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Subcommittee on Energy, Climate, and Grid Security
Hearing on
"Keeping the Lights On: Enhancing Reliability and Efficiency to Power American Homes"

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Thank you Chairman Duncan, Ranking Member DeGette, and Members of the Subcommittee, for the opportunity to testify today.

My name is Andrew deLaski and I am the Executive Director of the Appliance Standards Awareness Project (ASAP). ASAP advocates for appliance, equipment, and lighting standards that save energy and water, reduce economic and environmental burdens for low- and moderate-income households and cut planet-warming emissions and other air pollution. ASAP's steering committee includes representatives from environmental and efficiency nonprofits, consumer groups, the utility sector, and state government. ASAP is housed within the American Council for an Energy-Efficient Economy (ACEEE), a nonprofit 501(c)(3) organization focused on leading and advancing energy efficiency policies, programs and technologies across the nation.

The hearing today on the critical issues of the reliability and efficiency of our power systems is very timely.

Appliance efficiency standards have done more to cut energy waste in U.S. buildings than any other federal effort. Reduced electricity waste translates into lower peak demand levels, enhancing the reliability of our power grids. It also means lower household utility bills, delivering pocketbook benefits for families.

- In 2020, we estimate that peak electric demand was 130,000 megawatts lower than what it would have been absent existing appliance efficiency standards.
- We estimate that annual household utility bills are about $500 lower because of existing standards. That's real money, especially for households on tight budgets.

We can do much more. Updated standards due in the months and years ahead could add significant additional peak demand reductions and add hundreds of dollars of annual bill savings for consumers, further enhancing reliability and easing utility bill burdens.

Unfortunately, **the three bills before you today would harm grid reliability and efficiency rather than help them.** They would introduce needless new delays and hurdles for completing improved efficiency standards.

First, Representative Hudson's bill, H.R. 4167, would delay the Department of Energy's (DOE) consideration of new standards for distribution transformers by five years. This is unnecessary because pandemic-related supply chain problems have now largely abated and, regardless, new standards would not take effect for several years. Meanwhile, according to a Department of Commerce report, U.S. dependence on imports from Asia for high quality electrical steel for transformer cores has risen, underscoring the need to create clear market incentives for U.S. production.

Kicking the can down the road on the efficiency standard decision would be worse than counterproductive. It would force manufacturers of both electrical steel and transformers to either defer investments to upgrade their manufacturing or hedge their investment bets, planning for a range of potential regulatory outcomes. Ongoing regulatory uncertainty is the enemy of innovation. DOE has built a strong record in the current rulemaking process and has received robust input from a range of affected industries, including transformer manufacturers, electrical steel producers and utilities. Now is the time for decision-making.

We support the proposed rule; DOE's analysis shows that it will enhance reliability by encouraging investments in modern, efficient technologies that will likely lead to a diversified domestic supply chain. With overall demand for electrical steel skyrocketing to meet growth in the electrical vehicle (EV) market for both motors and charging equipment, electrical steel is a growing market where existing manufacturing jobs can be protected and new ones added.

Second, the so-called EPCA "reform" bill is a wolf in sheep's clothing. While some language in this bill may seem reasonable at first glance, it would gut the national efficiency standards program. It would mean that a new standard could not likely increase upfront product cost, have any effect on product characteristics such as cycle or charging time, or make it harder for any one manufacturer (or distributor) to compete (among other requirements), *regardless of the utility bill savings and other benefits of the standard*. Any existing standard could be revoked on any of these grounds. Taking a belt and suspenders approach to stop new standards, the bill also would

set unreasonably high minimum savings and low maximum payback period thresholds. **If this bill had been the law since the program's inception in the 1970s, consumers would not likely have seen any of the benefits they have received from DOE efficiency standards.**

Finally, **the GRID Act would grant extraordinary and unheard of power to the Federal Energy Regulatory Commission (FERC)** and, to some degree, each of the state regulatory commissions, to override federal regulatory decisions made by DOE, the Environmental Protection Agency, the Department of the Interior, the Department of Commerce, the Department of Defense, and every other federal agency. This would not only add delay to the agency rulemaking process, it would make FERC the final decision maker on a range of topics that are outside its expertise.

These bills would take us backwards – we urge the committee to reject them.

In the balance of my testimony today, I will:

1. Explain how the efficiency standards program works and clear up some misconceptions.
2. Describe how appliance efficiency standards have boosted grid reliability and enhanced home efficiency, saving families money – and how they can do much more.
3. Describe the current status of the program: the process for updating standards has been working well and DOE is catching up on the backlog of legally overdue reviews and updates.

The U.S. Appliance Standards Program is a Common Sense Strategy Incorporating Manufacturer Input and Historically Benefitting from Bipartisan Support.

