



October 12, 2021

To: Department of Energy

Re: Comments on the Proposed Interpretive Rule for Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters, EERE-2018-BT-STD-0018

The Institute for Policy Integrity at New York University School of Law (“Policy Integrity”)¹ submits these comments on the Department of Energy (“DOE”)’s proposed interpretive rule that non-condensing technology and associated venting are not performance-related features.² Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy.

In determining what product traits constitute features that warrant the creation of separate classes, DOE should:

- Interpret “performance-related features” to correspond with consumer utility, as separate from any cost considerations;
- Anticipate future technological developments that may resolve any potential issues of installation, cost, or utility; and
- Consider the benefits of fuel switching.

In finalizing the proposed interpretive rule, DOE should be careful not to make unnecessary statements about fuel switching that may hinder a future exploration of the full extent to which energy conservation standards under the Energy Policy and Conservation Act (“EPCA”) may encourage fuel switching. Therefore, DOE should:

- Excise from the final rule any unnecessary statement suggesting there might be some threshold for when fuel switching violates EPCA or DOE policy. This rulemaking and subsequent energy conservation standards will likely lead to only a moderate level of fuel switching (given the technological solutions available to use in the installation of condensing technology for gas-powered appliances), and so statements about hypothetical thresholds are unnecessary.
- Consider, in the future, whether the climate, public health, and indoor air quality effects from gas-fired appliances actually warrant more—not less—stringent energy conservation standards.

¹ This document does not purport to represent the views, if any, of New York University School of Law.

² 86 Fed. Reg. 48,049 (Aug. 27, 2021).

DOE’s Proposed Interpretive Rule Properly Returns the Focus of the “Performance-Related Feature” Inquiry to “Consumer Utility”

On January 15, 2021, DOE issued a final interpretive rule (“January 2021 Final Interpretive Rule”) determining that, “in the context of residential furnaces, commercial water heaters, and similarly-situated products/equipment, use of non-condensing technology (and associated venting) constitute a performance-related ‘feature’ under [EPCA] that cannot be eliminated through adoption of an energy conservation standard.”³ At that time, DOE supplied three reasons for its determination. DOE first asserted that, in some unspecified number of situations, use of non-condensing units would avoid “complicated installations” where space and other constraints would require building modifications to install a condensing unit.⁴ Second, DOE determined that, in some cases, use of non-condensing technology would avoid “significant and unwelcome” aesthetic changes to a home or business necessitated by installation of a condensing unit (*e.g.*, loss of patio or storage space).⁵ Finally, DOE stated that creating a separate product class for non-condensing units would prevent fuel switching and thereby further DOE’s policy of remaining fuel-neutral toward competing energy sources.⁶

DOE now proposes to revise its interpretation of “performance-related features” in this context and revert to its prior, longstanding approach. As explained below, the January 2021 interpretation was inconsistent with EPCA’s structure and lacked a reasoned justification, and so reverting to the prior understanding is appropriate.

Installation Complications (to the Extent They Exist) Are Considered as “Costs,” as Distinct from Utility

EPCA establishes consumer costs as a concept distinct from consumer utility. Regarding the former, EPCA requires DOE to conduct an extensive economic analysis of any proposed energy conservation standard.⁷ Among other factors, DOE is required to consider “the economic impact of the standard . . . on the consumers of the products subject to such standard.”⁸

Elsewhere, EPCA authorizes DOE to create separate product classes subject to higher or lower standards than would otherwise apply if DOE determines that covered products within such a class have a “performance-related feature” that “justifies” a different standard.⁹ In making this determination, the statute requires DOE to consider “the utility to the consumer of such a feature, and such other factors as [DOE] deems appropriate.”¹⁰ As with any other standard, DOE must conduct a comprehensive economic analysis of standards prescribed for separate product

³ 86 Fed. Reg. 4776, 4776 (Jan. 15, 2021).

⁴ *Id.* at 4816; *see also id.* at 4786 (“Although DOE does not have precise numbers in terms of the frequency of these difficult installation situations, . . . there are many.”).

⁵ *Id.* at 4816.

⁶ *Id.*

⁷ 42 U.S.C. § 6295(o)(2)(B)(i).

⁸ *Id.* § 6295(o)(2)(B)(i)(I).

⁹ *Id.* § 6295(q)(1)(B).

