the results of such testing.

(6) VOLUNTARY VERIFICATION PROGRAMS FOR AIR CONDITIONING, FURNACE, BOILER, HEAT PUMP, AND WATER HEATER PRODUCTS.—

(A) RELIANCE ON VOLUNTARY PROGRAMS.—For the purpose of verifying compliance with energy conservation standards and Energy Star specifications established under sections 324A, 325, and 342 for covered products described in paragraphs (3), (4), (5), (9), and (11) of section 322(a) and covered equipment described in subparagraphs (B), (C), (D), (F), (I), (J), and (K) of section 340(1), the Secretary and the Administrator of the Environmental Protection Agency shall rely on voluntary verification programs that are recognized by the Secretary in accordance with subparagraph (B).

(B) RECOGNITION OF VOLUNTARY VERIFICATION PROGRAMS.—

(i) IN GENERAL.—Not later than 180 days after the date of enactment of this paragraph, the Secretary and the Administrator of the Environmental Protection Agency shall initiate a negotiated rulemaking in accordance with subchapter III of chapter 5 of title 5, United States Code (commonly known as the "Negotiated Rulemaking Act of 1990") to develop criteria that have consensus support for achieving recognition by the Secretary as an approved voluntary verification program.

(ii) MINIMUM REQUIREMENTS.—The criteria developed under clause (i) shall, at a minimum, ensure that the voluntary verification program—

(I) is nationally recognized;

(II) satisfies any applicable elements of—

(aa) International Organization for Standardization standard numbered 17025; and

(bb) any other relevant International Organization for Standardization standards identified and agreed to through the negotiated rulemaking under clause (i);

(III) at least annually tests products following the test procedures established under this title to verify the certified rating of a representative sample of products and equipment within the scope of the program;

(IV) maintains a publicly available list of all certified products and equipment and their certified ratings;

(V) requires the changing of the performance rating or removal of the product or equipment from the program if testing determines that the performance rating does not meet the levels the manufacturer has certified to the Secretary;

(VI) requires the qualification of new participants in the program through testing and production of test reports;

(VII) allows for challenge testing of products and equipment within the scope of the program;

(VIII) requires program participants to certify the performance rating of all covered products and equipment within the scope of the program for the covered product or equipment;

(IX) provides to the Secretary—

(aa) an annual report of all test results, the contents of which shall be determined through the negotiated rulemaking process under clause (i);

(bb) prompt notification when program testing results in—

(AA) the rerating of the performance rating of a product or equipment; or

(BB) the delisting of a product or equipment; and

(cc) test reports, on the request of the Secretary or the Administrator of the Environmental Protection Agency, that note any instructions specified by the manufacturer or the representative of the manufacturer for the purpose of conducting the verification testing, to be exempted from disclosure under section 552(b)(4) of title 5, United States Code (commonly known as the "Freedom of Information Act"); and

(X) satisfies any additional requirements or standards that the Secretary and Administrator of the Environmental Protection Agency shall establish consistent with this subparagraph.

(iii) REVISION OF CRITERIA.—

(I) IN GENERAL.—The Secretary and the Administrator of the Environmental Protection Agency may revise the criteria established under clause (ii) by initiating—

(aa) a notice of proposed rulemaking in accordance with section 553(b) of title 5, United States Code, on publication of a determination in the Federal Register that revisions to the criteria are necessary; or

(bb) a direct final rule in accordance with section 553(b)(3)(B) of title 5, United States Code, on publication of a determination in the Federal Register that revisions to the criteria are necessary and that substantive opposition to the proposed revisions is not expected.

(II) EFFECT OF DIRECT FINAL RULE.—

(aa) FULL FORCE AND EFFECT.—If the Secretary does not receive adversarial comments during the 30-day period following publication of the determination in the Federal Register under subclause (I)(bb), the direct final rule shall have full force and effect.

(bb) WITHDRAWAL.—If the Secretary receives adversarial comments during the 30-day period following publication of the determination in the Federal Register under subclause (I)(bb), the Secretary shall withdraw the direct final rule and publish a

notice of proposed rulemaking in accordance with subclause (I)(aa).

(C) ADMINISTRATION.—

(i) IN GENERAL.—The Secretary and the Administrator of the Environmental Protection Agency shall not require—

(I) manufacturers to participate in a voluntary verification program described in subparagraph (A); or

(II) participating manufacturers to provide information that can be obtained through a voluntary verification program described in subparagraph (A).