Let's level-set on what the federal appliance standards program does and does not do, and, in the process, address some misconceptions.

Congress initially created the national appliance standards program to curb energy waste in response to the energy crises of the 1970s. Since then, the law has been expanded repeatedly on a bipartisan basis so that today we have energy and water saving standards for some 60 product types, including for consumer, commercial, and industrial products.

These standards set minimum efficiency requirements for products manufactured or imported for sale in the United States. It does not require anyone to replace any appliance.

The federal standards generally preempt state requirements, providing manufacturers and sellers a consistent national marketplace (42 U.S.C. 6297).

By statute, standards must be set at levels that ensure that the features consumers value remain available (42 U.S.C. 6295(o)(4) and 6295(q)). Products that use different fuel types (for example, electricity or gas) are regulated separately and DOE may not set a standard that prohibits all products that use any particular fuel (42 U.S.C 6295(q)).

The law requires DOE to periodically review standards to determine whether improved efficiency levels are technologically feasible and economically justified, taking into account pocketbook impacts for consumers, the costs to manufacturers, and competitive effects (42 U.S.C. 6295(o)(2)(B). DOE accounts for impacts on utilities, employment, and the environment. (10 CFR Part 430, Appendix A to Subpart C). DOE may only adopt standards that result in significant energy or water savings (42 U.S.C. 6295(o)(3)(B)).

The Appliance Efficiency Standards Program Has Boosted Grid Reliability and Enhanced Home Efficiency, Saving Families Money – and It Can Do Much More.

Appliance and equipment efficiency standards are an essential grid reliability strategy. Efficiency standards have cut peak electrical demand. We estimate that total peak electric demand in 2020 was about 130,000 megawatts (MW) lower than it would have been absent efficiency standards. In other words, strong appliance standards are critical for mitigating high peak electric loads that can cause blackouts.

From a grid reliability perspective, updated efficiency standards including new standards for central air conditioners (most likely to be completed in 2025) could reduce peak demand by up to almost 90,000 MW by 2050 (an amount equal to 13% of current total peak demand) easing pressure on power grids.

The typical American household spends about $500 less each year on utility bills because of existing efficiency standards for a range of products. That's real money that matters for households working to make ends meet. Seemingly small savings for some individual standards add up. All told, cumulative utility bill savings for consumers will reach about $2 trillion by 2030.

New standards will deliver meaningful additional bill savings. A simple analysis of the impact of pending standards for five common home appliances – refrigerators, washing machines, clothes

dryers, dishwashers, and stoves – is instructive. As shown in the table below, assuming the most common type of each of these five products, DOE estimates that the combined annual average utility bill savings from the proposed standards relative to the least efficient products that can be sold today would be $116.

	Annual utility bill savings
Refrigerator with top-mounted freezer	$9
Top-loading, standard-size clothes washer	$31
Electric standard clothes dryer	$62
Standard-size dishwasher	$6
Electric range (electric smooth cooktop + electric self-clean, freestanding oven)	$8
Total	**$116**

This is on top of the $500 annually that current efficiency standards are already saving U.S. households. In addition, savings from water heaters, furnaces, air conditioners and other products will add to this total. The administration has said that new standards could collectively save consumers about $570 billion over 30 years.

These utility savings are especially important for low- and moderate-income households. They spend more on their energy bills as a proportion of their income than wealthier households. For families that have to regularly make painful choices between essentials like housing, food, and medicine, hundreds of dollars of savings on utility bills makes a real difference.

Many low- and moderate-income households are also renters. Renters are not able to choose the appliances their landlords purchase but typically must pay the utility bills themselves. Robust appliance standards help ensure that renters benefit from savings on their utility bills from more efficient appliances.

Along with these direct economic and energy system reliability benefits, efficiency standards provide very significant reductions in harmful climate pollution – up to 2.4 billion metric tons in CO_2 reductions are expected from standards due in the months ahead – as well as cuts in emissions of particulates, NOx, mercury and other air pollutants that endanger human health.

The program has spurred tremendous innovation. Each time DOE updates a standard, innovative manufacturers put their engineers to work on developing cost-competitive products to meet the new standard and on developing the next generation of even more efficient products to distinguish themselves in the marketplace.

For example, after new washer standards adopted in 2012 took effect in 2018, the best top loaders got better. The most-efficient top-loading washers on the market today are 35% more efficient than the very best top-loading washer DOE identified in 2012 and many excel in cleaning performance tests.

And while sometimes we hear doom and gloom from manufacturers about proposed new standards, the record shows that innovation driven in large part by regulatory change keeps on bringing the cost to improve efficiency down and opening up even larger savings opportunities for consumers. Academic studies have shown this effect.

