



*Leadership > Knowledge > Innovation*

**Testimony  
of  
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**Before the  
Energy & Commerce Subcommittee on Energy  
U.S. House of Representatives**

**Hearing on  
Wasted Energy: DOE's Inaction On Efficiency Standards And Its  
Impact On Consumers And The Climate**

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Chairman Rush, Ranking Member Upton and members of the Subcommittee, thank you for the opportunity to testify on behalf of the Association of Home Appliance Manufacturers (AHAM) regarding the Department of Energy (DOE) Appliance Standards Program. We appreciate the Subcommittee reviewing this program, which we fully support. It significantly impacts appliance manufacturers, their employees and the consumers that use home appliances every day to make their lives easier, safer and more enjoyable. It is our hope that today's hearing can provide some insights and momentum to strengthen and improve the appliance program, which requires changes to the underlying law, the Energy Policy and Conservation Act of 1975, as amended (EPCA).

AHAM represents manufacturers of major, portable and floor care home appliances, and suppliers to the industry. AHAM's membership includes more than 150 companies throughout the world. In the U.S., AHAM members employ tens of thousands of people. AHAM members produce more than 95% of the household appliances shipped for sale in the U.S. and Canada. The factory shipment value of these products is more than \$38 billion annually. The home appliance industry, through its products and innovation, is essential to U.S. consumer lifestyle, health, safety and convenience. Through its technology, employees and productivity, the industry contributes significantly to U.S. jobs and economic security. Home appliances also are a success story in terms of energy efficiency and environmental protection. New appliances often represent the most effective choice a consumer can make to reduce home energy use and costs.

AHAM is a major stakeholder in the Appliance Standards program and the ENERGY STAR program, which builds from the minimum standards program. Our member companies make this program work through their investments and innovations. We have been involved in virtually all legislative efforts that have culminated into what is today's Appliance Standards program, including the National Appliance Energy Conservation Act of 1987. We strongly support a system of federal standards and state preemption, and we do not support a rollback of any standards. One set of nation-wide standards is critical to a thriving domestic industry, its employees, and to ensure that consumers have fully featured, moderately priced products.

AHAM and its members are committed to providing energy efficient home appliances that have a direct, positive impact on the lives of consumers. The energy efficiency gains across all of the core major appliance categories are dramatic and undeniable. For example, the most commonly purchased modern refrigerator uses the same amount of electricity in one year as a 50 Watt light bulb.

There have also been numerous test procedure revisions accompanying these standards revisions. In many cases, we have supported specific standards in legislation or as part of regulatory negotiations. The reality is that for many home appliance product categories, the energy savings have a diminishing return. For example, an average refrigerator uses about 450 kWh/year. Trying to squeeze another 10 percent energy savings out of the product would be costly and only save 45 kWh/year of energy to a household. The Energy Information Agency estimates the average residential energy cost in the U.S. is 12.95 cents/kWh, so a household would save a mere \$5.83/year in their utility bill or less than 50 cents/month. In addition, there are basic laws of

thermodynamics that exist requiring a certain amount of energy to remove heat and ensure the food stays cold.

Similarly, we have engaged with ENERGY STAR in all its forms and through its various reorganizations. It has been a successful program in which our companies have been integrally involved. It builds from the Appliance Standards program. The ENERGY STAR program for home appliances was always managed by DOE until in 2009 it was administratively moved to EPA. This has caused a wealth of redundancies that are unavoidable when two federal agencies regulate the same products. AHAM continues to support moving the management of the ENERGY STAR program for home appliances back to DOE, where the product expertise lies and government efficiencies can be realized by one agency regulating industry products.

The title of this hearing is “DOE’s Inaction on Efficiency Standards” and I would like to comment on this topic directly. DOE’s actions on standards and whether they are “late” or “early” are sometimes based on a never-ending statutory timeframe under EPCA that simply did not anticipate the efficiency gains achieved and the numerous additional products added to the program since the 1970s and 1980s. DOE, regardless of who is the President or Secretary of Energy, has little ability to prioritize the standards work based on energy savings and resources. Under EPCA, DOE must review a standard every six years and test procedures every seven years. In practice, the laws have been interpreted to require DOE to engage in a full rulemaking regardless of the merits.