¹⁰ *Id.*

classes, including the economic impact on the product's consumers.¹¹ Thus, as DOE now acknowledges, importing pure consumer cost considerations into the utility analysis effectively amounts to double counting.¹² Instead of this economically dubious approach, EPCA strongly suggests that DOE's analysis of a performance-related feature's utility should center on impacts not already reflected in the consumer cost analysis.

Consistent with this distinction, DOE has long carried out its statutory mandate by focusing on the utility of a "performance-related feature"—as distinct from its cost impact—when determining whether to create a separate product class.¹³ DOE has steadfastly acknowledged that, historically, it has "determin[ed] utility through the value the item brings to the consumer" "based on user operation and interaction with the product," not by "analyzing . . . costs that anyone, including the consumer, . . . may bear."¹⁴

Complicated installations are an issue of cost, and do not affect consumer utility beyond the scope of economic impact. To the extent these situations exist and necessitate building modifications or other expenditures,¹⁵ consumers who choose to undertake¹⁶ these costs to install gas furnaces using condensing technology are making an economic decision that, subsequent to the installation, does not further affect their experience operating or interacting with the product. These impacts are properly considered under DOE's cost-benefit analysis, and any avoidance of such economic impacts that would result from use of non-condensing technology does not constitute a special utility.¹⁷

¹¹ *Id.* § 6295(o)(2)(A) (requiring "any new or amended energy standard . . . for any type (or class) of covered product" to be economically justified).

¹² 86 Fed. Reg. at 48,054.

¹³ *Id.* at 48,051.

¹⁴ *Id.*; *see also* 86 Fed. Reg. at 4780.

¹⁵ The administrative record for the January 2021 Final Interpretive Rule contained scarce evidence regarding the extent of these difficult situations. *See* 86 Fed. Reg. at 4786 ("DOE does not have precise numbers in terms of the frequency of these difficult installation situations."); *see also* 86 Fed. Reg. at 48,055–56 ("DOE would add furthermore that it has tentatively concluded that it gave undue weight to [Industry Petitioners' complicated installation] arguments, which were largely based upon anecdotal accounts and limited installer survey data . . . [and] were not accompanied by sufficient evidence to establish the existence or magnitude of the alleged problem."). DOE now acknowledges that there exist "technological solutions for most difficult installation situations." 86 Fed. Reg. at 48,054.

¹⁶ Of course, consumers are also free to avoid these installation issues by switching to electric appliances that will deliver the same heat.

¹⁷ *See, e.g.,* Residential Boilers Final Rule, 81 Fed. Reg. 2320, 2339 (Jan. 15, 2016) ("DOE maintains its position from the NOPR and reiterates that the utility derived by consumers from boilers is in the form of the space heating function that a boiler performs, rather than the type of venting the boiler uses. Condensing and non-condensing boilers perform equally well in providing this heating function. Likewise, a boiler requiring Category I venting and a boiler requiring Category IV venting are capable of providing the same heating function to the consumer, and, thus, provide virtually the same utility with respect to their primary function. DOE does not consider reduced costs associated with Category I venting in certain installations as a special utility, but rather, as was done in the March 2015 NOPR, the costs were considered as an economic impact on consumers that is considered in the rulemaking's cost-benefit analysis. DOE does not agree with Burnham's assertion that costs can become so prohibitively expensive that they should be considered a loss of utility of the product. Rather, the larger expense should be considered as an economic impact on consumers in the rulemaking's cost-benefit analysis and ultimately the analysis will determine if a cost is economically prohibitive.").

Aesthetically Unobjectionable Installations Would Remain “Available” Even if Non-Condensing Technology Were Eliminated, and DOE Has Discretion To Anticipate Technological Developments and Fuel Switching That Will Obviate Any Aesthetic Concerns

The January 2021 Final Interpretive Rule also relied on aesthetic considerations in determining that use of non-condensing technology constitutes a “performance-related feature” under Section 6295(o)(4).¹⁸ Specifically, DOE previously concluded that non-condensing technology constitutes a feature because (as compared with condensing technology) use of non-condensing technology could avoid unattractive piping through a commercial or residential space, or the loss of patio, window, or storage space.¹⁹

