

August 30, 2019

Via E-mail

Ms. Sofie Miller, Senior Advisor U.S. Department of Energy Office of Energy Efficiency and Renewable Energy 1000 Independence Ave., SW Washington, D.C. 20585

Process.Rule@ee.doe.gov

RE: Joint Comments on DOE's Notice of Data Availability on Procedures, Interpretations, and Policies for Consideration of New or Revised Energy Conservation Standards for Consumer Products; Docket No. EERE-2017-BT-STD-0062; RIN 1904-AD38

Dear Ms. Miller:

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI), Association of Home Appliance Manufacturers (AHAM), National Electrical Manufacturers Association (NEMA), and Plumbing Manufacturers International (PMI) (collectively, the Joint Commenters) respectfully submit the following comments to the Department of Energy (DOE) on its Notice of Data Availability (NODA) on Procedures, Interpretations, and Policies for Consideration of New or Revised Energy Conservation Standards for Consumer Products; Docket No. EERE-2017-BT-STD-0062; RIN 1904-AD38, 84 Fed Reg. 36037 (July 26, 2019).

The Joint Commenters appreciate the publication of the data that underlies DOE's proposal to modernize the DOE's Process Rule—an effort we strongly support—and define an energy savings threshold to satisfy the statutory requirement (see 42 U.S.C. §6295(o)(3)(B)) that amended energy conservation standards "result in significant conservation of energy." We continue to strongly support DOE's proposal to define an energy savings threshold to satisfy the requirement in the Energy Policy and Conservation Act of 1975, as amended (EPCA) a new or amended energy conservation standard must result in a significant conservation of energy.

Specifically, based on this revised data, the Joint Commenters support DOE's proposal to apply a threshold of 0.50 quad in energy savings or a ten percent reduction in energy consumption over a 30-year analysis period to satisfy the requirement.¹ As we discuss further below, we also note

¹ We note that our initial comments on the Process Rule proposed rule proposed that DOE adopt a 1.00 quad threshold. Those comments were based on the data presented at the time which was based on "source" energy. Were DOE to return to a measurement and threshold using "source" energy, we would retain our proposal that 1.00 quad is the appropriate quad threshold. But the new data in this NODA are

that a threshold of 0.75 quad in energy savings or a ten percent reduction in energy consumption over a 30-year analysis period would have achieved the same energy savings as the 0.5 quad threshold.

The historical data presented by DOE show that between 0.40 and 0.75 quad or ten percent reduction in energy use over the analysis period, 34 of the 57 rules would have achieved significant energy savings using that definition. It is critical to note that the rules that would be considered significant using that threshold achieved 93.87 percent of the total energy savings. **That fact is staggering—almost half of the historical rules** *collectively* **accounted for a mere 6.13 percent of total savings**. That fact supports only one conclusion: each of the individual rulemakings not reaching the significance threshold of 0.50 and ten percent achieved only insignificant savings. Such rules should not be permitted to move forward in the future.

We have considered similar data before, albeit only for DOE appliance efficiency rulemakings from 2007–2016, in connection with our comments in specific rulemakings on this issue during that time period. The NODA refers to a larger sample size of DOE rulemakings—57 rulemakings since 1989—than our research included, and the NODA uses site energy savings as the energy savings metric in order to achieve "apples to apples" comparison of energy savings among rules.² Initially, we can observe that the larger sample size provided in the NODA is helpful. In terms of looking at the array of energy savings produced by DOE's appliance efficiency rulemakings over time, the relative rankings of the specific rulemakings in terms of projected energy savings barely changes. In either case, the 2008 Packaged Terminal Air Conditioners and Heat Pumps rulemaking resulted in the smallest level of economically justified projected energy savings. Either measurement, in our view, is appropriate and reasonable for this evaluation.

The Department's proposal focuses on determining a measurable threshold for "*significant* energy savings," because the Secretary may not amend an energy conservation standard unless the Final Rule results in "significant conservation of energy." *Id.* As one appellate court has noted, "EPCA does not define 'significant conservation of energy'," Natural *Resources Defense Council v. Herrington*, 768 F.2d 1355, 1372 (D.C Cir. 1985), acknowledging that Congress "left DOE with substantial discretion to set specific levels of significance, but no one disputes that the

in terms of "site" energy and, based on those calculations, we support DOE's proposed 0.5 quad threshold proposal.

