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UNITED STATES SENATE

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Chairman Bingaman, Ranking Member Murkowski, Members of the Committee, thank you for the opportunity to appear before you today to discuss appliance standards and four recently introduced bills.

As this Committee well knows, energy efficiency generally is a fast, low risk, economical way to address climate and energy security concerns. Improvements in energy efficiency can be made today, with significant benefits. Numerous studies have concluded that current technology can greatly reduce energy consumption while providing considerable economic benefit.

Mr. Chairman, I know energy efficiency is a priority for you and your fellow Committee Members. The Department of Energy (DOE) is pleased to work with you to advance the goal of making the Nation's homes, offices, factories, and vehicles more efficient. The Department advances energy efficiency through a number of efforts, including promoting the adoption of energy efficiency policies and practices; broadening consumer acceptance of energy efficiency as a high-priority, cost-saving resource; and accelerating market adoption of energy efficient technologies. The Appliances and Commercial Equipment Standards Program is a major component of DOE's energy efficiency efforts.

My comments focus on five main items, including:

- Appliance standards background and history;
- Recent DOE efforts to meet an appliance standards consent decree;
- DOE appliance standards processes and enforcement;
- Comments on pending energy efficiency legislation; and
- The "Best in Class" concept for appliance standards.

APPLIANCE STANDARDS

Background and History

The Department's Appliance and Commercial Equipment Standards Program develops test procedures and energy conservation standards for residential appliances and commercial equipment. When applied, these standards can spur innovation, conserve energy, and reduce greenhouse gas (GHG) emissions.

The Energy Policy and Conservation Act of 1975 (EPCA) designated test procedures, conservation targets, and labeling requirements for certain major household appliances, and established the DOE Appliance and Commercial Equipment Standards Program. Amendments to EPCA changed the conservation targets to mandatory standards and added categories, and eventually included a broad range of residential and commercial products. In 2005, DOE was sued for allegedly failing to meet the deadlines and other requirements of EPCA. Deadlines for these specific products had been repeatedly missed, in some cases for a dozen years or more.

In January 2006, the Department released its plan to eliminate the appliance standards backlog by issuing one new or amended standard for each of the products in the backlog by June of 2011. This ambitious schedule reflected a six-fold increase in standards activities compared with the previous 18 years. In addition to clearing the backlog of appliance standards, the Department is addressing further standards and test procedure requirements included in the Energy Policy Act of 2005 (EPAAct 2005) and the Energy Independence and Security Act of 2007 (EISA).

In November 2006, the Department entered into a consent decree, under which it agreed to publish the final rules for 22 product categories by specific deadlines, the latest of which is June 30, 2011.

Recent Efforts to Meet the Appliance Standards Consent Decree

The Department has made significant progress on meeting its consent decree and additional EPAAct 2005 and EISA requirements. It has met the deadlines for the 13 rulemakings required to date leaving eight rulemakings to be completed by June 30, 2011.

On February 5, 2009, President Obama issued a memorandum to Secretary Chu requesting that DOE take all necessary steps to finalize legally required energy conservation standards rulemakings as expeditiously as possible and to meet all applicable judicial and statutory deadlines.

Between February 5, 2009 and August 8, 2009, DOE completed the five appliance standards rulemakings highlighted in the President's memo on time. The five standards rulemakings included the codification of standards prescribed by EISA, standards for fluorescent and incandescent lamps, beverage vending machines, ranges and ovens, and certain commercial equipment contained in the American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard (ASHRAE) 90.1. These five standards rulemakings were completed ahead of schedule and will save over two billion metric tons of carbon dioxide over the next 30 years. Over that time period, they will save Americans an estimated \$250 to \$300 billion through avoided energy costs.¹

In addition, in the last three months DOE completed standards for commercial clothes washers and small electric motors on schedule, and aims to complete residential water heaters, direct heating equipment and gas pool heaters by the end of March 2010. In the next three years, the Department will also revise standards for several additional categories of products, including residential air conditioners, refrigerators, clothes washers, and medium electric motors. These standards will also provide substantial energy savings to Americans.

¹ DOE Press Release. October 13, 2009. <http://www.energy.gov/news2009/8129.htm>

DOE Appliance Standards Processes and Enforcement

While DOE has already increased its pace to complete required rulemakings, the Department continues to examine and review its operations to improve efficiency and productivity to achieve the Administration's goal of using appliance standards to increase energy savings and avoid GHG emissions. In addition, the Department continues to proactively work to improve and streamline its test procedures and enforcement of appliance standards. The improved procedures will build upon DOE and industry best practices, creating a process for developing, reviewing, and updating test procedures that will be able to accommodate changes in designs and technologies.