Attached to this testimony is a chart of the 30 standards for 10 products that have been promulgated since 1986, including many multiple standards for the same product. We negotiated most of our products’ standards with the efficiency advocates, the latest being in 2010. Negotiating these standards is a broadly supported process and is even newly placed in DOE’s proposed Process Rule changes. However, DOE took up to three years to finalize some of the products in the agreement so even when they are negotiated it can take DOE some time to finalize the standards. Further complicating the matter is that test procedures have a different arbitrary timeline than standards for regulatory look back, and I think we all agree that the test procedure needs to be done before the standard otherwise we have a Tower of Babel in understanding possible standard levels. This principle was in the bipartisan Senate Energy bill in the previous two Congressional sessions. The current statutory mandate hamstring DOE and prevents “on time” compliance. For example, for clothes dryers, under EPCA, the test procedure work at DOE needs to be done by August 2020, but the standards under EPCA need to be completed by April 2017, three years after the test procedure.

Manufacturers need certainty and stability. We want a data-driven appliance standards program, and by and large DOE has shown that they want the program to be data-driven. Over the years, regardless of the Administration, concerns have arisen when the DOE has failed to move in a methodical manner – too slowly or too quickly. For example, under the Energy Policy Act of 2005, DOE was directed to issue a final rule for energy conservation standards for battery chargers by 2008. That did not happen. In 2007, the Energy Independence and Security Act (EISA) attempted to compel DOE to act, stating that “Not later than July 1, 2011, the Secretary shall issue a final rule that prescribes energy conservation standards for battery chargers or determine that no energy conservation standard is technically feasible and economically

justified.” AHAM supported DOE compliance with this statutory deadline, and still, DOE issued the final rule only in 2016 – nine years after EISA 2007 was enacted into law and mandated publication of the standard.

And DOE has at times moved too quickly to publish a standard. For example, a dishwasher negotiated standard was to be effective in 2013. In 2014, just one year after the negotiated change took effect, DOE published a proposed rule that would have severely impacted the ability of the dishwasher to clean the dishes. It took the industry two years to convince DOE of this problem.

The overarching and historical problem is that DOE’s work and resources are based on arbitrary timelines set forth under EPCA that are not relevant to the program’s experience over the past thirty five years. As a result, when the DOE attempts regulatory expediency or experiences a delay in setting a standard, serious problems arise for industry. It should be common sense to assume that DOE should spend less time regulating a product that might save 0.01 Quads than it would for a product that saves 1 Quad.

EPCA needs to be amended and the program needs to be reformed. AHAM would like to work with the committee and other stakeholders to reform EPCA.

### **Process Rule**

AHAM commends the Department of Energy on the recent release of the Notice of Proposed Rulemaking (NPR) to modernize its Process Rule for developing appliance efficiency standards and related test procedures. This has been time well spent to modernize the program, recognize its achievements and lay out a process that drives prioritization related to energy savings. Importantly, the proposed rule that was released requires that the Department of Energy to consistently adhere to its process requirements. It also will allow DOE to better prioritize its resources based on energy savings – the core goal of the program. For updates to current standards, DOE will undertake an early, fact-based assessment of the need for further updates before the normal multi-year process to analyze all other impacts of a standards update. This assessment will be subject to public comments and will aid in prioritization of appliance standards rulemakings based on energy savings potential, not by an arbitrary six-year lookback period. It also adds a new provision to the Process Rule that ensures DOE will use the negotiated rulemaking process in an attempt to develop a consensus proposal before issuing a proposed rule.

Last year, AHAM along with a group of similarly situated organizations submitted very detailed (more than 36 pages) joint comments to DOE in response to its RFI on the Process Rule. We would be happy to share those comments with the Subcommittee. That rule, which was adopted in 1996 through a joint stakeholder effort, has been an important roadmap for DOE rulemaking that, until recently, served to ensure the transparent, consistent, data-driven development of rules with early and frequent input from experts and stakeholders. Since the initial development of the rule, however, much has changed. The Appliance Standards program itself and the individual product test procedures and standards have matured and an enormous amount of energy savings have been achieved.

It is time that DOE modernize the Process Rule to continue to allow transparent, consistent, data-driven rule development with early and frequent input from stakeholders, which was the intent of the original rule. AHAM agrees that amended standards should be periodically reviewed. In a modernized rule, DOE should adopt policies and analyses that reduce burdens in the rulemaking process and lead to less burdensome rules supported by sound data. Specifically, the joint commenters recommended that a modernized Process Rule do the following:

- Be binding on DOE and apply to both consumer products and commercial equipment;
- Require a quick assessment during the initial phase of a rulemaking in order to determine whether amended standards may be or are not justified;
- Increase transparency and public engagement before DOE proposes an energy conservation standard;
- Ensure proper development, application, and sequencing of test procedures;
- Include a strong preference for negotiated rulemakings and rely on direct final rules when appropriate;
- Meaningfully consider cumulative regulatory burden in the rulemaking analyses; and
- Update DOE's economic analysis.

