

**UNITED STATES OF AMERICA
BEFORE THE
DEPARTMENT OF ENERGY**

Energy Conservation Program for)	
Appliance Standards: Energy)	EERE-2018-BT-STD-0018
Conservation Standards for)	RIN 1904-AE39
Residential Furnaces and)	
Commercial Water Heaters)	

**COMMENTS OF THE
AMERICAN GAS ASSOCIATION**

Dated: October 12, 2021 [**DRAFT**]

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DRAFT

I. INTRODUCTION

Pursuant to the Department of Energy’s (“DOE” or “Department”) August 27, 2021 notice of proposed interpretive rulemaking regarding the Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters (“the Proposal”),¹ the American Gas Association (“AGA”) respectfully submits these comments.

In response to a rulemaking petition submitted by AGA, the American Public Gas Association, the Natural Gas Supply Association, the National Propane Gas Association, and Spire Inc., the Department issued a final rule in January 2021² determining that, “in the context of residential furnaces, commercial water heaters, and similarly-situated products/equipment, use of non-condensing technology (and associated venting) constitutes a performance-related ‘feature’ under the Energy Policy and Conservation Act (“EPCA” or “Act”) that cannot be eliminated through adoption of an energy conservation standard.”³ The Proposal seeks comments on the Department’s intention to revoke the January 2021 Final Rule and issue an new

¹ *Energy Conservation Program for Appliance Standards: Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters*, 86 Fed. Reg. 48,049 (Aug. 27, 2021).

² *Energy Conservation Program for Appliance Standards: Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters*, 86 Fed Reg. 4776 (Jan. 15, 2021) (“January 2021 Final Rule”).

³ Proposal at 48,052.

interpretive rule determining that “non-condensing technology (and the associated venting) does not provide unique utility to consumers separate from an appliance’s function of providing heated air or water, as applicable.”⁴

For the reasons stated below, AGA opposes the recent Proposal and supports DOE’s January 2021 Final Rule. The Proposal would render non-condensing natural gas furnaces, commercial water heaters, and boilers unavailable to millions of Americans whose homes and businesses cannot accommodate the alternative, condensing appliances without major renovation.⁵ These comments show that: (1) the text, structure, and context of Sections 6295(o)(4), 6295(q)(1), and 6313(a)(6)(B)(iii)(II) of EPCA foreclose the Department’s proposed reinterpretation; (2) the January 2021 Final Rule’s interpretation is consistent with the Department’s past application of the statute and the proposed change, for these classes of covered products, represents an arbitrary, unjustified shift; and (3) the record supports maintaining the January 2021 Final Rule’s interpretation, but not the Proposal—it would therefore be arbitrary and capricious to finalize it.

II. IDENTITY AND INTEREST

The American Gas Association, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States.

⁴ *Id.* at 48,053.

⁵⁵These comments refer to natural gas furnaces, commercial water heaters, and boilers as “appliances,” but the term “appliances” should be viewed as interchangeable with “products” or “covered products” in this context.

There are more than 76 million residential, commercial and industrial natural gas customers in the U.S., of which 95 percent — more than 72 million customers — receive their gas from AGA members. AGA is an advocate for natural gas utility companies and their customers and provides a broad range of programs and services for member natural gas pipelines, marketers, gatherers, international natural gas companies, and industry associates. Today, natural gas meets more than thirty percent of the United States' energy needs.

AGA's members serve residential and commercial customers, the majority of which use natural gas furnaces, boilers and/or water heaters, and therefore have a direct and vital interest in both the minimum efficiency standards for these products and the procedures used by DOE to adopt these standards. The Interpretive Rule is integral to DOE's rulemaking process, therefore reforms to the Interpretive Rule can and will have meaningful impacts on DOE's rulemakings to establish new minimum efficiency standards. AGA encourages the adoption of efficiency standards and related policies only after consideration of all relevant points of view, including the distributors of natural gas, whose desire for the efficient use of natural gas is matched only by their commitment to ensure minimum standards do not distort consumers choices away from natural gas to other less efficient and more costly fuel sources.