² Since 2001, DOE has been reporting both site energy savings, "primary energy savings," and "full-fuelcycle energy savings" in its rulemakings. As DOE notes in the NODA, "DOE is not at this time making any determination regarding whether the use of full-fuel-cycle energy measures are an appropriate measure of the benefits of any prior rulemaking." 84 F.R. at 36038. EPCA's text contemplates site energy savings. *Id.* See also, *NRDC v. Herrington*, 768 F.2d 1355, 1374 (D.C. Cir. 1985) ("The consumption figures in section 325(a) measure energy use at the site of consumption, i.e., the energy actually consumed by an appliance in the household.").

levels selected must be consistent with the express terms and underlying congressional intention of the Act." *Id.* at 1372-73.

The difference between 1985, when *Herrington* **was decided, and now (2019) is enormous.** In 1985, the *Herrington* court was working from a nearly blank EPCA-slate. The case was before the court of appeals because the Secretary had adopted no energy conservation standards. Thirty-three years later, there is a voluminous record of at least sixty energy conservation rulemakings and a robust dataset that informs us. While we do not contend that *Herrington* was wrongly decided, there is also a history of DOE misinterpreting *Herrington*, as we explain below.

The construction of 6295(0)(3)(B) came before the *Herrington* court because the DOE discerned Congress' intent for the meaning of "significant" conservation of energy in terms of Congress' statutorily stated interest in reducing national dependence on foreign oil. DOE settled on a multi-part threshold for a decrease in fuel use attributable to an amended standard as "significant" energy savings.³ The court of appeals, however, cited other paragraphs in EPCA (*e.g.* now 42 U.S.C. 6295(*l*)(1)) that informed the court that Congress likely had in mind a lower threshold than those adopted by DOE. In reversing DOE's interpretation of "significant" energy savings as too high, the court of appeals expressly acknowledged that its analysis of other possible metrics did not "bind[] DOE to any particular definition of significance." 768 F.2d at 1382.

In the aftermath of *Herrington*, DOE mistakenly came to believe that the only energy savings that was not "significant" was that which was "genuinely trivial." *See e.g.* 76 F.R. 70548, 70561 (November 14, 2011) ("While the term 'significant' is not defined in the Act, the U.S. Court of Appeals, in *Natural Resources Defense Council v. Herrington*, 768 F.2d 1355, 1373 (DC Cir. 1985), indicated that Congress intended 'significant' energy savings in this context to be savings that were not 'genuinely trivial.").⁴ But that is not what the Court of Appeals said in *Herrington*. The court wrote, "[w]e think it unlikely that the Congress that enacted NECPA and its four related energy statutes *intended DOE to throw away a cost-free chance to save energy*

³ *Herrington*, 768 F.2d at 1372: "Under DOE's final definition, energy savings from a proposed standard were significant only if they met at least one of the following three tests: (1) "the standard would result in the saving of 10,000 bpd of oil or the saving of natural gas equivalent to 10,000 bpd of oil over the period of the average life of the product in question beginning with the year 1987," id. at 57,209; (2) "the standard would result in the saving of one percent of national electricity use over the period of the average life of the product in question beginning with the year 1987," id. ; or (3) "the savings attributable to a standard for a product were equal to 16.67 percent of the energy that would be used by that product in the absence of a standard measured over the one year period following the period of the average life of the product in the last year before the standard would be imposed."

⁴ We point out in another rulemaking in which DOE decided it could not economically justify amending standards for incandescent reflector lamps, DOE, deploying the same erroneous interpretation of *Herrington*, stated that it considers projected energy savings 0.0102 quads of energy to be significant." 80 Fed. Reg. 4042, 4145 (January 26, 2015). This conclusion is erroneous, in our view.

unless the amount of energy saved was genuinely trivial." Id. at 1373. And in a footnote to this statement, the court added:

As we emphasize below, our argument is not intended to dictate any specific definition of significance to DOE. In particular, we note that any scheme of mandatory appliance standards will have certain rough fixed costs that will probably not vary radically with the levels at which standards are set. Those costs might include, for example, the costs of administering a regulatory scheme, including the costs of enforcement, and perhaps certain generic burdens of regulation on industry. *Cf. infra* at 1424-25 (discussing DOE's consideration of such generic burdens of standards). If it were truly obvious, without the extended investigation appropriately undertaken as part of the inquiry into economic justification, that the value of saving small amounts of energy was outweighed by the cost and trouble of undertaking any appliance program at all, DOE might be justified in determining that those small savings were not significant.

