



Department of Energy

Washington, DC 20585

June 10, 2013

The Honorable Ed Whitfield
Chairman
Subcommittee on Energy and Power
Committee on Energy and Commerce
U. S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

On February 26, 2013, Dr. Kathleen Hogan, Deputy Assistant Secretary for Energy Efficiency, Office of Energy Efficiency and Renewable Energy, testified regarding "American Energy Security and Innovation: An Assessment of Private-Sector Successes and Opportunities in Energy Efficient Technologies."

Enclosed are the answers to 13 questions that were submitted by Representatives Michael C. Burgess, Bill Cassidy, Peter Welch and you to complete the hearing record.

If we can be of further assistance, please have your staff contact our Congressional Hearing Coordinator, Lillian Owen, at (202) 586-2031.

Sincerely,

A handwritten signature in blue ink, reading "Christopher E. Davis".

Christopher E. Davis
Deputy Assistant Secretary
for Congressional Affairs
Congressional and Intergovernmental Affairs

Enclosures

cc: The Honorable Bobby L. Rush, Ranking Member



QUESTION FROM CHAIRMAN WHITFIELD

- Q1. Late last year, the Pay-TV and consumer electronics industries came together and agreed upon a voluntary Energy Conservation Agreement (“Pay-TV Agreement”). The agreement will result in the deployment of more energy efficient set-top boxes. The Pay-TV Agreement is already bringing tangible energy efficiency gains and promises significantly more.
- a. Does the Department plan to move forward with its own proposed set-top box rulemaking, despite the execution of the Pay-TV Agreement? If so, when would the Department’s rule go into effect and when would energy efficiency gains begin to be realized?
- A1a. At this time, DOE has taken an initial step in moving forward with its regulatory rulemaking activities to develop an energy conservation standard for set-top boxes. DOE issued an initial Notice of data availability (NODA) analysis on February 28, 2013, that presents DOE’s initial analysis estimating the potential economic impacts and energy savings that could result from promulgating a regulatory energy conservation standard for set-top boxes. DOE has not yet proposed an energy conservation standard for set-top boxes. Any proposal would be made through a public notice and comment process and a final rule would follow. Absent a consensus agreement, compliance with a DOE promulgated standard would be approximately five years after the publication of the final rule. Energy efficiency gains would begin to be realized at this point.
- b. Why has the Department been reluctant to follow the Administration’s preference for voluntary/market solutions that are already delivering savings?
- A1b. The Department encourages the development of market-based solutions that are a result of a consensus from all relevant parties and has recently finalized several rules through consensus agreements. In the case of set-top boxes, DOE had a rulemaking in process, which it suspended for a six-month period in 2012 following a request from Pay-TV, consumer electronics industries, and energy efficiency advocates to provide these stakeholders time to

negotiate a voluntary agreement. The Department is now proceeding with the rulemaking, with DOE issuing an initial Notice of data availability (NODA) analysis on February 28, 2013, that presents DOE's initial analysis estimating the potential economic impacts and energy savings that could result from promulgating a regulatory energy conservation standard for set-top boxes. DOE has not yet proposed an energy conservation standard for set-top boxes, and any future proposed standard would not be binding on products for approximately five years after the publication of the final rule, in addition to the time that would be required to complete the rulemaking process. DOE welcomes the voluntary agreement industry has developed, but also notes that it is with a subset of the participants originally involved in the negotiation.

DOE has an obligation to ensure that standards maximize the economically justified, technically feasible energy savings potential identified by a thorough analysis and as part of a notice and comment rulemaking. However, DOE recognizes that there are multiple paths forward to ensure that the maximum economic benefits and energy savings from increasing the efficiency of set-top boxes are achieved, and DOE strongly encourages and will consider any non-regulatory consensus agreement as an alternative to a regulatory standard.

- c. What steps does the Department intend to take to work cooperatively with the signatories to the Pay-TV Agreement to develop energy efficiency savings and promote innovation outside of rulemaking proceedings?

A1c. The Department of Energy (DOE) intends to work cooperatively with Pay-TV and the consumer electronics industries to improve the efficiency of set-top boxes. DOE has already

taken several steps to work with industry representatives to develop energy efficiency savings and promote innovation outside of the rulemaking process. DOE suspended its rulemaking activities for a six-month period in 2012 to allow stakeholders, including Pay-TV, the consumer electronics industry, and energy efficiency advocates, time to attempt to negotiate a non-regulatory agreement to be considered in lieu of a rulemaking. The parties negotiating did not reach an agreement during that period. On February 28, 2013, DOE released a notice of data availability so that stakeholders could access and review DOE's assessment of cost and benefits of efficient set-top boxes.