### **EPCA Reform**

EPCA was originally signed into law more than 40 years ago in response to the 1973 energy crisis, creating the first comprehensive approach to federal energy policy. The primary goals of EPCA were to:

- Increase energy production and supply
- Reduce energy demand
- Increase energy efficiency, and
- Help the Executive Branch respond to supply disruptions.

EPCA established the Energy Conservation Program for Consumer Products Other Than Automobiles (Energy Conservation Program), which was designed to improve energy efficiency for consumer products, including home appliances, and certain commercial and industrial equipment. EPCA also allows the Secretary of Energy to classify additional types of consumer products as covered products. The Energy Conservation Program consists of four parts: testing, labeling, minimum energy conservation standards, and certification and enforcement procedures.

For home appliances, EPCA requires that, six years after the issuance of every final rule establishing or amending standards, DOE either publish a determination that no amendment to the standard is justified or publish a proposed rule to amend the standard. This is commonly referred to as the "six year lookback." AHAM supported this provision as part of a legislative compromise. But, after decades, it is reasonable to reconsider its continued application. The lookback requirement is unending and has proven to be a prescription for a huge regulatory edifice built around churning out dozens of rulemakings each year regardless of their significance or justification.

Since the law was enacted in 1975, the U.S. has made great strides in reducing energy use. Home appliance manufacturers have played a significant role in that success by innovating to

create products that save time, effort, water and energy, as well as enhance style, convenience, and ease of use. Specific examples include appliances that take less time to set/start, refrigerators with more internal volume using the same footprint, appliances that can monitor and diagnose themselves, and smart grid enabled appliances. Appliances today are thinner, lighter, longer lasting and have greater capacities without increases in size. What's more, at end of life, more than 90 percent of white goods are recycled, pointing to sustainability of products.

Let me address one concern that we have heard expressed with our support for eliminating the EPCA statutory requirement to review standards every six years and test procedures every seven years. The nature of regulatory activity and the purpose of the federal regulatory agencies is to properly balance stakeholder comments with the needs of the country based on the policies of the Administration. Virtually every other, if not all, agencies that promulgate regulations outside of the DOE Appliance Standards program are amended or updated based on changes in events, innovation or new information. Under our proposal, DOE would have more decision-making control and flexibility to prioritize and administer the program more efficiently. It would not prevent any action nor would it eliminate any standards under the program. A modernized program should limit unnecessary, lengthy, unending rulemakings and focus on priorities, return to properly sequencing test procedures and standards, and evaluate cumulative regulatory burden while improving transparency and stakeholder engagement. The current Process Rule already has "*Factors for Priority-Setting.*" The factors to be considered by DOE in developing priorities and establishing schedules for conducting rulemakings include:

- Potential energy savings.
- Potential economic benefits.
- Potential environmental or energy security benefits.
- Applicable deadlines for rulemakings.
- Incremental DOE resources required to complete rulemaking process.
- Other relevant regulatory actions affecting products.
- Stakeholder recommendations.
- Evidence of energy efficiency gains in the market absent new or revised standards.
- Status of required changes to test procedures.
- Other relevant factors.

If a stakeholder believes that DOE is not acting when they should, a petition can be filed by anyone to DOE.

### **Federal Standards**

AHAM supports federal efficiency standards in lieu of state standards and has been involved with and supported appliance related energy legislation for 30 years. A single, uniform standard throughout the U.S. is vastly preferable to a patchwork of 50 disconnected state-by-state standards. Federal appliance standards based on industry input and stakeholder agreement is a path towards more reasonable regulation and protection of consumer interest in a full diversity of products by manufacturer, brand, features and price points. Rational, definite standards with sufficient lead-time, when coupled with incentive programs, can also minimize the damage to U.S. employment.

Home appliances are an energy efficiency success story. Accordingly, energy consumption of home appliances has steadily decreased according to AHAM's 2014 Energy Efficiency and Consumption Trends data. The energy efficiency gains across all of the core major appliance categories are dramatic and undeniable. Refrigerators are being produced at larger capacities, and are 50 percent more efficient than 20 years ago. Refrigerators, refrigerator-freezers, and freezers with an added ENERGY STAR designation are at least 10 percent more efficient than the federal standard. The most commonly purchased modern refrigerator uses the same amount of electricity as a 50-Watt light bulb. Clothes washers are another example of energy efficiency success, with tub capacities growing larger and energy consumption declining. A new clothes washer uses 76 percent less energy than it did in 2000. In fact, replacing an 8-year old washer with one of average efficiency will save the American consumer \$130 per year in utility bills, and more than 5,000 gallons of water per year.