Herrington, 768 F.2d at 1373 n.19.5

Over thirty years later and with over 57 appliance efficiency rulemakings under its belt since *Herrington* was decided, the DOE knows there is no such thing as a "cost free chance to save energy." No rulemaking ever uncovered that utopia, and therefore the circumstance where the *Herrington* court hypothesized that anything more than the genuinely trivial was "significant" does not exist.

Principles of statutory construction confirm this view of the court's statement. The starting point is the ordinary meaning of the text used by Congress, turning to the dictionary for the ordinary meaning of specific terms. *Food Marketing Institute v. Argus Leader Media*, 588 U.S. _____, slip op. at 5 (No. 18-481, June 24, 2019). Various dictionaries uniformly define "significant" to mean "meaningful," "important," "having influence," or "noteworthy." *See e.g., Webster's New Collegiate Dictionary* 1079 (1973). No definition includes a reference to "trivial" or "more than trivial." A recent decision of the Third Circuit Court of Appeals rejected the argument that the term "significant" includes "more than [the] 'trivial'":

We also reject the assumption that the local defendant's conduct is significant as long as it is "more than trivial or of no importance." *Kaufman*, 2008 U.S. Dist. LEXIS 71245, 2008 WL 4224911, at *3 (citing *Caruso v. Allstate Ins. Co.*, 469 F. Supp. 2d 364, 369 (E.D. La. 2007)). Whether the local defendant's alleged conduct is significant cannot be decided without comparing it to the alleged conduct of all the Defendants. The word "significant" is defined as "important, notable." <u>Oxford English Dictionary</u> (2d ed. 1989). The local defendant's alleged

⁵ In another, but related context that the court of appeals probably would not have appreciated in 1985, one of the leading climate economists and 2018 Nobel Prize winner, William Nordhaus has calculated that appliance efficiency regulation is the most expensive policy for removing a ton of carbon from the atmosphere. W. Nordhaus, *The Climate Casino* at 170-73 (2013) ("Returning to our examples of refrigerators versus electricity generation, we saw a cost difference factor of almost ten.").

conduct must be *an important* ground for the asserted claims in view of the alleged conduct of all the Defendants.

Kaufman v. Allstate N.J. Ins. Co., 561 F.3d 144, 157 (3rd Cir. 2009).

DOE's mistaken interpretation of *Herrington*—that only "genuinely trivial" energy savings are beyond the reach of EPCA—has led to the adoption of energy conservation standards that result in what can only be described as very small, insignificant amounts of energy savings as demonstrated in the summary of 57 appliance efficiency rulemakings published by DOE.⁶ Significantly, even using 1.00 quad as a significant energy savings threshold, together with a ten percent reduction in energy use over the analysis period, 32 of the 57 rules accounted for 90.71 percent of the energy savings which means that the other roughly half of the rules accounted for only about ten percent of the energy savings (at high costs to manufacturers).

In light of the above discussion, we evaluate the DOE's proposed rule that energy savings meet a threshold of significance described as a minimum of 0.50 quads of site energy savings over thirty years or a reduction in energy use of ten percent or more over the DOE's analysis period.