DOE encourages stakeholders, including signatories to the Pay-TV Agreement, to provide any relevant information and input to inform DOE's regulatory activities for these products. DOE has, and will continue to meet with Pay-TV and the consumer electronics industry to ensure that we are collectively providing U.S. consumers with energy-efficient products with energy use information developed using a standardized Federal testing protocol.

DOE also encourages these entities to participate in the recently formed Federal Advisory Committee for Appliance Standards (ASRAC), which is a transparent, open process to advise DOE on future regulatory activities.

QUESTION FROM CHAIRMAN WHITFIELD

Q2. Energy Savings Performance Contracts (ESPCs) have been available to federal agencies for over 20 years but have been underutilized.

a. What barriers at the federal level are preventing or deterring greater utilization of ESPCs by federal agencies?

A2a. Through ESPCs, Federal agencies can complete energy savings projects and meet energy and water savings goals without up-front capital costs paid from direct appropriations. From FY 1998 to FY 2013, DOE's Federal Energy Management Program facilitated \$2.7 billion of private-sector efficiency investments in Federal Government facilities through the use of DOE IDIQ performance-based contracts, which will result in guaranteed energy cost savings of approximately \$7.2 billion over the life of the energy-saving measures, without any up-front investments from the American taxpayer. To increase uptake of this valuable performance contracting methodology for investing in energy efficiency, the Presidential Performance Contracting Challenge directed the Federal government to enter into a minimum of \$2 billion in performance-based contracting by December 2013. As of April 2013, 313 projects worth \$2.2 billion in energy upgrade projects have been identified and more than \$560 million in projects have already been awarded. The Federal government views the end date to this Challenge as a marker in a sustained effort to use performance contracts at Federal agencies. This Challenge has helped reinvigorate use of ESPCs and UESCs throughout the government, and we anticipate they will be increasingly utilized into the future, particularly given the fiscal climate and the continued need for efficiency investments in Federal buildings. Efforts around contract and project standardization, training, process simplification, project facilitation, and the establishment of goals are all key ingredients to

helping ESPCs become “business as usual” in the Federal government, creating momentum for further projects.

Despite the benefits of using ESPCs, increasing the utilization of this contracting mechanism has faced some barriers. One of the most significant is the fact that this type of contracting process is different from what most Federal agencies are used to performing and requires contracting officers well-trained in performing and managing these types of contracts. Thus, agencies have had trouble implementing these types of contracts due to a lack of institutional expertise, and need significant outside assistance.

- b. Are there other areas, such as in the federal vehicle fleet, where innovative uses of ESPCs can be used to promote cost savings to the federal government, as well as the use of alternative fuels?

A2b. Currently, the statutory authority limits the use of ESPCs to improvements applied to Federal buildings that are owned by the government. The Federal government has studied the potential use of ESPCs in the Federal fleet environment, but has not identified specific approaches.

QUESTION FROM CHAIRMAN WHITFIELD

Q3. In 2011, President Obama directed federal agencies to enter into \$2 billion worth of Energy Savings Performance Contracts (ESPCs).

a. What is the current status of the President's ESPC initiative?

A3a. As you note, the White House issued a memorandum to the heads of executive departments and agencies committing the Federal Government to enter into a minimum combined \$2 billion in performance contracts by the end of 2013. As of April 2013, agencies have identified 313 potential projects with an estimated \$2.2 billion investment value. This current pipeline of projects is proceeding at pace to be completed on time: 64 projects already have been awarded with an investment value of more than \$560 million; and 249 projects are in the development pipeline, with expectations of being awarded. An additional 40 projects are in earlier stages of development. The Federal government views the end date to this Challenge as a marker in a sustained effort to use performance contracts at Federal agencies. This Challenge has helped reinvigorate use of ESPCs and UESCs throughout the government, and we anticipate they will be increasingly utilized into the future, particularly given the fiscal climate and the continued need for efficiency investments in Federal buildings.

b. What is the biggest barrier to achieving the President's \$2 billion goal?