EISA added new flexibility to the rulemaking process that can contribute to the Department's productivity. Section 308 of EISA permits DOE to issue direct final rules in cases where a fairly representative group of stakeholders (including manufacturers, States, and efficiency advocates) jointly submit a recommended standard and no adverse public comments are received. For a consensus rule, this has the potential to reduce a typical three-year process. EISA also authorizes DOE to consider the establishment of regional standards for furnaces, central air conditioners, and heat pumps. The residential central air conditioner rulemaking, currently underway, is the Department's first opportunity to pursue the establishment of regional standards under the new authority. Furthermore, Section 307 of EISA removes the requirement for DOE to publish an Advance Notice of Proposed Rulemaking (ANOPR) in rulemakings on energy conservation standards for certain residential products. In lieu of ANOPRs, DOE posts analyses to its website and holds public meetings to receive stakeholder input on preliminary analyses.

The Department is assessing the resource needs of the appliance standards team, as well as determining how best to improve or reengineer underlying processes. The goal is to put sufficient Federal resources in place to ensure all requirements are met within given timelines and quality and content requirements. These resources will be applied to rule development and standards enforcement.

Additionally, the Department recognizes that the energy conservation standards must be enforced to be effective. The Department recently has taken significant steps to strengthen its enforcement of standards. Within the last six months the Department created a new enforcement team within the Office of the General Counsel, announced a program to randomly review compliance with DOE certification requirements and, most importantly, has held manufacturers accountable for failing to comply with EPCA and DOE's regulations. As part of DOE's tougher enforcement efforts, the Office of the General Counsel has initiated investigations and enforcement actions involving hundreds of products as far ranging as refrigerator-freezers, heating and air conditioning systems, light bulbs, and showerheads. These efforts include both actions to enforce the underlying energy efficiency standards, as well as efforts to improve the quality of the energy efficiency information available to DOE and consumers.

While many of these efforts are still ongoing, they have revealed that the existing statutory language constrains the Department's enforcement efforts in several ways. For example, the current statutory penalty, originally adopted in the 1970s, is limited to \$200 per violation. Similarly, the process prescribed by statute for assessing these penalties may also benefit from updating. Finally, the statute limits the Department's enforcement authority to specific enumerated acts which do not cover all circumstances found to be problematic by the enforcement team.

PENDING ENERGY EFFICIENCY LEGISLATION

The Department recognizes and appreciates the Committee's hard work on developing legislation that advances the research, development and deployment of energy efficiency. DOE looks forward to working with the Committee on this legislation as requested.

My comments below address four bills, either pending or introduced, including:

- S. 3059 - The National Energy Efficiency Enhancement Act of 2010;
- S. 1696 - The Green Gaming Act of 2009;
- S. 2908 - The Water Heater Rating Improvement Act of 2009; and
- S. 3054 - a bill establishing efficiency standards for spas, water dispensers, and commercial food cabinets.

S. 3059 - National Energy Efficiency Enhancement Act of 2010

Sec 2. Energy Conservation Standards

(a) Multiple efficiency descriptors: DOE does not currently have authority to regulate based on multiple efficiency descriptors. The lack of such authority has prevented DOE from responding positively to stakeholder requests for the use of multiple efficiency descriptors. This provision would allow DOE greater flexibility in the technical formulation of test procedures and energy conservation standards.

(c) Regional standards for central air conditioners and heat pumps: DOE has initiated a rulemaking on central air conditioners and heat pumps. DOE has not yet completed an analysis of the specific proposed standards. The next step in DOE's rulemaking process for these products is the provision of a preliminary analysis of potential standard levels. In this next step of the process, stakeholders will have an opportunity to discuss issues relevant to the rulemaking and to comment on DOE's approach.

(d) Regional standards for furnaces: DOE currently has a rulemaking underway for residential furnaces. DOE has not yet completed an analysis of the specific proposed standards. The next step in DOE's rulemaking process is a notice of public meeting in which DOE will describe the planned analytical methodology and process for conducting a rulemaking. In this next step of the process, stakeholders will have an opportunity to discuss issues relevant to the rulemaking and to comment on DOE's approach.