A quick illustrative story: Last week, Bill Richardson, who served in the House and went on to become Energy Secretary passed away – may he rest in peace. In 2001, Richarson set a central air conditioning and heat pump standard that boosted efficiency by 30%, a measure that, according to DOE, would reduce peak demand by 12,400 MW, or enough to avoid the need to build 39 large power plants. Some manufacturers said it couldn't be done, that it was too expensive and would bankrupt companies. But, after a court decision, DOE implemented the standard in 2006 as planned and without a hitch. **Twice** since then DOE has updated central air conditioning and heat pump efficiency, each time with manufacturer support. Once DOE sets a new standard, experience has shown that manufacturers get to work on making new minimally-compliant products at the lowest cost possible so they can compete for the most price-sensitive consumers' business and on making the next step forward for efficiency.

The United States Has Fallen Behind in Energy Efficiency Leadership but DOE Has Been Catching Up and the Standard Setting Process is Working Well

When the current administration took office in January 2021, DOE had already missed 28 legal deadlines for reviewing efficiency standards. The efficiency standards for many products, including refrigerators, clothes dryers and water heaters, have not been updated in more than a decade.

Where once the United States led the world in efficiency standards and the underlying technologies, we now lag in many cases. The result is energy waste, which translates into

needlessly high utility bills for consumers and disproportionate impacts on lower income families; extra strain on our electric grid; and lost opportunities to bolster U.S. manufacturing of energy efficient products.

DOE has been working to catch up on the many missed legal deadlines, a clear and needed change in direction from the rollbacks and delays pursued by the previous Administration.

The process of updating a standard, which typically takes three to four years, involves multiple public steps and opportunities for stakeholder and public input. If DOE finds that a standard would not result in significant savings or is not technologically feasible or economically justified, it must issue a determination to leave the standard unchanged. Conversely, if those criteria are met, DOE proposes revised standards for public comment.

Since 2021, **DOE has determined or proposed to determine that nearly a dozen standards do not need to be strengthened.** For 30 products, DOE has found that technological change has opened the door for improvement and proposed new standards. Based on public comment, industry input, and its own additional research, DOE revises each underlying analysis and makes a decision on final rule efficiency levels. About a dozen standards have been finalized in the past 18 months such as new standards for room air conditioners and pool heaters, and many more are scheduled for the months ahead.

Many of these efficiency standards have not been controversial, and several, including first-ever standards for portable air cleaners and improved standards for electric motors and a pending proposal for rooftop commercial air conditioners, have consensus support.

Upcoming Efficiency Standards Will Save Consumers Money, Enhance Grid Reliability, and Foster World-leading Investments by U.S. Manufacturers in Efficiency Technology.

Here are details on some of the high-profile pending efficiency standards.

A. Distribution transformers: Since all power flows through one or more transformers, making them even slightly more efficient can lead to big national savings. DOE's proposed standards would reduce losses in transformers by one-third to one-half, yielding up to $15 billion in savings that can be passed on to ratepayers and averting 340 million metric tons of CO_2 emissions over 30 years. A final standard can advance efficiency, promote investments in a stronger domestic supply chain and protect and expand manufacturing jobs.

B. Water heaters: The biggest saver among the pending standards, the proposal could save households replacing an electric water heater more than $200 on average each year and make heat pump technology much more affordable. Savings for consumers with gas water heaters would be about $20 per year.
C. Stoves: DOE recently proposed to loosen the efficiency requirements under consideration for first-ever gas stove efficiency standards in response to newly submitted data to better ensure fully-featured gas stoves can comply.
D. Home furnaces: On average, the proposed standards would reduce total costs for households with gas furnaces by nearly $500 over the life of the product. It would also cut 373 million metric tons of CO_2 emissions, 5 million tons of methane emissions, and 833 thousand tons of NOx emissions over 30 years. Supporters include major utilities like National Grid and consumer groups like the Consumer Federation of America and National Consumer Law Center.
E. Refrigerators: The proposed standards would save consumers up to $20 billion and avert 179 million metric tons of CO_2 emissions over 30 years.
F. Clothes washers: The proposed standards would save consumers up to $14.5 billion and avert 53 million metric tons of CO_2 emissions and 2.5 trillion gallons of water waste over 30 years.
G. Dryers: The standard would reduce costs for consumers by about $580 over the life of an electric dryer and by $200 for a gas dryer. The standard would cut 116 million metric tons of CO_2 emissions over 30 years.
H. Dishwashers: The standards would save consumers nearly $3 billion on utility bills and reduce CO_2 emissions by 12.5 million metric tons over 30 years while also ensuring that compliant products clean dishes well.

Conclusion

Appliance efficiency standards have been an effective policy for cutting costly energy waste, enhancing grid reliability, and saving consumers money. DOE's process for catching up on a big backlog of legal reviews for considering updates to standards is working well. The three bills before the committee today would undermine that process and open the door to revocation of existing standards. The committee should reject these bills.