III. Background

A. Non-condensing and condensing natural gas heating products

Many conventional natural gas heating and cooling products, such as furnaces, commercial water heaters, and boilers, in American homes and businesses are designed for use with atmospheric venting systems. Atmospheric venting systems allow the exhaust gases that are under negative pressure, produced in combustion to exit a building through a vertical or nearly vertical chimney or conduit using the heat and buoyancy of the gases to carry them outside. Atmospheric venting has been used in the United States for generations and remains the primary exhaust gas venting system in millions of homes, apartments, and businesses.

Natural gas products that use condensing combustion technology can achieve higher measured efficiencies than conventional or “non-condensing” products, but they are not compatible with conventional atmospheric venting systems because they discharge the products of combustion with positive pressure in the venting system. Condensing products increase thermal efficiency by extracting additional heat from the combustion gases before they are vented. This increases the efficiency of the products but creates two conditions that are significantly different than non-condensing products. First, the condensing process generates cooler exhaust gases that lack sufficient buoyancy to exit a building through an atmospheric venting system and as noted above cannot be “common vented” with an atmospheric (non-positive) venting systems. There are literally millions of installations throughout the

United States that have two or even 3 vented gas appliances common vented into a single chimney or vent. Second, the condensing process generates liquid condensate that must be disposed. Because of these conditions, condensing products require positive pressure venting—generally through a horizontal conduit, powered by a fan or other additional electronic device—to generate sufficient pressure and flow to vent the gases. They also require plumbing systems to dispose of the condensate.

Condensing products can be a cost effective and efficient solution for many consumers. But they are incompatible with millions of homes and workplaces. As noted, American buildings have been using atmospheric venting for generations.⁶ Millions of homes, townhomes, apartment buildings, offices, and other commercial buildings were built with utility closets, chimneys, and conduits designed for this technology. And non-condensing furnaces have the unique ability to share a common atmospheric vent with other non-condensing products, like non-condensing water heaters. The heat and volumes of gases combine to create the conditions necessary to carry the gases out of the building without powered positive pressure systems. And many of these structures lack existing plumbing systems to dispose of the condensate.

⁶ For example, Energy Information Agency data shows that “more than half of all commercial buildings were constructed before condensing commercial water heaters were introduced to the market.” Energy Conservation Program for Appliance Standards: Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters: Proposed rule, 84 Fed. Reg. 33,011, (July 11, 2019).

As a result, condensing products are unusable without major modifications to these buildings. To install a condensing product, the homeowner or business must also restructure its exhaust system and purchase and install the equipment necessary to create positive pressure. The homeowner or business must also install plumbing to deal with the condensate. In the event the homeowner or business also has an atmospherically vented water heater, which is often the case, the homeowner or business must also replace that water heater that does not rely on atmospheric venting and install the necessary venting and plumbing system to accommodate the new water heater.

There is no commercially available condensing natural gas furnace, commercial water heater, or venting technology that offers a feasible solution for homes and buildings architecturally designed around combined atmospheric venting systems. Homeowners and businesses wishing to install condensing units must make the modifications to their buildings, venting systems, and plumbing noted above. As such, non-condensing units provide an important feature to millions of homes and businesses: they work with the homeowner or business's existing utility structure.