Analysis

Table II.1 in the NODA invites a comparative approach to the determination of "significant" energy conservation that we submit is consistent with *Herrington* and the Third Circuit's discussion in *Kaufman* above. Something is typically deemed "significant," "important," "meaningful," or "noteworthy" when compared to something else. Table II.1 (and the rulemaking data underlying Table II.1 published in the rulemaking record (see footnote 3, *supra*)) compares:

- Alternative site energy savings thresholds between 1 quad and 0.10 quad *and* alternative reduction in energy use resulting from the standard over the analysis period between a 0% reduction and 10% reduction;
- The site energy savings resulting from a single rule to the totality of site energy savings from 57 rulemakings (54.638 quads);
- The site energy savings resulting from a single rule to the *average* national site energy savings (.959 quads) from 57 rulemakings;
- The site energy savings resulting from a single rule to the *median* national site energy savings (.32 quads) from 57 rulemakings;
- The percent site energy reduction from a single rule to the *average* national site energy savings (13.1%) from 57 rulemakings
- The percent site energy reduction from a single rule to the *median* national site energy savings (8%) from 57 rulemakings

Additionally, for the rulemakings where the site energy savings would exceed any one of the alternative thresholds and thereby be deemed "significant," one can compare the aggregate site

⁶ See <u>https://www.regulations.gov/document?D=EERE-2017-BTSTD-0062-0144</u>.

energy savings represented by those rulemakings to the total site energy savings (54.638 quads) of the 57 rulemakings.⁷ Alternatively, for the rulemakings whose site energy savings that would <u>not</u> exceed any one of the alternative thresholds and thereby be deemed not "significant," one can compare the aggregate site energy savings represented by those rulemakings to the total site energy savings (54.638 quads) of the 57 rulemakings. Similarly, for those rulemakings that either do or do not result in "significant" energy savings, one can compare the average of those rulemakings to the average or median energy savings of the 57 rulemakings.

Herrington invites this sort of comparison when the court acknowledges that significance can be assessed both in terms of the energy savings resulting in an individual rulemaking while reminding that the cumulative effect of energy conservation standards is also relevant. But the cumulative effect of each rulemaking's energy savings cannot be without limits: if DOE had to recognize every incremental increase in cumulative energy savings from appliance efficiency rulemakings, no matter how small, it would read the word "significant" out of the statute and violate a major principle of statutory construction. This strongly counsels that the Secretary's discretion to establish a significance threshold involves a judgment of balance. We believe the balance can be determined by the types of comparisons that are outlined above.

One aspect of this balance, we believe, lies in DOE's proposal to rely on two components to the assessment of significance. If, for example, the site energy savings from a proposed rule is below the site energy savings threshold, it can still be deemed significant energy savings if the proposed rule represents a reduction in energy use for the covered product greater than or equal to ten percent.

In our judgment, historical energy savings are a reasonable, data-based guide to determine a level below which rules would not result in significant energy savings. As discussed above, the historical data presented by DOE show that between 0.40 and 0.75 quad or ten percent reduction in energy use over the analysis period, 34 of the 57 rules would have achieved significant energy savings using that definition. Although it may seem that a significance threshold should not deem almost half of the prior rules as having achieved only insignificant savings, it is critical to note that the rules that would be considered significant using that threshold achieved 93.87 percent of the total energy savings. **That fact is staggering—almost half of the historical rules** *collectively* accounted for a mere 6.13 percent of total savings. That fact supports only one conclusion: each of the individual rulemakings not reaching the significance threshold of 0.50 and ten percent achieved only insignificant savings. Such rules should not be permitted to move forward in the future. Thus, the Joint Commenters support DOE's proposed threshold of 0.50 quad in energy savings over a ten percent reduction in energy consumption over a 30-year analysis period to satisfy the requirement.⁸ We also note that a threshold of 0.75 quad in energy

⁷ DOE has done this in Table II.1. 84 F.R. at 36038-39.

⁸ As stated above, we note that our initial comments on the Process Rule proposed rule proposed that DOE adopt a 1.00 quad threshold. Those comments were based on the data presented at the time which was based on "source" energy. Were DOE to return to a measurement and threshold using "source" energy, we would retain our proposal that 1.00 quad is the appropriate quad threshold. But the new data

savings over a ten percent reduction in energy consumption over a 30-year analysis period would have achieved the same energy savings as the 0.5 quad threshold.