(ii) LIST OF COVERED PRODUCTS.—The Secretary or the Administrator of the Environmental Protection Agency may maintain a publicly available list of covered products and equipment certified under this section that distinguishes between—

(I) covered products and equipment certified by a voluntary verification program described in subparagraph (A); and

(II) products not certified by a voluntary verification program described in subparagraph (A).

(iii) PERIODIC VERIFICATION TESTING.—The Secretary—

(I) shall not subject products or equipment that are certified under a voluntary verification program described in subparagraph (A) to periodic verification testing that verifies the accuracy of the certified performance rating of the products or equipment; but

(II) may test products or equipment described in subclause (I) if the testing is necessary—

(aa) to assess the overall performance of a voluntary verification program;

(bb) to address specific performance issues;

(cc) to determine other performance characteristics for use in updating test procedures and standards; or

(dd) for other purposes consistent with this title.

(D) EFFECT ON OTHER AUTHORITY.—Nothing in this paragraph limits the authority of the Secretary or the Administrator of the Environmental Protection Agency to enforce compliance with any law.

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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 on-site 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.

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NATIONAL ENERGY CONSERVATION POLICY ACT

Public Law 95–619, as amended

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[SEC. 543. ENERGY MANAGEMENT REQUIREMENTS.

[(a) Energy Performance Requirement for Federal Buildings.—(1) Subject to paragraph (2), each agency shall apply energy conservation measures to, and shall improve the design for the construction of, the Federal buildings of the agency (including each industrial or laboratory facility) so that the energy consumption per gross square foot of the Federal buildings of the agency in fiscal years 2006 through 2015 is reduced, as compared with the energy consumption per gross square foot of the Federal buildings of the agency in fiscal year 2003, by the percentage specified in the following table:

[Fiscal Year	Percentage Reduction
[2006	2
[2007	4
[2008	9
[2009	12
[2010	15
[2011	18
[2012	21
[2013	24
[2014	27
[2015	30

[(2) An agency may exclude from the requirements of paragraph (1) any building, and the associated energy consumption and gross square footage, in which energy intensive activities are carried out. Each agency shall identify and list in each report made under section 548(a) the buildings designated by it for such exclusion.

[(3) Not later than December 31, 2014, the Secretary shall review the results of the implementation of the energy performance requirement established under paragraph (1) and submit to Congress recommendations concerning energy performance requirements for fiscal years 2016 through 2025.]

(a) ENERGY PERFORMANCE REQUIREMENT FOR FEDERAL BUILDINGS.—

(1) REQUIREMENT.—Subject to paragraph (2), each agency shall apply energy conservation measures to, and shall improve the design for the construction of, the Federal buildings of the agency (including each industrial or laboratory facility) so that the energy consumption per gross square foot of the Federal buildings of the agency in fiscal years 2006 through 2017 is reduced, as compared with the energy consumption per gross square foot of the Federal buildings of the agency in fiscal year 2003, by the percentage specified in the following table:

Fiscal Year	Percentage Reduction
2006	2
2007	4
2008	9
2009	12
2010	15
2011	18
2012	21
2013	24
2014	27
2015	30
2016	33
2017	36

(2) EXCLUSION FOR BUILDINGS WITH ENERGY INTENSIVE ACTIVITIES.—

(A) IN GENERAL.—An agency may exclude from the requirements of paragraph (1) any building (including the associated energy consumption and gross square footage) in which energy intensive activities are carried out.

(B) REPORTS.—Each agency shall identify and list in each report made under section 548(a) the buildings designated by the agency for exclusion under subparagraph (A).

(3) REVIEW.—Not later than December 31, 2017, the Secretary shall—

(A) review the results of the implementation of the energy performance requirements established under paragraph (1); and

(B) based on the review conducted under subparagraph (A), submit to Congress a report that addresses the feasibility of requiring each agency to apply energy conservation measures to, and improve the design for the construction of, the Federal buildings of the agency (including each industrial or laboratory facility) so that the energy consumption per gross square foot of the Federal buildings of the agency in each of fiscal years 2018 through 2030 is reduced, as compared with the energy consumption per gross square foot of the Federal buildings of the agency in the prior fiscal year, by 3 percent.

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(f) USE OF ENERGY AND WATER EFFICIENCY MEASURES IN FEDERAL BUILDINGS.—

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(E) ONGOING COMMISSIONING.—The term "ongoing commissioning" means an ongoing process of commissioning using monitored data, the primary goal of which is to ensure continuous optimum performance of a facility, in accordance with design or operating needs, over the useful life of the facility, while meeting facility occupancy requirements.