### **Diminishing Returns**

For products that have already been subject to two or three rounds of standards regulation, as many of the products under AHAM's scope have, EPCA's required serial rulemaking process, driven by the mandatory six year lookback, is beginning to result not only in significant cumulative regulatory burden on manufacturers, but also in diminishing returns for consumers and the environment. Most regulated home appliances have been through at least three rounds of standards revisions. The chart in Appendix A shows the many standards for our products and how far into the future standards are already in the queue to be revised or implemented for the first time.

For many home appliances, the opportunities for additional savings beyond the significant savings already achieved are severely diminished as they are nearing maximum efficiency under available technology. For those products, further amended standards will likely result in insignificant energy savings and increased cost to consumers and manufacturers beyond an acceptable level. Moreover, for some products more stringent energy conservation standards will likely result in degraded performance and functionality.

With regard to product performance, AHAM members performed investigative testing to demonstrate the impact DOE's proposed standards would have on dishwashers' ability to remove adhered soils and grease. AHAM members then conducted consumer surveys regarding the performance test results and consumers commented that, for example, the dishes from a dishwasher under the proposed standards level were "yucky," "unsanitary," "unappetizing," "filthy," and "nasty." In fact, according to one survey, 70 percent of the consumers surveyed were somewhat, very, or extremely likely to serve family and friends from the dishwasher at the current standard level. Not one person would serve dishes to family or friends from the dishwasher at the proposed levels. Moreover, AHAM pointed out that if dissatisfied with product performance, consumers are likely to pre-rinse dishes, which increases water use. Product performance is at the very essence of the bargain in EPCA between obtaining energy efficiency improvements while protecting consumers from being deprived of products that work well and perform the desired function. This is not only meaningful to any understanding of technical feasibility, but is also explicitly a requirement for economic justification under the "safe harbor" provision in 42 U.S.C. § 6295(o)(2)(B)(IV).

Demonstrating diminishing returns, recent standards have resulted in minimal energy savings and it is reasonable to think that trend will continue. The 2013 dishwasher standard, per DOE’s analysis saved only 0.07 quad and the 2014 room air conditioner standard and 2019 dehumidifier standards each saved under a quad—about 0.3 quad each. And, as shown in the table below, the percentage of consumers experiencing a net cost (i.e., those for whom the lifecycle cost of the product will be greater than the savings at the new efficiency level) per DOE’s own analysis (which AHAM has consistently shown is overly optimistic), is high.

<b>Appliance Standard</b>	<b>Percent of Consumers Experiencing Net Cost Per DOE’s Analysis</b>
2015 Clothes Dryer	Up to 32
2019 Dehumidifier	Up to 28.7
2013 Dishwasher	19 for standard size
Proposed Dishwasher	53 for standard size
Proposed Portable Air Conditioner	13 for residential consumers
2014 Room Air Conditioner	Up to 33.6
2014 Refrigerator/Freezer	Up to 45.7

Not only are consumers experiencing a net cost to achieve minimal savings, but the payback periods for those who will experience a benefit are long. The payback period—the time it takes consumers to recover the increased purchase cost of a more-efficient product through lower operating costs—for the current dishwasher standard (effective May 30, 2013), per DOE’s analysis is 11.8 years for a standard size product. And, per AHAM’s analysis the proposed dishwasher standard would have a 20 year payback period for a standard size product (DOE’s analysis indicates a 9 year payback period). These payback periods are compared to the 13 year lifetime of the product. Similarly, the last refrigerator/freezer standards (effective September 15, 2014) had a median payback period, per DOE’s analysis, of 9.5 years for top mount refrigerators. And the last room air conditioner standard (effective June 1, 2014) had payback periods of up to 10 years for one product class according to DOE’s analysis. Per DOE, the clothes dryer standard (effective January 1, 2015) had consumer a payback period of 11.7 years for gas clothes dryers.

The same is true for ENERGY STAR specifications. For example, according to EPA’s analysis the expected consumer savings for the latest dishwasher specification were only about \$6 per year. And the 2014 refrigerator, refrigerator-freezer, and freezer ENERGY STAR specification saves a consumer only about \$5-7 per year compared to a product that meets the 2014 DOE standard for those products. According to EPA’s analysis, the ENERGY STAR specification for compact refrigerators would save consumers only \$3.65 per year.