A3b. As you note, the White House issued a memorandum to the heads of executive departments and agencies committing the Federal Government to enter into a minimum combined \$2 billion in performance contracts by the end of 2013. The agencies have already made significant progress identifying 313 potential projects with an estimated \$2.2 billion investment value. This current pipeline of projects is proceeding at pace to be completed on

time: 64 projects already have been awarded with an investment value of more than \$560 million; and 249 projects are in the development pipeline, with expectations of being awarded. An additional 40 projects are in earlier stages of development. The Federal government views the end date to this Challenge as a marker in a sustained effort to use performance contracts at Federal agencies. This Challenge has helped reinvigorate use of ESPCs and UESCs throughout the government, and we anticipate they will be increasingly used into the future, particularly given the fiscal climate and the continued need for efficiency investments in federal buildings.

One of the most significant barriers to use of ESPCs is the fact that this type of contracting process is different from what most Federal agencies are used to performing and requires contracting officers well-trained in performing and managing these types of contracts. Thus, agencies have had trouble implementing these types of contracts due to a lack of institutional expertise, and need significant outside assistance. The Presidential Performance Contracting Challenge and associated efforts around contract and project standardization, training, process simplification, project facilitation, and the establishment of goals are all key ingredients to helping ESPCs become “business as usual” in the Federal government, creating momentum for further projects.

QUESTION FROM CHAIRMAN WHITFIELD

Q4. Dr. Hogan testified during the hearing that the Department serves in a technical capacity during the development of the building energy codes.

a. Please describe this involvement in greater detail.

A4a. The Department seeks to advance energy efficiency in the International Energy Conservation Code (IECC) and Standard 90.1 by strengthening the code where cost-effective, and improving the criteria to be more easily understood, applied, implemented, and enforced. DOE participates in the IECC development process by developing code change proposals for submission to the International Code Council (ICC). Prior to submitting code change proposals to the ICC, DOE publishes draft code change proposals that it has developed, along with documentation of concepts, for public review and comment. DOE also contributes to the development of ANSI/ASHRAE/IES Standard 90.1 by participating in committee meetings, as well as providing technical and analytical support to the committee. For both the IECC and Standard 90.1, DOE conducts necessary technical analyses to document the validity of DOE code change proposals.

In developing concepts for submission to the ICC, DOE conducts a series of analyses to evaluate energy savings and economic impacts of potential code change proposals. DOE recently updated its cost-effectiveness methodology based on feedback gathered during a public input process (September 2011 RFI: <http://www.gpo.gov/fdsys/pkg/FR-2011-09-13/html/2011-23236.htm>). The DOE methodology and resulting analysis is available for reference and use by outside parties. In developing code change proposals for the IECC, DOE references all analysis and supporting documentation as required by the ICC. Analysis

performed by DOE should be considered on a technical basis, and does not represent an endorsement of any particular individual or organization. DOE publishes the results of its analysis, along with supporting energy simulation models, for review and use by outside parties. Proposals submitted by DOE for the 2015 IECC, as well as any accompanying analysis, can be accessed at <https://www.energycodes.gov/development>.

- b. Does the Department participate in advocacy during building code development, either in support of or in opposition to, changes or updates? If yes, please provide examples of such advocacy.

A4b. The Energy Conservation and Production Act, as amended, requires DOE to participate in the development of the International Energy Conservation Code (IECC) for residential buildings and Standard 90.1 for commercial buildings. The development process for each respective code is as defined and administered by the International Code Council (ICC) and the American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE). As part of these development processes, DOE evaluates specific energy saving measures, and proposes code changes targeting reduced overall building energy consumption or increased code compliance. DOE participation in code development processes may include drafting proposed code language, gathering public input on changes proposed by DOE, or conducting technical analysis to inform and support proposed changes. DOE may also present and/or testify on behalf of DOE-proposed code changes, or proposals submitted by others relative to DOE-proposed changes.

When the model code is updated (i.e., publication of the IECC or Standard 90.1), DOE performs a *Determination of Energy Savings* (<http://www.energycodes.gov/regulations/determinations>). In the event of an affirmative

DOE determination, states are required to review the updated code version. DOE also provides assistance in the form of technical analysis, informational resources, and tools intended to help states and local enforcement jurisdictions in adopting and complying with updated codes.

QUESTION FROM REPRESENTATIVE BURGESS

Q1. You mentioned during your testimony that DOE has had numerous discussions with the Commodity Futures Trading Commission (CFTC) regarding rising gas prices. What collaborative efforts have DOE and the CFTC identified to address rising gas prices?