B. Rulemaking history

Subchapter III of EPCA, 42 U.S.C. §§ 6291-6309, governs energy conservation standards for various "covered products," including furnaces, water heaters, and boilers. As elaborated more below, Congress established efficiency

standards for those products in the statute and authorized the Department to amend those standards under certain conditions. Among other things, the Act contemplates setting separate standards for different “classes” of covered product that perform the same or similar purpose, where they have “performance-related features,” useful to consumers, which justify a higher or lower standard than others in their category.⁷ In addition, the Act prohibits the Department from issuing standards “likely to result in the unavailability in the United States of any product type (or class) of performance characteristics (including reliability, features, sizes, capacities, and volumes) that are substantially the same as those generally available in the United States.”⁸ And it applies a fuel neutrality approach to the standards, meaning that products are treated differently based on whether they run on electricity, natural gas, or oil, and the standards should not require consumers to switch from one fuel to another.⁹

In 2015 and 2016, the Department proposed amendments to the energy conservation standards for furnaces, commercial water heaters, and boilers “that would effectively require products/equipment in certain classes to use condensing technology to meet the amended standards.”¹⁰ The Department has noted that “the

⁷ 42 U.S.C. § 6295(q)(1)(B).

⁸ *Id.* § 6295(o)(4).

⁹ *Id.* § 6295(q)(1)(A)

¹⁰ 86 Fed. Reg. at 48,052

amended standards would have effectively eliminated all non-condensing products/equipment that are current on the market in those classes.”¹¹ In notices for the proposed amendments the Department tentatively concluded that venting systems and condensing/non-condensing technology did not provide a basis for making separate equipment classes, despite comments supporting the contrary conclusion.¹²

In October 2018, the AGA, American Public Gas Association, the Natural Gas Supply Association, the National Propane Gas Association, and Spire Inc., filed a petition for a rulemaking asking the Department to issue an interpretative rule (1) “confirming that energy conservation standards effectively limit the market for natural gas and/or propane gas . . . furnaces or water heaters to products using condensing combustion technology would result in the unavailability of “performance characteristics” within the meaning of [EPCA]” and (2) withdrawing its proposed standards for residential furnaces and commercial water heaters on the grounds that, among other things, the “performance-related features” of non-condensing units warranted separate standards.¹³

¹¹ *Id.*

¹² *See id.*

¹³ Petition for Rulemaking (Oct. 18, 2018), Doc. no. 2018-BT-STD-0018-0063, *available at* <https://www.regulations.gov/document/EERE-2018-BT-STD-0018-0063>.

After publishing a proposed rule granting the petition and an alternative proposed rule, and after considering the comments and extensive data presented in the record, the Department issued a final interpretive rule on January 15, 2021, granting the petition (“January 2021 Final Rule”). The January 2021 Final Rule determined that “in the context of residential furnaces, commercial water heaters, and similarly-situated products/equipment, use of non-condensing technology (and associated venting) constitutes a performance-related “feature” under EPCA that cannot be eliminated through adoption of an energy conservation standard.”¹⁴ The Department further made relevant factual finding supporting this conclusion, and withdrew the proposed amendments to the standards from 2015 and 2016.

The Department now proposes to “revise” its interpretation. The Department proposes to revive its interpretation from 2015 and 2016 and takes its tentative conclusion that “utility is determined through the benefits and values the feature provides to the consumer while interacting with the product,” not through analyzing whether the product provides utility to homeowners and businesses by functioning in their homes and businesses without requiring renovation.¹⁵

IV. COMMENTS

¹⁴ 86 Fed. Reg. at 48,052.

¹⁵ *Id.* at 48,053.

For the reasons stated below and in the Department's own January 2021 Final Rule, the proposed revision and interpretation is inconsistent with the text, structure, and context of the relevant EPCA provisions and the Department's historical application of EPCA. It would be arbitrary, capricious, and contrary to law for the Department to finalize its interpretation and to rescind the January 2021 Final Rule. The Proposal should be withdrawn.