As an initial matter, DOE now acknowledges that it lacks “definitive evidence regarding the extent of . . . [the] loss of usable residential or commercial space” that might result from standards based on condensing technology.²⁰ DOE has certainly never contended that, in every instance where a condensing unit might have been installed, installation of a non-condensing unit instead would preserve relatively more usable space. Indeed, the January 2021 Final Interpretive Rule’s strongest statement regarding the extent of aesthetic concerns was that use of non-condensing technology could obviate some unwelcome aesthetic changes “in at least some cases.”²¹ The corollary is that while there may be some undefined, limited number of cases in which installation of a condensing unit could result in the loss of some usable space, *in all other cases*, such installation would *not* result in the loss of usable space. In other words, the potential unavailability of a unit using non-condensing technology would not result in any significant disutility for many if not most consumers. Furthermore, it follows that this second rationale depends upon characterizing *the aesthetic aspect of a non-condensing unit in certain situations* (*i.e.*, that limited number of situations in which installation of a condensing unit would result in aesthetic disutility) as the relevant feature, not the non-condensing technology itself. Those consumers who could install a condensing unit without experiencing a loss of usable space or other aesthetic disutility would derive no special utility from a furnace using non-condensing technology.

Setting aside the lack of evidence regarding the extent of these aesthetic issues and assuming that they even exist to some meaningful degree, DOE has discretion to anticipate technological developments and consider whether future technology could resolve these concerns. Here, DOE has, consistent with its historic position, determined that technological solutions exist “for most difficult installation situations.”²² Moreover, again assuming that aesthetic concerns exist to some meaningful degree, DOE now rightly notes that consumers can avoid this aesthetic

¹⁸ 86 Fed. Reg. at 4618.

¹⁹ *Id.* at 4793–94, 4796, 4811, 4816.

²⁰ *See* 86 Fed. Reg. at 48,054; *see also* 86 Fed. Reg. at 4786 (referring to situations in which “replacement of an appliance necessitates additional piping or venting in the usable space of a home or business, major modifications to a utility room, or encroachment upon an existing window or patio” and stating that “DOE does not have precise numbers in terms of the frequency of these difficult installation situations”).

²¹ 86 Fed. Reg. at 4816.

²² 86 Fed. Reg. at 48,054; *see also id.* at 48,055 (“It has been DOE’s historic position that there is a technological solution to accommodate virtually all of the difficult installation situations involving gas-fired appliances, although some might be costly.”).

disutility (*i.e.*, any unsightly venting or loss of usable space) simply by switching to electric-based heating.²³

Importantly, EPCA prohibits DOE from prescribing a standard only if it would render a performance-related feature “unavailab[le].”²⁴ As discussed above, the relevant feature under the aesthetic rationale is not the non-condensing technology itself, but rather the ability of non-condensing units to obviate unwelcome aesthetic changes *in those limited circumstances* where installation of a condensing unit would necessitate such changes. The aesthetic rationale therefore fails to support the creation of a separate class for non-condensing units, because even if a standard based on condensing technology eliminated furnaces using non-condensing technology, aesthetically unobjectionable installations would remain “available” in all but a limited number of cases.²⁵ Moreover, the subset of consumers who would face aesthetically undesirable installations of condensing units maintain the option of relying on technological solutions or switching to a heat based on a different fuel source to avoid those unwelcome changes, and could thereby maintain the aesthetic of their space.

Possible Consumer Preference for Gas Has Not Been Proven and, under the Statute, Does Not Justify Creating Subclasses for Each Gas-Related Installation Type

Finally, the January 2021 Final Interpretive Rule claimed that DOE’s policy of remaining fuel-neutral supported its determination that non-condensing technology constitutes a performance-related feature.²⁶ This rationale makes sense only if there exist consumers who hold a preference for heating based on natural gas as opposed to other fuel sources. DOE lends credence to this assumption in the instant proposal, stating that consumers will choose to incur the cost of technological solutions for installation of condensing units “[i]f the consumer’s affinity for gas-fueled appliances is sufficiently high to warrant their continued use.”²⁷ However, neither the January 2021 Final Interpretive Rule nor the instant proposal point to any evidence that such a preference actually exists, and, in a similar context, DOE has held that consumers are indifferent to the means by which their heat is provided.²⁸ Without evidence of how many consumers prefer gas, why they might seem to prefer gas,²⁹ or their hypothetical valuation of gas, DOE should not speculate in this rulemaking about consumer affinity for gas.