Product	Date of Final Rule	Energy Savings Period	Adopted Standard Site Energy Savings (quads)	Adopted Standard Site Energy % Savings
Packaged Terminal Air Conditioners and Heat Pumps	10/7/2008	30	0.009	4%
Ceiling fan light kits	1/6/2016	30	0.016	3%
Pool heaters	4/16/2010	30	0.018	1%
Commercial clothes washers	12/15/2014	30	0.044	7%
Single package vertical air conditioners and heat pumps	9/23/2015	30	0.05	4%
Automatic commercial ice makers	1/28/2015	30	0.063	8%
Commercial pre-rinse spray valves	1/27/2016	30	0.065	8%
Dishwashers	5/30/2012	30	0.07	2%
Dehumidifiers	6/13/2016	30	0.1	7%
Commercial and industrial pumps	1/26/2016	30	0.105	0.9%
Electric gas & kitchen ranges & ovens	4/8/2009	30	0.13	4%
Residential Boilers	1/15/2016	30	0.137	0.6%
Room air conditioners	4/21/2011	30	0.15	6%
Room air conditioners	9/24/1997	30	0.17	3%
Residential Clothes Dryers	4/21/2011	30	0.19	3%
Direct heating equipment	4/16/2010	30	0.19	3%
Metal halide lamp fixtures	2/10/2014	30	0.2	3%
Commercial warm air furnaces	1/15/2016	30	0.2	0.8%
Furnaces and boilers	11/19/2007	24	0.24	0.2%
Walk-in cooler and freezers	7/10/2017	30	0.29	8%
Residential Clothes Washers	5/14/1991	23	0.29	5%
Small gas furnace	11/17/1989	24	0.3	0.2%
Residential clothes dryers	5/14/1991	23	0.32	6%
Total quads savings	3.347			
Total quads savings as percent of site energy savings (54.638 quads) in all 57 rulemakings	6.1%			
Total quads savings not affected from	51.291			

Table II.1 in the NODA reveals that 34 of 57 rules would meet this threshold. 84 F.R. at 36038. The 23 rules (of the 57) that would not have met this combined threshold include:

in this NODA are in terms of "site" energy and, based on those calculations, we support DOE's proposed 0.5 quad threshold proposal.

34 rules that would pass threshold		
Total quads savings not impacted as percent of site energy savings in all 57 rulemakings	93.9%	
Average site energy savings per rulemaking in 23 rulemakings that would not pass threshold	0.146 quads	
Average site energy savings per rulemaking from 34 rules that would pass threshold	1.51 quads	

In the aggregate, 3.347 quads of energy over 30 years represent a savings of approximately 980 billion kilowatt hours of electricity over 30 years.⁹ According to the Energy Information Agency (EIA), the United States produced approximately 4.18 trillion kWh of electricity in 2018 alone.¹⁰ If we were to assume conservatively that U.S. electricity production remained relatively stable or flat over the next 30 years (which is consistent with current trends but may not be in the future) and continued to produce 4.18 trillion kilowatt hours of electricity a year, that would total 125.4 trillion kilowatt hours of electricity production over 30 years. The estimated electricity savings represented by 3.347 quads of energy over 30 years would represent 0.78 percent of cumulative electricity production over the same period in this example. In our view, the aggregate energy savings would not be meaningful in terms of reducing electricity generation will grow to 5.335 trillion kilowatt hours by 2048,¹¹ and 667 billion kilowatt hours of cumulative electricity savings during that time period would represent an even smaller percentage of cumulative electricity production than the conservative scenario posited above.¹²

In contrast, the 51.291 quads of collective energy savings over 30 years from the 34 rules not impacted by the thresholds represent a savings of approximately 15.0 trillion kWh of electricity over 30 years. This represents almost 3 years of annual U.S. electricity production over the next 30 years. Under the stable, flat scenario posited in the previous paragraph, the estimated cumulative electricity savings from the 34 rules not impacted over the next 30 years would represent 12 percent of cumulative electricity production over the same period. Under the growth scenario posited in the previous paragraph, the estimated cumulative electricity savings

⁹ http://extraconversion.com/energy/quads/quads-to-kilowatt-hours.html

¹⁰ <u>https://www.eia.gov/tools/faqs/faq.php?id=427&t=3</u>

¹¹ <u>https://www.eia.gov/outlooks/aeo/data/browser/#/?id=8-AEO2019®ion=0-</u>0&cases=ref2019&start=2017&end=2050&f=A&linechart=&sourcekey=0

¹² The EIA data in footnote 11, supra, shows cumulative net electricity production of 141.392 trillion kilowatt hours from 2019-2048. 667 billion kilowatt hours of electricity savings represents 0.47% of net electricity production over the 30-year timeframe. We view this percentage as not meaningful.

from the 34 rules not impacted over the next 30 years would represent 9.4% of cumulative electricity production over the same period. We view those percentages as meaningful.