A. EPCA Sections 6295(o)(4), 6295(q)(1), and 6313(a)(6)(B)(iii)(II) foreclose the proposed reinterpretation.

The Proposal seeks comment on the Department's new interpretation of what constitutes a "performance-related feature" under EPCA. Specifically, the Proposal states that, "in the context of residential furnaces, commercial water heaters, and similarly-situated products or equipment, use of non-condensing-technology (and associated venting) is not a performance-related 'feature' under Sections 6295(o)(4) and 6313(a)(6)(B)(iii)(II)(aa).¹⁶ But a performance-related feature is at least a characteristic that renders a product useful for its intended use and allows the Department to differentiate that product from others. Condensing and non-condensing technologies provide important performance-related features that can determine whether they will work with existing home and business utility infrastructure or require major renovation. And under this new interpretation, the

¹⁶ 86 Fed. Reg. at 48,053.

Department could consider issuing energy conservation standards for furnaces and water heaters that “would effectively require products/equipment . . . to use condensing technology to meet the standards” and “would . . . effectively eliminate all non-condensing products/equipment” from the market.”¹⁷

This new interpretation and its effects would disregard important considerations mandated by the statute. The Proposal is incompatible with EPCA.

- i. EPCA’s text, structure, and context shows that “performance-related features” include features that make the equipment compatible with its intended use.**

EPCA, among other things, created energy conservation standards for specific “covered products,” including furnaces, boilers, and water heaters.¹⁸ “Energy conservation standards” are a type of “performance standard which prescribes a minimum level of energy efficiency or maximum quantity of energy use,” for a covered product.¹⁹

Congress itself prescribed the initial energy conservation standards that it deemed appropriate for furnaces, boiler, and water heaters, in Section 6295.²⁰ Those energy conservation standards either specified efficiency rates for the covered products or directed DOE to set standards at or around a congressionally specified

¹⁷ *Id.* at 48,052.

¹⁸ 42 U.S.C §§ 6291(2), 6292(4)-(5), & 6295(a), (e), (f).

¹⁹ *Id.* § 6291(6).

²⁰ *See id.* § 6295(a), (e), (f).

efficiency level after making certain determinations. For example, Congress directed the Secretary to finalize standards for certain furnaces built after January 1, 1992 that mandated “annual fuel utilization efficiency . . . not less than 71 percent and not more than 78 percent” and “which the Secretary determines 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.”²¹ Importantly, Congress treated classes or categories of these products differently, recognizing that separate standards would be appropriate based on fuel and performance related features. For example, it established separate standards for gas, oil, and electric (among others).²²

Congress authorized the Department to amend the energy conservation standards to increase efficiency under certain circumstances.²³ Congress was careful, however, to ensure that the Department did not create amended standards that would eliminate a class of covered products or render them unworkable through infeasible or overly costly standards.

First, Congress mandated that the Department must determine that any amended standards it prescribes are both “technologically feasible and economically

²¹ *Id.* § 6295(f)(1)(B)(iii).

²² *Id.*

²³ *Id.* at § 6295(n), (o)

justified.”²⁴ Technological feasibility is a critical factor.²⁵ To be “technologically feasible,” a standard must be “capable of being carried out.”²⁶ That is, the class of covered products for which DOE promulgates amended energy conservation standards must actually be capable of complying with those standards.

Second, Congress specifically contemplated sub-categorizing covered products to allow increased efficiency standards for some products within a category, while preventing the regulations from eliminating the availability and utility of important consumer goods. Although Congress defined the specific categories of “covered products,” subject to energy conservation standards, such as “furnace” or “water heater,” it also recognized that developing “classes” of technologically comparable products was necessary to avoid driving useful products out of the market or limiting consumer choice. Congress refers throughout EPCA to the development of standards for each “class of covered products,” which means “a

²⁴ *Id.* § 6295(o)(2)(A).

²⁵ Economic justification is a separate consideration that requires the Department to determine that the “benefits of the standard exceed its burdens” after considering (i) “the economic impact of the standard on the manufacturer’s and on the consumers of the products subject to such standard;” (ii) “the savings in operating costs throughout the estimated average life of the covered product in the type (or class) compared to any increase in the price” or operating and maintenance costs for the covered products; (iii) the total projected amount of energy” likely to result from the standard; (iv) “any lessening of the utility or performance of the covered products” from the standard; and other factors. *Id.* § 6295(o)(2)(B).