A1. The Department of Energy is sensitive to the impact high gas prices can have on families and businesses. DOE has not directly collaborated with the Commodity Futures Trading Commission as part of its efforts to address rising gas prices. However, as Dr. Hogan's testimony indicated, the Department, through its existing authorities, is working in conjunction with other Federal agencies across the government, including the Departments of Transportation, Agriculture, Interior, and Defense and the National Science Foundation to address high gas prices and reduce the amount of money families spend at the pump every year.

QUESTION FROM REPRESENTATIVE BURGESS

- Q2. Which offices within DOE are working with the CFTC to address rising gas prices?
- A2. Dr. Hogan's testimony indicated that EERE engages in conversations across the Federal government regarding short- and long-term solutions to high gasoline prices. While EERE has significant collaboration across the Federal government to reduce gasoline consumption, it is not directly working with the Commodity Futures Trading Commission. EERE's cross-government coordination efforts in this area include state and local governments in addition to other Federal agencies.

QUESTION FROM REPRESENTATIVE BURGESS

Q3. What effect does DOE expect any collaborative efforts with the CFTC will have regarding gas prices?

A3. Dr. Hogan's testimony indicated that EERE engages in conversations across the Federal government regarding short- and long-term solutions to high gasoline prices. While EERE has significant collaboration across the Federal government to reduce gasoline consumption, it is not directly working with the Commodity Futures Trading Commission. EERE's cross-government coordination efforts in this area include state and local governments in addition to other Federal agencies.

QUESTION FROM REPRESENTATIVE BURGESS

- Q4. Has DOE provided any specific recommendations to the Architect of the Capitol (AOC) for ways the Congressional office buildings can reduce their energy consumption that the AOC was not already considering?
- A4. The Department of Energy (DOE) through the Federal Energy Management Program (FEMP) has provided technical assistance as well as access to financing resources to facilitate and expedite the implementation of energy-saving projects for the Architect of the Capitol (AOC). FEMP also provides these services to all of the Federal agencies.

FEMP has worked with the AOC's Office of Sustainability to provide its engineers with technical assistance on an array of energy modeling tools and software to help them select the best energy analysis tool for their facilities. The technical assistance has helped the AOC perform their own energy use analyses rather than relying on outside vendors, allowing them to manage the energy use of the Capitol Complex more effectively and at lower costs.

The AOC has also worked with the Department to implement energy saving performance contracts (ESPCs) to make significant energy-saving improvements in several of its buildings at no additional cost to the taxpayer.

The latest public energy report from the AOC can be found here.

http://www.aoc.gov/sites/default/files/AOC_EnergyReport_FULL_2011_FINAL_508_091712.pdf

QUESTION FROM REPRESENTATIVE BURGESS

Q5. Has DOE provided guidance to all agencies and federal buildings regarding how to reduce energy consumption?

a. What is the status of implementation of any such recommendations?

A5a. DOE has published all guidance required under Section 432 of the Energy Independence and Security Act of 2007 (EISA), which prescribes a framework for facility energy and water management and benchmarking for Federal agencies. The statute includes the following requirements for Federal agencies:

- Designate covered facilities and assign facility energy managers for ensuring compliance of covered facilities subject to the requirements;
- Conduct comprehensive energy and water evaluations;
- Implement identified efficiency measures;
- Follow up on implemented efficiency measures;
- Report to DOE on covered facilities' energy use, evaluations, projects, follow-up, and analysis; and
- Benchmark metered buildings that are, or are part of, covered facilities.

DOE has published the following guidance pertaining to these requirements:

- *Facility Energy Management Guidelines and Criteria for Energy and Water Evaluations in Covered Facilities*

http://www1.eere.energy.gov/femp/pdfs/eisa_s432_guidelines.pdf: This document contains guidelines and criteria for meeting requirements within Section 432 of EISA, including defining facilities covered by the provision, designating facility energy

managers to ensure compliance, and conducting comprehensive energy and water evaluations.

- *Guidance for the Implementation and Follow-up of Identified Energy and Water Efficiency Measures in Covered Facilities*

(http://www1.eere.energy.gov/femp/pdfs/eisa_project_guidance.pdf): This guidance pertains to the implementation and follow-up of energy and water efficiency measures identified and undertaken in Federal facilities. This guidance also provides context for how these activities fit into the comprehensive approach to facility resource (energy and water) management outlined by the statute and incorporates by reference previous DOE guidance released for Section 432 of EISA and other related documents.