To achieve these minimal energy savings, impacts on manufacturers have also been significant. The table below shows the loss in the industry’s value that the DOE’s own analysis predicted for several recent home appliance rulemakings.

<b>Appliance Standard</b>	<b>Loss in Industry Net Present Value (%)</b>
2015 Clothes Washer	33
2013 Dishwasher	13.3



Proposed Dishwasher	17.7-34.7
2019 Dehumidifier	20.9
Proposed Portable Air Conditioner	30.6
2014 Room Air Conditioner	18.6
2014 Refrigerator/Freezer	21.7 for standard size refrigerator-freezers

For manufacturers, there is always a flurry of activity leading up to the compliance date of a new or amended standard. This includes adding new capital equipment, sourcing new and sometimes more costly materials, redesigning products, retooling factories, etc. Home appliances are now in an endless cycle of regulation, where as soon as one compliance effort ends or is near completion, another round of regulation to change the standard again begins. There is no time for manufacturers to catch their breath.

Just as importantly, there is no time for DOE, manufacturers or efficiency advocates to assess the success of standards or review their impacts on consumers and manufacturers. It would seem that, as part of its retrospective review, DOE should not be so driven to issue standards that it does not take into account whether an amended standard is justified. Without DOE fully reviewing the success/impact of past rules, consumers are at risk of increased product cost and the simultaneous loss of functionality, features and choice. Among other effects, certain product models could be at risk, with disparate impact on low and fixed income consumers.

Finally, a complete analysis of cumulative regulatory burden must consider the sheer number of products the regulated manufacturers make, in addition to the one being regulated in a particular rule, that are subject to proposals to amend standards or to promulgate standards for the first time. The time and resources needed to evaluate and respond to DOE’s proposed test procedures and energy conservation standards for all of these products should not be discounted. When these rulemakings occur simultaneously, the cumulative burden increases dramatically.

The same is true when compliance dates are clumped together for all of these products, as it was with the last major round of standards for products in AHAM’s scope, as shown in the table below. The ENERGY STAR specification also changed on these dates and new EnergyGuide labels were required. For many AHAM members, this meant a revamp of product lineups for several of the major product categories in less than a year, bookended by changes to commercial clothes washers in January 2013, residential dishwashers in May 2013, and microwave ovens in June 2016.

June 2014	September 2014	January 2015	March 2015
Room Air Conditioners	Refrigerator/Freezers	Clothes Dryers	Clothes Washers

DOE should be required to take this into account in its analysis as well as in its planning.

Going fast just to hit an arbitrary, recurring statutory deadline is not the way to run a regulatory program. It has caused DOE to short-circuit the rulemaking process by forgoing such critical pre-proposal steps as public data availability, stakeholder input, and company interviews. These steps should not be overlooked—they provide DOE with a better understanding of the realities of

the current market and product mix and could have prevented many analytical errors. In addition, the pre-proposal steps allow stakeholders time to prepare much more useful comments for DOE's consideration. Indeed, the Process Rule was originally developed in large part because DOE was conducting nontransparent analyses and in isolation from real-world data, which resulted in the need for much more engagement among government, DOE contractors, and industry stakeholders.

Similarly, EPA's process for changing and developing ENERGY STAR specifications is not consistent. Although EPA provides opportunity for public comment, there is no formalized notice and comment process for specification levels and test procedures. While the ENERGY STAR Guiding Principles provide factors EPA often reviews in developing new or revised specifications, the principles do not mandate that all of the factors be reviewed every time, nor do they provide sufficient insight into when EPA will review each of the factors. Because the ENERGY STAR program has been so successful, it has become essentially mandatory in the marketplace. As such, a more formalized process that provides consistency and certainty as well as requires a fuller technical analysis is necessary, hence our call for ENERGY STAR to be subject to the requirements more akin to the Administrative Procedure Act.

### **Conclusion**

Our ultimate objective is to improve the U.S. regulatory environment in measureable ways that foster a fairer, more predictable, more open and more efficient regulatory landscape. Manufacturers are eager for certainty and stability. Accordingly, we hope this Subcommittee will support modernizing EPCA so that DOE can prioritize its work on the Appliance Standards program, maximize energy savings, and improve transparency and stakeholder engagement. This is the best way to preserve the national standards program and build upon its successes while still recognizing the realities of limited opportunities for further energy savings that are economically justified, technologically feasible, and do not negatively impact product performance.