²⁶ *United Steelworkers of Am., AFL-CIO-CLC v. Marshall*, 647 F.2d 1189, 1266 (D.C. Cir. 1980).

group of covered products, the functions or intended uses of which are similar.”²⁷

Indeed, the Department historically has acted on this authority to create sub-classes of covered products, where warranted by their performance characteristics.²⁸

Third, Congress prohibited the Department from promulgating standards that are “likely to result in the unavailability in the United States of any product type (or class) of performance characteristics (including reliability, features, sizes, capacities, and volumes) that are substantially the same as those generally available in the United States.”²⁹

Fourth, Congress recognized that products using different fuel types (*e.g.*, gas, oil, electricity) create valuable options for consumers, but operate differently and warrant separate efficiency standards. For example, Congress itself set statutory energy conservation standard levels for water heaters and boilers based on fuel type.³⁰ EPCA also provides for setting separate classes where appliances “consume a different kind of energy from that consumed by other covered products within such type (or class).”³¹

²⁷ 42 U.S.C. § 6291(9).

²⁸ *See* Section IV.B., below.

²⁹ 42 U.S.C. § 6295(o)(4); 6313(a)(6)(B)(iii)(II).

³⁰ *Id.* § 6295(e)(1), (f)(3).

³¹ *Id.* § 6295(q)(1)(A).

Finally, to make these provisions work together and maximize reasonable opportunities for some classes of products to increase efficiency above others, Congress recognized that some classes of products may require higher or lower energy conservation standards than competing products in a category. “A rule prescribing an energy conservation standard for a type (or class) of covered products *shall* specify a level of energy use or efficiency *higher or lower* than that which applies (or would apply) for such type (or class) for any group of covered products which have the same function or intended use,” if the Secretary determines that covered products within such group “have a capacity or other performance-related feature which other products within such type (or class) do not have” and “such feature justifies a higher or lower standard.”³²

Congress did not define a “performance-related feature” that requires consideration of a higher or lower standard, but its meaning is clear in context. A “feature” generally refers to a “prominent or conspicuous part or characteristic,” “something offered as a special attraction,” or “a prominent part of or characteristic” of a product.³³ Congress further directed the Department to consider, among other

³² *Id.* § 6295(q)(1) (emphasis added)

³³ See <https://www.dictionary.com/browse/feature> (definition of “feature”); <https://www.merriam-webster.com/dictionary/feature> (same).

things, “the utility to the consumer of such a feature” when evaluating whether it justifies a higher or lower standard.³⁴

As such, a performance-related feature is at least a characteristic that renders a product useful for its intended use and allows the Department to differentiate that product from others. Here, that intended purpose would be providing heat or hot water in a building designed with atmospheric venting.

Reading the statute this way is consistent with EPCA’s overall context and structure. As noted above, energy conservation standards must be technically feasible, meaning that covered products are capable of complying with them. If a feature that makes a product useful to the consumer also would affect its capabilities (either making the product more or less able to comply with the standards) that feature must be considered a performance related feature. Similarly, considering a performance-related feature one that makes a product work for its intended application is consistent with the Department’s ability to create classes of covered products, to among other things, set higher or lower standards for specific classes. This also helps ensure the Department does not issue a standard that renders a class of products unavailable to U.S. consumers. It, also, assists the Department in

³⁴ 42 U.S.C. § 6295.

determining whether a class of products should have a higher or lower standard than others in its category.

ii. The proposed interpretation of “performance-related features” is incompatible with the statute.