- *Building Energy Use Benchmarking Guidance*

(http://www1.eere.energy.gov/femp/pdfs/eisa432_guidance.pdf): This document contains guidance for benchmarking of federal facilities recommending the use of Energy Star Portfolio Manager benchmarking tool.

To date, Federal agencies have reported evaluating 73 percent of their covered facilities and identified potential energy and water efficiency measures totaling \$9.5 billion in potential investment.

- b. Has DOE identified any recommendations for reducing energy consumption that were not identified by private energy audits of federal buildings?

A5b. Most federal buildings have not undergone private energy audits. DOE's guidance under Section 432 of the Energy Independence and Security Act of 2007 (EISA) provides agencies

recommendations on how to perform energy audits to identify all cost-effective energy and water saving opportunities. In addition to guidance required under Section 432 of EISA for use of energy and water efficiency measures in federal buildings, DOE has issued the following guidance related to operations and maintenance best practices:

- *Operations & Maintenance Best Practices, A Guide to Achieving Operational Efficiency*

http://www1.eere.energy.gov/femp/pdfs/omguide_complete.pdf: The guide highlights O&M energy efficiency programs that could save 5 percent to 20 percent on energy bills without a significant capital investment.

- *Commissioning for Federal Facilities*

http://www1.eere.energy.gov/femp/pdfs/commissioning_fed_facilities.pdf: This is a practical guide to building commissioning, recommissioning, retrocommissioning, and continuous commissioning.

- *Metering Best Practices: A Guide to Achieving Utility Resource Efficiency*

<http://www1.eere.energy.gov/femp/pdfs/mbpg.pdf>: The guide features information about energy and resource metering at federal facilities, including metering requirements under the Energy Policy Act of 2005.

QUESTION FROM REPRESENTATIVE CASSIDY

Q1. In our dialogue you claimed the availability of energy efficient mortgages and cited the problem in a lack of awareness among potential consumers about such mortgages. Can the Department please provide information about the availability and accessibility of such mortgages for home builders?

A1. The Department of Energy does not administer or manage this type of loan, but information is available through the Housing and Urban Development Department's Federal Housing Administration. Please see:

http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/eem/eemhome.

QUESTION FROM REPRESENTATIVE CASSIDY

Q2. In our dialogue you stated that there is conversation ongoing through the codes organizations on how to have a performance-based path get to an outcome in a least-cost way. You also mentioned that the DOE is not part of the code-making but instead participates in energy-savings determinations relative to the code. However, DOE does participate in the development of energy codes, provides code change proposals and seeks to advance energy efficiency by advocating for more stringent energy codes. Additionally, ECPA and subsequent energy bills have authorized the Department of Energy to provide technical assistance and incentive funding to the states to update their state building energy codes. Can you please identify the statutory authority for this action? If the language in the ECPA is interpreted to allow for this, please explain that justification.

Furthermore, in the 2012 version of the IECC, it specifies the use of foam insulation over structural wood panels in certain climate zones. Does DOE plan to support the elimination of such product specific mandates in the 2015 version of the IECC?

A2. The statutory authority for DOE participation in energy code development is identified in Section 307 of the Energy Conservation and Production Act (ECPA), as amended (42 U.S.C. 6836). This section mandates that DOE shall support the upgrading of voluntary building energy codes for residential and commercial buildings, providing assistance to improve the technical basis for codes and determining cost-effectiveness and feasibility. It also directs DOE to review the technical and economic basis for voluntary energy codes and participate in the industry process for review and modification.

Statutory authority for state technical assistance and incentive funding is established in Section 304 of ECPA, as amended (42 U.S.C. 6833). This section directs DOE to provide the technical assistance necessary for states to implement the requirements related to updating residential and commercial building energy codes and authorizes incentive funding to states to be used to update building energy codes, and to implement the updated codes.

Further information about DOE's statutory authority regarding building energy codes can be accessed at <https://www.energycodes.gov/about/statutory-requirements>.