[(E)]*(F)* PAYBACK PERIOD.—

(i) IN GENERAL.—Subject to clause (ii), the term "payback period", with respect to a measure, means a value equal to the quotient obtained by dividing—

(I) the estimated initial implementation cost of the measure (other than financing costs); by

(II) the annual cost savings resulting from the measure, including—

(aa) net savings in estimated energy and water costs; and

(bb) operations, maintenance, repair, replacement, and other direct costs.

(ii) MODIFICATIONS AND EXCEPTIONS.—The Secretary, in guidelines issued pursuant to paragraph (6), may make such modifications and provide such exceptions to the calculation of the payback period of a measure as the Secretary determines to be appropriate to achieve the purposes of this Act.

[(F)]*(G)* RECOMMISSIONING.—The term "recommissioning" means a process—

(i) of commissioning a facility or system beyond the project development and warranty phases of the facility or system; and

(ii) the primary goal of which is to ensure optimum performance of a facility, in accordance with design or current operating needs, over the useful life of the facility, while meeting building occupancy requirements.

[(G)]*(H)* RETROCOMMISSIONING.—The term "retrocommissioning" means a process of commissioning a facility or system that was not commissioned at the time of construction of the facility or system.

(2) FACILITY ENERGY MANAGERS.—

(A) IN GENERAL.—Each Federal agency shall designate an energy manager responsible for implementing this subsection and reducing energy use at each facility that meets criteria under subparagraph (B).

(B) COVERED FACILITIES.—The Secretary shall develop criteria, after consultation with affected agencies, energy efficiency advocates, and energy and utility service providers, that cover, at a minimum, Federal facilities, including central utility plants and distribution systems and other energy intensive operations, that constitute at least 75 percent of facility energy use at each agency.

(C) ENERGY MANAGEMENT SYSTEM.—An energy manager designated under subparagraph (A) shall consider use of a system to manage energy use at the facility and certification of the facility in accordance with the International

Organization for Standardization standard numbered 50001 and entitled "Energy Management Systems".

[(3) ENERGY AND WATER EVALUATIONS.—

[(A) EVALUATIONS.—Effective beginning on the date that is 180 days after the date of enactment of this subsection and annually thereafter, energy managers shall complete, for each calendar year, a comprehensive energy and water evaluation for approximately 25 percent of the facilities of each agency that meet the criteria under paragraph (2)(B) in a manner that ensures that an evaluation of each such facility is completed at least once every 4 years.

[(B) RECOMMISSIONING AND RETROCOMMISSIONING.—As part of the evaluation under subparagraph (A), the energy manager shall identify and assess recommissioning measures (or, if the facility has never been commissioned, retrocommissioning measures) for each such facility.]

[(4) IMPLEMENTATION OF IDENTIFIED ENERGY AND WATER EFFICIENCY MEASURES.—Not later than 2 years after the completion of each evaluation under paragraph (3), each energy manager may—

[(A) implement any energy- or water-saving measure that the Federal agency identified in the evaluation conducted under paragraph (3) that is life cycle cost-effective; and

[(B) bundle individual measures of varying paybacks together into combined projects.]

(3) ENERGY AND WATER EVALUATIONS AND COMMISSIONING.—

(A) EVALUATIONS.—Except as provided in subparagraph (B), effective beginning on the date that is 180 days after the date of enactment of the Energy Savings and Industrial Competitiveness Act of 2015, and annually thereafter, each energy manager shall complete, for each calendar year, a comprehensive energy and water evaluation and recommissioning or retrocommissioning for approximately 25 percent of the facilities of each agency that meet the criteria under paragraph (2)(B) in a manner that ensures that an evaluation of each facility is completed at least once every 4 years.

(B) EXCEPTIONS.—An evaluation and recommissioning shall not be required under subparagraph (A) with respect to a facility that—

(i) has had a comprehensive energy and water evaluation during the 8-year period preceding the date of the evaluation;

(ii)(I) has been commissioned, recommissioned, or retrocommissioned during the 10-year period preceding the date of the evaluation; or

(II) is under ongoing commissioning;

(iii) has not had a major change in function or use since the previous evaluation and commissioning;

(iv) has been benchmarked with public disclosure under paragraph (8) within the year preceding the evaluation; and

(v)(I) based on the benchmarking, has achieved at a facility level the most recent cumulative energy savings target under subsection (a) compared to the earlier of—

(aa) the date of the most recent evaluation; or

(bb) the date—

(AA) of the most recent commissioning, recommissioning, or retrocommissioning; or

(BB) on which ongoing commissioning began; or

(II) has a long-term contract in place guaranteeing energy savings at least as great as the energy savings target under subclause (I).