For the same reasons, discussed above, the Proposal is incompatible with the statute. The Department “proposes to revise its interpretation of EPCA’s ‘features’ provision in the context of condensing and non-condensing technology used in furnaces, water heating equipment, and similarly-situated appliances,” such that “use of non-condensing technology (and associated venting) is not a performance-related “feature.” As noted above, however, condensing and non-condensing technology are decidedly performance-related features. They dictate whether a covered furnace, water heater, or boiler can be used within the existing utility infrastructure (e.g., chimneys and plumbing systems) of millions of homes and businesses without major renovation.

The Department’s argument to the contrary boils down to its assertion that “differences in cost or complexity of installation between different methods of venting (e.g., a condensing furnace versus a non-condensing furnace)” are issues better addressed when evaluating the cost effectiveness of energy conservation standards, and not other aspects of EPCA.³⁵ This ignores important aspects of

³⁵ 86 Fed. Reg. at 48,053.

evaluating whether non-condensing technology is a performance-related feature, in light of the plain language and context of that term discussed above.

To be sure, before finalizing energy conservation standards, the Department must determine the standards are economically justified. This is an important responsibility that requires the Department to determine that the “benefits of the standard exceed its burdens” after considering (i) “the economic impact of the standard on the manufacturers and on the consumers of the products subject to such standard;” (ii) “the savings in operating costs throughout the estimated average life of the covered product in the type (or class) compared to any increase in the price” or operating and maintenance costs for the covered products; (iii) the total projected amount of energy” likely to result from the standard; (iv) “any lessening of the utility or performance of the covered products” from the standard; and other factors.³⁶ And we believe an honest evaluation of those factors would show standards based on condensing technology to be economically unjustified in many applications.

However, economic justification is a separate consideration. A statute should be read in a manner that gives meaning to all its provisions, so that “no part will be inoperative, or superfluous, void or insignificant.”³⁷ Courts and agencies do so, in

³⁶ 42 U.S.C. § 6295(o)(2)(B).

³⁷ 2A N. Singer, *Statutes and Statutory Construction* § 46.06, pp. 1810186 (rev. 6th ed. 2000); *Hibbs v. Winn*, 542 U.S. 88, 101 (2004).

part, by reading the operative language in context. As shown above, reading “performance related-features” to include those that make a product useful for its intended purpose (here, serving as a furnace, water heater, or boiler in a home or business utility system that cannot function with condensing units) flows from the meaning and context of several provisions of EPCA, including that (1) energy conservation standards must be technically feasible for their intended application; (2) covered products should be subcategorized into classes to recognize different functions, consumer needs, and fuel types; (3) standards should not render covered products unavailable to American consumers; and (4) the Department should recognized “performance-related features” that make a product useful to consumers.

Conversely, viewing technical and architectural constraints as purely an economic consideration fails to give meaning to the entire purpose behind establishing separate classes of consumer products based on their “performance-related features.” Engineers and contractors can develop technical solutions to most technical problems, especially with an unlimited budget. However, in the current market the known solutions are limited to making major reconfigurations to the venting and plumbing systems in millions of homes and businesses that might otherwise choose a natural gas product that works with their existing systems. Recognizing condensing and non-condensing technology as a performance-related feature ensures that both classes of furnaces, commercial water heaters, and boilers

continue to be available to the consumers who need them and are not interested in making a renovation to accommodate a replacement appliance.

In addition, Congress clearly directed the Department to consider the “utility” to the consumer both when deciding whether performance-related features warrant promulgating separating energy conservation standards and when evaluating whether proposed standards are economically justified. In Section 6295(q)—the provision directing the Department to consider separate standards—Congress specified, that “the Secretary shall consider such factors as the utility to the consumer of such feature.” Furthermore, when evaluating whether an energy conservation standard is cost justified, the Department also must consider “any lessening of the utility or the performance of the covered products likely to result from the imposition of the standard.”³⁸ These are mutually exclusive considerations that must both be undertaken to give full meaning to the statute.