With regard to product specification within the 2012 IECC, DOE believes that the prescriptive wall insulation requirements achieve reasonable efficiency improvements in residential buildings, while maintaining neutrality with respect to construction materials. The presence of continuous insulation does not necessitate an exclusion of wood products. The code allows for flexibility in choice of wall assembly designs, some of which allow for the use of wood products to reduce or eliminate thermal bridging effects. Beyond prescriptive requirements, the IECC also contains multiple performance-based compliance options. These options are available at the discretion of the builder, and have not changed in recent code editions.

QUESTION FROM REPRESENTATIVE CASSIDY

Q3. Studies have shown that energy savings in the 2012 IECC is roughly 30 to 40% more efficient than the 2006 IECC. At this point the stringency of the code has reached the point of diminishing returns on the building envelope and in many cases high efficiency equipment is the most cost-effective means to save energy. I understand that the Department of Energy has reviewed the concept of reinstating equipment trade-offs toward code compliance, but ultimately decided *not* to support this proposal for the 2015 IECC proposal. Can you indicate how this decision was evaluated?

A3. DOE evaluated several concepts for potential submission to the 2015 International Energy Conservation Code (IECC), and ultimately did not submit a proposal targeting the reinstatement of equipment tradeoffs. The allowance for energy to be traded between residential building envelope and mechanical systems is a concept that previously existed in the code, but was removed by the IECC governing body following the 2006 IECC. DOE understands that, while some IECC members remain in favor of the equipment tradeoff, others support different methods of achieving whole-building energy savings. In developing proposals for the 2015 IECC, DOE solicited public comments on draft code changes. Stakeholder feedback yielded a mix of support and opposition surrounding a reinstatement of equipment tradeoffs within the IECC.

In addition, other organizations have submitted proposals targeting whole-building energy savings and performance-based alternative compliance paths. Some of these proposals target the use of the Residential Energy Services Network (RESNET) Home Energy Rating System (HERS). Proposals have also been submitted based on modified versions of the former equipment tradeoff mechanism. The International Code Council recently published a monograph containing all submitted code change proposals for the 2015 IECC (<http://www.iccsafe.org/cs/codes/Pages/12-14-Proposed-Group-B.aspx>). All of these

proposals are considered for adoption into the 2015 IECC. The DOE-submitted proposals for the 2015 IECC, including related analyses and public comments received, are available at <https://www.energycodes.gov/development/residential/2015IECC>.

QUESTION FROM REPRESENTATIVE WELCH

Q1. Dr. Hogan, in the President's "Plan for a Strong Middle Class and a Strong Economy", the President calls for a doubling of U.S. energy productivity by 2030 (similar to the Alliance to Save Energy's Commission on National Energy Efficiency Policy). Dr. Hogan, could you please discuss how the Administration proposes to achieve this goal?

A1. The Department is prepared to support the achievement of the President's goal to double U.S. energy productivity by 2030. Since energy is essential for every aspect of our economy, including conventional and alternative sources of energy for transportation, homes, and businesses, improving energy productivity has the potential to make our economy stronger and more competitive.

Recent reports¹ have demonstrated that using only currently available technologies, the potential for energy use reduction could be sufficient to achieve the goal. Emerging technologies in the buildings, advanced manufacturing, and transportation sectors have the potential to raise savings beyond the improvement needed to double energy productivity. Many DOE activities strive to take advantage of these opportunities and contribute to the Administration's energy productivity goal. Energy efficiency technology research and development, appliance and vehicle standards, and information sharing activities that inform consumers all form a part of the strategy to transform the Nation's energy system, reduce waste, and improve economic productivity.

An important step the Administration has taken to achieve the President's goal of doubling U.S. energy productivity by 2030 was the issuance last year of the Corporate Average Fuel

¹ For example, "Real Prospects for Energy Efficiency in the United States," National Academy of Science, 2009, http://www.nap.edu/catalog.php?record_id=12621.

Economy (CAFE) standards for light duty vehicles. DOE worked with the Department of Transportation and EPA in promulgating these standards that will double the average fuel economy of new light duty vehicles by 2025. The first fuel efficiency standards for medium- and heavy duty vehicles, issued in 2011 by DOT and EPA in consultation with DOE, will improve energy productivity for larger vehicles and save an estimated 530 million barrels of oil over the lifetime of the vehicles covered.

Doubling U.S. energy productivity by 2030 will require concerted action and investment by households, businesses, and governments at many levels over the next two decades, but it is an achievable goal that carries with it the promise of extensive benefits, leading to a stronger, more efficient economy.