(f) Allowance for State building codes to exceed Federal standards: DOE analyses of energy efficiency standards in many cases demonstrate that high efficiency products may be more economically justified in new buildings compared with replacement products. This is because some efficiency technologies require not only changes in the equipment but in how the equipment is installed in a building. Since whole-building standards can address both equipment features and how the equipment is installed in a building's infrastructure, such codes can sometimes address the efficiency improvements more economically than equipment standards alone. But currently due to federal preemption, building codes cannot take advantage of such economically viable energy efficiency opportunities because they cannot specify equipment standards that are more stringent than Federal standards. An alternative approach to this same issue might be to provide DOE with authority to promulgate different standards for replacement equipment compared to equipment that is installed in new homes.

Sec. 3. Energy Conservation Standards for Heat Pump Pool Heaters.

DOE is currently regulating gas heaters for pools and this provision would regulate heat pump water heaters which are the comparable type of equipment for households in warmer climates and with electricity-only energy supplies.

Sec. 4. Efficiency Standards for Class A External Power Supplies.

DOE estimates that the specified products only very rarely operate under no-load conditions. These proposed provisions address comments that DOE received in its public workshops concerning external power supply regulation. In the rulemaking DOE did not have the ability to respond to these comments noting that the statute did not allow DOE to grant an exemption from no-load requirements.

Sec. 5. Prohibited Acts.

Currently, DOE's authority to enforce its energy and water conservations standards is limited to certain entities engaged in specific conduct. This provision expands DOE's enforcement authority to include representatives of manufacturers, distributors, and retailers, which will help to ensure effective enforcement of our energy conservation standards throughout the distribution chain.

Sec 6. Outdoor Lighting.

This section ends production of inefficient mercury vapor lamps and sets initial standards for outdoor lighting luminaires. These provisions are also consistent with on-going DOE activities to set efficiency standards for particular high intensity discharge lamps and lamp ballasts.

Sec. 7. Energy Efficiency Provisions.

(a) Direct final rule for test procedures: This provision may allow for more timely updates of test procedures in some cases.

(b) (1) (A) (i) Inclusion of impact on average energy prices as criteria: DOE believes that the clearest economic impact that energy conservation standards have on consumers and the country, is the impact on their energy bill. DOE already evaluates energy bill impacts

in its standards rulemakings. In many cases, an energy conservation standard will decrease consumers' energy bills while the average price of energy increases. In many cases incremental average energy price changes may be weakly correlated, or even negatively correlated with either consumer or national economic impacts.

(b) (1) (A) (i) Inclusion of smart grid impacts as a criteria: This provision provides clear legislative intent to DOE to specifically address smart grid capabilities and features when considering energy efficiency ratings for appliances and equipment and any attendant energy conservation standards impacts. There is a potential for the smart grid technologies to provide national energy and economic savings beyond those considered for equipment that is efficient but which do not have such smart grid features.

(b) (2) Rebuttable presumption: In general, DOE promulgates standards based on the criteria in 42 USC 6295(o)(2)(B), but the "rebuttable presumption" provisions proposed in the act would allow DOE to set cost-effective standards using alternative methods. However, in many cases, an analysis based on the seven factors could lead to more energy savings than that on the rebuttable presumption.

(c) Obtaining appliance information from manufacturers: DOE is currently reviewing its existing certification and information collection requirements to determine how they can be streamlined and improved. This provision authorizes DOE to collect additional information that DOE may use in its compliance, monitoring and enforcement activities. Accurate and comprehensive information is a prerequisite to effective enforcement of DOE's energy conservation standards. Coordination with other federal agencies, states, and third-party verification programs will help to rationalize this vital information gathering effort and ensure that DOE has the information it needs, while minimizing reporting burdens and duplication to the extent possible.

(e) Permitting States to Seek Injunctive Enforcement. This provision would permit state attorneys general to seek injunctive enforcement for violations of federal conservation standards in U.S. District Court, with notice to DOE. It provides DOE an opportunity to intervene in any such actions. This broadening of enforcement authority and the additional resources of State enforcement agencies will help to ensure efficient enforcement of our standards throughout the country.

S. 1696 - The Green Gaming Act of 2009

This legislation requires DOE to conduct a study of video game consol energy use.

DOE is aware of the potentially significant energy savings potential of a wide range of miscellaneous energy uses that are not covered equipment. Such miscellaneous end uses also include such common household items as: set-top boxes, audiovisual and home entertainment equipment, cordless telephones, coffee makers, computers, computer displays and monitors, computer networking equipment, ground fault circuit interrupting outlets, printers, and home security systems.