We also note here that fuel type is not itself a performance-related feature: EPCA distinguishes energy consumption as distinct from “capacity or other performance-related

²³ 86 Fed. Reg. at 48,055–56.

²⁴ 42 U.S.C. § 6295(o)(4).

²⁵ 86 Fed. Reg. at 4816 (stating merely that “*in at least some cases*, a condensing appliance may necessitate significant and unwelcome physical modifications to a home or business” (emphasis added)).

²⁶ 86 Fed. Reg. at 4816.

²⁷ 86 Fed. Reg. at 48,055.

²⁸ See Heat Pump Water Heaters, 73 Fed. Reg. 20,112, 20,135 (Apr. 16, 2010) (“DOE does not believe heat pump water heaters provide a different utility from traditional electric resistance water heaters. Heat pump water heaters provide hot water to a residence just as a traditional electric storage water heater does.”).

²⁹ For example, to the extent that any such hypothetical preference is based on incomplete or inaccurate information, or due to some other market failure, it is not clear that DOE should act based on preferences that may not actually be tied to real consumer welfare.

feature[s]”³⁰ and does not list energy type among the product traits that standards may not make “unavailabl[e].”³¹ Even assuming that somewhat limiting consumers’ options for a particular fuel type somehow lessens consumer utility, such an effect does not justify creating subclasses for each gas-related installation type. Rather this effect should be balanced against other key factors when setting energy standards, including the need to conserve energy³² and the public health and environmental consequences of combusting different fuel types.³³

DOE’s Proposal Includes Several Unnecessary Statements Regarding “Fuel Switching” That Should Be Excised

As highlighted above, DOE’s proposal correctly notes that consumers can resolve any hypothetically difficult installation situations or avoid any hypothetical aesthetic disutility that might be associated with installation of condensing units by replacing their gas-fired furnace with an electric heat source.³⁴ In the course of this discussion, however, DOE also adds that: “Nothing in EPCA precludes such [fuel-switching effects], *as long as DOE’s standard would not eliminate the appliance of that fuel type entirely*, and in this case, maintaining non-condensing and condensing units under a single class of product or equipment would not eliminate the availability of natural gas, propane, or other fuel type models from the U.S. market.”³⁵ The emphasized language above—implying that EPCA might be offended by some level of fuel switching in this context—is unnecessary and should be excised.

DOE fails to point to any statutory language or provision that would support this implied limit on fuel switching. Indeed, in the passage that immediately follows the quoted language above, DOE acknowledges that, “while EPCA recognizes that various fuel types exist in the appliance marketplace and provides certain protections, it does not directly address fuel switching or mandate that DOE take regulatory action to preclude such marketplace effects.”³⁶ DOE has failed to explain how, if EPCA does not directly address fuel switching in this context, there exists some statutory cap on the permissible level of this effect.

Examination of EPCA’s standards for small gas furnaces underscores the statute’s silence on fuel switching in the residential furnaces context. When DOE establishes an energy conservation standard for small gas furnaces, EPCA explicitly requires DOE to determine that the standard “is not likely to result in a significant shift from gas heating to electric resistance heating with respect to either residential construction or furnace replacement.”³⁷ As others have noted, Congress could have easily added a similar limit on DOE’s standard-setting authority in the

³⁰ Compare 42 U.S.C. § 6295(q)(1)(A) with *id.* § 6295(q)(1)(B).

³¹ *Id.* § 6295(o)(4) (listing features, sizes, capacities, and volumes, but not energy type).

³² *Id.* § 6295(o)(2)(B)(i)(VI).

³³ See *Zero Zone, Inc. v. Dept. of Energy*, 832 F.3d 654, 677 (7th Cir. 2016) (concluding that environmental cost “needs to be taken into account”).

³⁴ 86 Fed. Reg. 48,055–56.

³⁵ *Id.* at 48,056 (emphasis added).

³⁶ *Id.*

³⁷ 42 U.S.C. 6295(f)(1)(B)(iii).

residential furnaces context—but it did not.³⁸ Moreover, this statutory language would be superfluous if EPCA already contained some limit on the permissible level of fuel switching.³⁹ That Congress added this fuel-switching limit only for small furnaces further undermines DOE’s suggestion that, at a certain level, EPCA bars fuel switching in the residential furnaces context.