(4) IMPLEMENTATION OF IDENTIFIED ENERGY AND WATER EFFICIENCY MEASURES.—

(A) IN GENERAL.—Not later than 2 years after the date of completion of each evaluation under paragraph (3), each energy manager may—

(i) implement any energy- or water-saving measure that the Federal agency identified in the evaluation conducted under paragraph (3) that is life-cycle cost effective; and

(ii) bundle individual measures of varying paybacks together into combined projects.

(B) MEASURES NOT IMPLEMENTED.—The energy manager shall, as part of the certification system under paragraph (7), explain the reasons why any life-cycle cost effective measures were not implemented under subparagraph (A) using guidelines developed by the Secretary.

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(7) WEB-BASED CERTIFICATION.—

(A) IN GENERAL.—For each facility that meets the criteria established by the Secretary under paragraph (2)(B), the energy manager shall use the web-based tracking system under subparagraph (B)—

(i) to certify compliance with the requirements for—

(I) energy and water evaluations under paragraph (3);

(II) implementation of identified energy and water measures under paragraph (4); and

(III) follow-up on implemented measures under paragraph (5); and

(ii) to publish energy and water consumption data on an individual facility basis.

(B) DEPLOYMENT.—

(i) IN GENERAL.—Not later than 1 year after the date of enactment of this subsection, the Secretary shall develop and deploy a web-based tracking system required under this paragraph in a manner that tracks, at a minimum—

(I) the covered facilities;

(II) the status of meeting the requirements specified in subparagraph (A);

(III) the estimated cost and savings for measures required to be implemented in a facility;

(IV) the measured savings and persistence of savings for implemented measures; and

(V) the benchmarking information disclosed under paragraph (8)(C).

(ii) EASE OF COMPLIANCE.—The Secretary shall ensure that energy manager compliance with the requirements in this paragraph, to the maximum extent practicable—

(I) can be accomplished with the use of streamlined procedures and templates that minimize the time demands on Federal employees; and

(II) is coordinated with other applicable energy reporting requirements.

(C) AVAILABILITY.—

(i) IN GENERAL.—Subject to clause (ii), the Secretary shall make the web-based tracking system required under this paragraph available to Congress, other Federal agencies, and the public through the Internet.

(ii) EXEMPTIONS.—At the request of a Federal agency, the Secretary may exempt specific data for specific facilities from disclosure under clause (i) for national security purposes.

(iii) SUMMARY REPORT.—The Secretary shall make available a report that summarizes the information tracked under subparagraph (B)(i) by each agency and, as applicable, by each type of measure.

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(g) LARGE CAPITAL ENERGY INVESTMENTS.—

(1) IN GENERAL.—Each Federal agency shall ensure that any large capital energy investment in an existing building that is not a major renovation but involves replacement of installed equipment (such as heating and cooling systems), or involves renovation, rehabilitation, expansion, or remodeling of existing space, employs the most energy efficient designs, systems, equipment, and controls that are life-cycle cost effective.

(2) PROCESS FOR REVIEW OF INVESTMENT DECISIONS.—Not later than 180 days after the date of enactment of this subsection, each Federal agency shall—

(A) develop a process for reviewing each decision made on a large capital energy investment described in paragraph (1) to ensure that the requirements of this subsection are met; and

(B) report to the Director of the Office of Management and Budget on the process established.

(3) COMPLIANCE REPORT.—Not later than 1 year after the date of enactment of this subsection, the Director of the Office of Management and Budget shall evaluate and report to Congress on the compliance of each agency with this subsection.

(h) FEDERAL IMPLEMENTATION STRATEGY FOR ENERGY EFFICIENT AND ENERGY-SAVING INFORMATION TECHNOLOGIES.—

(1) DEFINITIONS.—In this subsection:

(A) DIRECTOR.—The term "Director" means the Director of the Office of Management and Budget.

(B) INFORMATION TECHNOLOGY.—The term "information technology" has the meaning given the term in section 11101 of title 40, United States Code.

(2) DEVELOPMENT OF IMPLEMENTATION STRATEGY.—Not later than 1 year after the date of enactment of this subsection, each Federal agency shall collaborate with the Director to develop an

implementation strategy (including best-practices and measurement and verification techniques) for the maintenance, purchase, and use by the Federal agency of energy-efficient and energy-saving information technologies.

(3) ADMINISTRATION.—In developing an implementation strategy, each Federal agency shall consider—

(A) advanced metering infrastructure;

(B) energy efficient data center strategies and methods of increasing asset and infrastructure utilization;

(C) advanced power management tools;

(D) building information modeling, including building energy management; and

(E) secure telework and travel substitution tools.