The Department’s suggestion that the January 2021 Final Rule would “lock in the currently existing technology as the ceiling for product efficiency” is misplaced.³⁹ Congress and the Department have recognized numerous classes of covered products, including classes organized by fuel type for the products at hand. The existing technology has never been locked in place, as the energy conservation

³⁸ 42 U.S.C. § 6295(o)(2)(B)(IV).

³⁹ 86 Fed. Reg. at 48,054.

standards for those products can and have been amended as technology improves.

And surely the Department does not contend that the standards for “space constrained” air conditioners, dryers, and tabletop water heaters – products for which the Department has recognized separate classes to avoid requiring home renovations to accommodate energy conservation standards⁴⁰ —are locked in place because the Department recognized their analogous constraints as performance-related features.

Moreover, by separating condensing and non-condensing appliances, the Department can focus on establishing the maximum feasible efficiency levels for those separate technologies. This would allow the Department to focus on the most technologically feasible and cost-effective options for both types of appliances. In the end, it may lead to better standards for both. For example, by separating condensing from non-condensing units, the Department could evaluate the cost of increased efficiency for condensing units without considering the increased costs required to retrofit millions of structures.

In short, relegating the significant limitations of condensing furnaces, commercial water heaters, and boilers to an economic question fails to give meaningful consideration to all provisions of the statute. This is perhaps best demonstrated by the Department’s own words. The proposed interpretation would

⁴⁰ See section IV.B., below.

allow the Department to evaluate energy conservation standards “that would effectively require products/equipment in certain classes to use condensing technology to meet the amended standards.” And such standards “would have effectively eliminated all non-condensing products/equipment that are currently on the market in those classes.”⁴¹

Any future effort to promulgate energy conservation standards based on the proposed interpretation would be contrary to EPCA and could not withstand judicial scrutiny.

iii. The Department must consider “fuel switching” when deciding whether to create separate classes of products.

Both the Proposal and the January 2021 Final Rule recognized that an energy conservation standard that requires only condensing appliances will push many consumers to replace their natural gas appliances with electric ones. For some, this will be an economic consideration—installing an appliance that may be cheaper than installing another type of appliance or retrofitting their home. For many others, however, the prospect of retrofitting their homes to accommodate venting and plumbing configurations necessary for condensing appliances may be untenable or infeasible, regardless of cost, even though they prefer natural gas. As the Department put it in the prior rulemaking, “[t]he choice of purchasing a non-condensing

⁴¹ 86 Fed. Reg. at 48,052.

appliance is something that matters to some significant portions of consumers (especially person with low-incomes), with concerns ranging from impacts on the aesthetics of the home to overall choice of housing options.”⁴² Moreover, fuel switching can occur because a standard would result in the unavailability of important product characteristics; for instance, simple functionality in homes where it would be impractical or impossible to perform the renovations necessary to accommodate condensing units. That is, an energy conservation standard that only allows for condensing products would make natural gas products unavailable to many consumers.

The Proposal wrongly asserts that fuel switching should only be addressed in a later cost-effectiveness determination and that the Department can eliminate the availability of natural gas products for some consumers so long as it does not eliminate their availability for all consumers.⁴³ As noted above, however, EPCA directs the Department to issue separate standards for classes of products that “consume a different kind of energy” (*i.e.*, type of fuel) than “other covered products within such type.”⁴⁴ It directs the Department to issue separate standards for classes

⁴² 84 Fed. Reg. at 33,018; *and see id.* at 33,017 (noting “DOE’s data support the finding in the fuel switching analysis of the September 23, 2016 supplemental notice of proposed rulemaking . . . that accounted for instances where installation of a condensing furnace was either too difficult or costly, with the result being substitution of another type of heating product.”).

⁴³ 86 Fed. Reg. at 48,056.