Having examined these rules below a threshold collectively and finding a reasonable basis for setting a minimum energy savings that is "significant" and "meaningful" consistent with congressional intent, it goes without saying that individually the rules with projected site energy savings below the threshold are not meaningful either. For example, 0.29 quads of energy savings over 30 years represents nearly 85 billion kilowatt hours of electricity during that 30-year period. That 30-year figure represents 2/100 of the 4.18 trillion kilowatt hours of net electricity generation in one year (2018) or about one week of electricity generation. Under the stable, flat scenario posited above, the estimated cumulative electricity savings from 0.29 quads of energy savings over the next 30 years would represent less than 7 ten thousandth of a percent (.0677%) of cumulative electricity production over the same period. Under the growth scenario posited in the previous paragraph, the estimated cumulative electricity savings from 0.29 quads of energy savings over the next 30 years would represent less than 6 ten thousandths of a percent (.0601%) of cumulative electricity production over the same period. These percentages are not meaningful in terms of reducing electricity production over the next 30 years.

The foregoing recommends that establishing a minimum threshold for "significant" conservation of energy at 0.50 quads of site energy savings (over 30 years) combined with a minimum ten percent reduction in energy use over the analysis period is reasonable and consistent with congressional intent. We submit that this balance "reasonably accommodates the policies of the Act." *Herrington*, 768 F.2d at 1377.

Accordingly, we support DOE's proposal to apply a threshold of 0.50 quad in energy savings or a ten percent reduction in energy consumption over a 30-year analysis period as a threshold for "significant conservation of energy" under EPCA.

The Joint Commenters

AHRI is the trade association representing manufacturers of heating, cooling, water heating, and refrigeration equipment. More than 300 members strong, AHRI is an internationally recognized advocate for the industry and develops standards for and certifies the performance of many of the products manufactured by our members. In North America, the annual output of the HVACR and water heating industry is worth more than \$44 billion. In the United States alone, the HVACR and water heating industry supports 1.3 million jobs and \$256 billion in economic activity annually.

AHAM represents manufacturers of major, portable and floor care home appliances, and suppliers to the industry. AHAM's more than 150 members employ tens of thousands of people in the U.S. and produce more than 95% of the household appliances shipped for sale within the U.S. The factory shipment value of these products is more than \$30 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.

NEMA represents nearly 350 electrical equipment and medical imaging manufacturers that make safe, reliable, and efficient products and systems. Our combined industries account for 360,000 American jobs in more than 7,000 facilities covering every state. Our industry produces \$106 billion shipments of electrical equipment and medical imaging technologies per year with \$36 billion exports.

PMI is the nation's leading trade association for plumbing product manufacturers. Its members produce 90 percent of the plumbing products sold in the United States and employ thousands of workers in over 70 locations in 25 states. Our member companies' plumbing products are found in the majority of homes, commercial buildings, schools, restaurants, manufacturing facilities, hospitals, and hotels across the nation. Examples of these products include, but are not limited to kitchen and bathroom faucets, toilets, showerheads, urinals, fixture fittings, sinks, whirlpools/tubs, water fountains, and waste disposal systems. PMI member companies continue to raise the bar in developing the most advanced water-efficient plumbing products.

We thank the Secretary for publishing the Notice of Data Availability. It provided useful insight that can guide the Secretary's discretion to determine consistent with congressional intent what is "significant energy conservation" under section 6295 of EPCA.¹³ We would be glad to further discuss this matter if you so request.

 $^{^{13}}$ We would also note that this determination would guide petitioners who seek amendments of rules under section 6295(n)(2)(A).

Respectfully Submitted,

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