Ultimately, DOE’s unsupported assertion that EPCA bars some level of fuel switching is unnecessary to make in this rulemaking. For purposes of this rulemaking, it is enough for DOE to acknowledge that a standard based on condensing technology may induce *some* consumers to switch from gas to a different fuel source to avoid difficult installation situations, but that “[n]othing in EPCA precludes” such a standard.⁴⁰ It is not necessary to speculate in the context of this rulemaking whether some greater level of fuel switching caused by some other standard might be precluded. In sum, DOE should delete from its final rule any unnecessary language implying that EPCA bars some level of fuel switching.

Other language in the proposal is similarly problematic. The proposal notes that DOE has historically “adhere[d] to a policy of fuel neutrality” in setting standards and repudiates DOE’s prior suggestion that a rule that results in fuel switching violates the fuel neutrality principle.⁴¹ In the course of doing so, however, DOE asserts that “[t]he appropriate threshold for when fuel switching violates the fuel neutrality principle requires a degree of fuel switching that is much greater than typically found in DOE energy conservation standards rulemakings.”⁴² This assertion stands the concept of fuel neutrality on its head. It suggests that an energy conservation standard otherwise developed in accordance with the requisite statutory considerations might nonetheless require modification to counteract or mitigate potential negative market impacts on a particular fuel source. But crafting or modifying a standard to preserve a particular fuel’s stature or existence in the market demonstrates a *preference* toward that fuel, not *neutrality*.⁴³

DOE’s assertion is also wholly unnecessary. This rulemaking does not require DOE to hypothesize the existence of a threshold for fuel switching that might violate some alleged bar in EPCA or DOE’s historical approach to fuel neutrality. Rather, it is sufficient in this rulemaking for DOE to conclude, as it has, that fuel switching would occur only “in a small number of

³⁸ See Nat. Res. Def. Council, Sierra Club & Earthjustice, Comments on “Energy Conservation Program for Appliance Standards: Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters,” 84 Fed. Reg. 33,011 (July 11, 2019), Docket No. EERE-2018-BT-STD-0018-0090 (Sept. 9, 2019), at 4–5, https://downloads.regulations.gov/EERE-2018-BT-STD-0018-0090/attachment_1.pdf.

³⁹ See *id.* at 5 (“The language of section [6295](f)(1)(B)(iii) has independent effect only to the extent that section [6295](o)(4) does not prohibit furnace standards that result in a significant amount of fuel-switching to electric heating products.”).

⁴⁰ 86 Fed. Reg. at 48,056.

⁴¹ *Id.*

⁴² *Id.*

⁴³ See, e.g., A.O. Smith Corporation, Comments on the Notice of Proposed Interpretive Rule on the Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters; Granting in Part and Denying in Part a Petition for Rulemaking, Docket No. EERE-2018-BT-STD-0018-0088 (Sept. 9, 2019), at 9 (“[B]y insulating non-condensing water heaters from standards, the Department is picking winners and losers in the water heater market—at the expense of consumer benefits and savings from higher-efficiency appliances.”), https://downloads.regulations.gov/EERE-2018-BT-STD-0018-0088/attachment_1.pdf.

cases.”⁴⁴ Thus, DOE should delete as unnecessary any language suggesting that some level of fuel switching would offend EPCA or DOE policy.

Finally, going forward, DOE should consider the full extent of its flexibility and discretion under subsection (q) to set standards based on fuel type. EPCA instructs DOE to consider whether, based on consumer utility and other “appropriate” factors, a “higher or lower” efficiency standard is warranted for certain classes of produced based on their kind of energy.⁴⁵ Notably, this provision does not specify which types of energy should correspond to higher or lower efficiency standards; does not say how different such standards need to be from each other; and gives DOE flexibility to consider any “appropriate” factors. DOE might, for example, consider the costs to climate change, public health, and indoor air quality caused by the methane and VOC emissions associated with gas-fired appliances and determine that such factors warrant a *more* stringent energy conservation standard for gas-fired appliances.

Respectfully submitted,

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⁴⁴ See 86 Fed. Reg. at 48,056.

⁴⁵ 42 U.S.C. § 6295(q)(1); *see also id.* § 6295(q)(2) (instructing DOE to explain “the basis” for such “higher or lower” standards).