(4) PERFORMANCE GOALS.—

(A) IN GENERAL.—Not later than September 30, 2015, the Director, in consultation with the Secretary, shall establish performance goals for evaluating the efforts of Federal agencies in improving the maintenance, purchase, and use of energy-efficient and energy-saving information technology systems.

(B) BEST PRACTICES.—The Chief Information Officers Council established under section 3603 of title 44, United States Code, shall supplement the performance goals established under this paragraph with recommendations on best practices for the attainment of the performance goals, to include a requirement for agencies to consider the use of—

(i) energy savings performance contracting; and

(ii) utility energy services contracting.

(5) REPORTS.—

(A) AGENCY REPORTS.—Each Federal agency subject to the requirements of this subsection shall include in the report of the agency under section 527 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17143) a description of the efforts and results of the agency under this subsection.

(B) OMB GOVERNMENT EFFICIENCY REPORTS AND SCORECARDS.—Effective beginning not later than October 1, 2015, the Director shall include in the annual report and scorecard of the Director required under section 528 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17144) a description of the efforts and results of Federal agencies under this subsection.

(C) USE OF EXISTING REPORTING STRUCTURES.—The Director may require Federal agencies to submit any information required to be submitted under this subsection though reporting structures in use as of the date of enactment of the Energy Savings and Industrial Competitiveness Act of 2015.

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FINANCIAL INSTITUTIONS REFORM, RECOVERY, AND ENFORCEMENT ACT OF 1989

Public Law 101–73, as amended

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SEC. 1110. FUNCTIONS OF THE FEDERAL FINANCIAL INSTITUTIONS REGULATORY AGENCIES RELATING TO APPRAISAL STANDARDS.

Each Federal financial institutions regulatory agency and the Resolution Trust Corporation shall prescribe appropriate standards for the performance of real estate appraisals in connection with federally related transactions under the jurisdiction of each such agency or instrumentality. These rules shall require, at a minimum—

(1) that real estate appraisals be performed in accordance with generally accepted appraisal standards as evidenced by the appraisal standards promulgated by the Appraisal Standards Board of the Appraisal Foundation;

(2) that such appraisals shall be written appraisals**[**; and**]***;*

(3) that such appraisals shall be subject to appropriate review for compliance with the Uniform Standards of Professional Appraisal Practice**[**.**]***; and*

(4) that State certified and licensed appraisers have timely access, whenever practicable, to information from the property owner and the lender that may be relevant in developing an opinion of value regarding the energy- and water-saving improvements or features of a property, such as—

(A) labels or ratings of buildings;

(B) installed appliances, measures, systems or technologies;

(C) blueprints;

(D) construction costs;

(E) financial or other incentives regarding energy- and water-efficient components and systems installed in a property;

(F) utility bills;

(G) energy consumption and benchmarking data; and

(H) third-party verifications or representations of energy and water efficiency performance of a property, observing all financial privacy requirements adhered to by certified and licensed appraisers, including section 501 of the Gramm-Leach-Bliley Act (15 U.S.C. 6801).

Unless a property owner consents to a lender, an appraiser, in carrying out the requirements of paragraph (4), shall not have access to the commercial or financial information of the owner that is privileged or confidential.

Each such agency or instrumentality may require compliance with additional standards if it makes a determination in writing that such additional standards are required in order to properly carry out its statutory responsibilities.

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SEC. 1113. TRANSACTIONS REQUIRING THE SERVICES OF A STATE CERTIFIED APPRAISER.

In determining whether an appraisal in connection with a federally related transaction shall be performed by a State certified appraiser, an agency or instrumentality under this title shall consider whether transactions, either individually or collectively, are of sufficient financial or public policy importance to the United States that an individual who performs an appraisal in connection with such transactions should be a State certified appraiser, except that—

(1) a State certified appraiser shall be required for all federally related transactions having a value of $1,000,000 or more*, or any real property on which the appraiser makes adjustments using an energy efficiency report*; and

(2) 1-to-4 unit, single family residential appraisals may be performed by State licensed appraisers unless the size and complexity requires a State certified appraiser, where a complex 1-to-4 unit single family residential appraisal means an appraisal for which the property to be appraised, the form of ownership, the property characteristics, or the market conditions are atypical*, or an appraisal on which the appraiser makes adjustments using an energy efficiency report*.

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UNITED STATES CODE

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TITLE 40—PUBLIC BUILDINGS, PROPERTY, AND WORKS

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§ 3307. Congressional approval of proposed projects

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(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 Com-

mittee on Environment and Public Works of the Senate or the Committee on Transportation and Infrastructure of the House of Representatives by resolution may rescind 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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