Currently, DOE has the regulatory authority to cover new products if they meet certain criteria. The average annual per-household energy use by products of such type is likely to exceed 100 kilowatt-hours (or its British thermal unit equivalent) per year (42 U.S.C. 6292(b)). However, in terms of establishing energy conservation standards for newly-covered consumer products DOE's authority is limited by particular threshold criteria. In 42 U.S.C. 6295(l)(1)(A), which specifies the requirement that "the average per household energy use within the United States by products of such type (or class) exceeded 150 kilowatt- hours (or its British thermal unit equivalent) for any 12-month period ending before such determination."

Currently the bill states: "On completion of the initial study the Secretary shall determine by regulation, whether minimum energy efficiency standards for video game consol energy use should be established." However, the proposed legislation does not specify the criteria that DOE should use in determining if standards should be established.

If standard-setting is dependent on the threshold in 42 U.S.C. 6295(l)(1)(A) it is not clear at this time if video game consoles would satisfy this criteria.

Barring explicit legislation for a long list of specific miscellaneous products, the biggest factor that determines whether or not DOE has the authority to set standards for a specific consumer product is the value of the threshold criteria contained in 42 U.S.C. 6295(l). Given compliance with the threshold criteria, DOE has existing authority to study and regulate any miscellaneous end use.

S. 2908 - The Water Heater Rating Improvement Act of 2009

This legislation gives DOE the authority to redefine the efficiency descriptor for water heaters marketed for both commercial and residential applications. Currently, some categories of water heaters are marketed for both commercial and residential applications, which use different test procedures and metrics. The boundary between commercial and residential applications is currently mandated by statute. The proposed legislation would allow greater flexibility in formulating regulations for large residential and small commercial water heaters and would allow DOE to make adjustments in test procedures and energy metrics to match standards and test procedures more closely with existing market conditions.

S. 3054 - Standards for Spas, Water Dispensers, and Commercial Food Cabinets

DOE has the regulatory authority to cover these new products after performing a coverage determination. Typically, the simple payback period of the energy conservation standards promulgated recently by DOE are substantially longer than the simple payback periods reported by the manufacturers of these products. In light of this, DOE is actively considering inclusion of these categories and other miscellaneous products under existing authority

TOP TIER LEVELS AND PROGRAMS

As the Committee is aware, last year DOE and EPA updated their agreement on roles and responsibilities for how the ENERGY STAR program is managed. As described in the enhanced program plan for ENERGY STAR products, released in December 2009, EPA will manage a new top tier program, in consultation with DOE, that will be nested in the existing ENERGY STAR program. EPA and DOE are currently exploring how this program might best be structured.

Secretary Chu has spoken favorably regarding the concept of a top tier category for ENERGY STAR. He has noted that such a designation would give companies key marketing positions for ultra-efficient products that would reduce consumer's energy bills by even more over their lifecycles. Such a market designation would also provide incentives for inventors, innovators and manufacturers to propel appliance and equipment technologies to new heights of energy efficiency. DOE analyses indicate that many high efficiency products are technically possible but are not yet on the market. For example, cutting edge television technologies can reduce energy use by 70 percent compared with the traditional cathode ray tube. Yet, there is no program to help consumers easily identify products in this top tier of performance. While cost and lack of performance information may be reasons that these energy saving technologies have not been deployed commercially, a top tier category could provide incentives for manufacturers to find ways to bring such technologies to market more cost effectively and may provide information to consumers who may have preferences for buying them

There are also a significant number of consumers who experience very high electricity costs. For example, in regions like Alaska and Hawaii electricity can cost 3 to 5 times the national average. The economically optimum energy efficiency for appliances and equipment for such consumers is typically much higher than what is either provided by the market or by more general designations like ENERGY STAR.

Creating a viable market niche for cutting edge efficiency technologies will provide a setting in which experimenters and innovators can test their ideas, evaluate consumer response to new technologies, and learn how to make cutting edge technologies cheaper and economically viable for a larger market.

CONCLUSION

DOE is continually working to seize the opportunities provided by energy efficiency to achieve greater energy savings, reduce electricity consumption, and lower GHG emissions. There are many opportunities for further improvements in the energy efficiency of appliances and products that consumers and businesses use every day. Therefore, the Department is continuing to establish commercial and residential appliance standards. DOE is constantly modernizing, improving, and tailoring the Appliance and Commercial Equipment Standards Program to respond to changing market conditions, while being responsive to legislative and regulatory requirements.

Thank you again for the opportunity to discuss the Department's work on appliance standards. I am happy to answer any questions Committee Members may have.