⁴⁴ 42 U.S.C. § 6295(q)(1).

of products that have “a performance related feature which other products do not have.”⁴⁵ Furthermore, it prohibits the Department from issuing energy conservation standards that “would result in the unavailability in the United States in any covered product . . . of performance characteristics [or] . . . features.”⁴⁶

Read together, these provisions make clear that EPCA forecloses a standard that would force consumers to switch fuels or make natural-gas products unavailable to consumers who want to buy them for reasons beyond economics. This is exactly what the Proposal would do, therefore, it is inconsistent with EPCA.⁴⁷

iv. The courts will not defer to the Department’s proposed interpretation.

Any intent by the Department to rely on *Chevron* deference to defend the proposed reinterpretation is misplaced. The starting point for any inquiry into whether an agency has authority to promulgate a rule is the words of the governing statute. An agency may not exercise its authority “in a manner that is inconsistent with the administrative structure that Congress enacted into law.”⁴⁸ Rather the

⁴⁵ *Id.* § 6295(q)(1)(B).

⁴⁶ *Id.* § 6295(o)(4).

⁴⁷ DOE appears to advocate for fuel switching in the Proposal when it states that an “option for resolving difficult installation situations would be for the consumer to replace a gas-fired furnace or water heater with an electric heat pump or water heater, thereby obviating the need for extensive changes to existing venting.” 86 Fed. Reg. at 48,055. This statement acknowledges that installation issues exist, that certain products may be unavailable to certain customers, and that DOE’s position would force fuel switching in contradiction with EPCA.

⁴⁸ *ETS Pipeline Project v. Missouri*, 484 U.S. 495, 517 (1988).

agency and the courts “must give effect to the unambiguously expressed intent of Congress.”⁴⁹ Even where, as here, an agency relies on a purported ambiguity, the courts will not defer to an agency’s interpretation until first “exhausting all the ‘traditional tools’” of statutory interpretation and determining the statute is genuinely ambiguous.⁵⁰ Only after making such a determination will the courts evaluate whether the “agency’s answer is based on a permissible construction of the statute” and therefore subject to deference.⁵¹

As discussed above, Congress made its intentions quite clear in EPCA. The Department must consider characteristics or aspects of a class of covered products that make them useful to consumers “a performance-related feature” that warrants separate standards. The Department’s proposed interpretation to the contrary is not based on any ambiguity in the statute, but rather a desired policy outcome that fails to adhere to structure Congress enacted into law. Even if there were ambiguity, the Proposal does not present a “permissible interpretation of the statute.”⁵²

B. Interpreting “performance-related features” to include characteristics that make a product useful for consumers is consistent with DOE’s past practice.

⁴⁹ *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 842-843 (1984).

⁵⁰ *Kisor v. Wilkie*, 139 S. Ct. 2400, 204 L. Ed. 2d 841 (2019); *Chevron U.S.A. Inc.*, 467 U.S. at 843 n. 9.

⁵¹ *Chevron U.S.A. Inc.*, 467 U.S. at 843.

⁵² *Id.*

The Department repeatedly has recognized that features affecting a product’s intended utility, conditions under which the products can be used, and design-specific factors that influence energy consumption are performance-related features. For example, when the Department reevaluated the standards for central air-conditioners and heat pumps and packaged terminal air conditioners, it recognized separate classes of “space constrained” and “non-standard sized” units from standard air conditioners because of their performance-related feature: accommodating the space constraints of many homes and apartments.⁵³ The Department specifically noted that EPCA instructs it to avoid promulgating standards that would render a class of covered products, like window air-conditioning units, unavailable by failing to recognize the space constraints. And it justified maintaining the separate classes of products, in part, on the need to avoid imposing standards that would require extensive building modifications. As the Department put it, “[t]he space-constrained product class acts as a safe harbor for product types . . . [like window units] whose efficiency is limited by physical dimensions that are rigidly constrained by the intended application.”⁵⁴

⁵³ Energy Conservation Program: Energy Conservation Standards for Residential Furnaces and Residential Central Air Conditioners and Heat Pumps, 76 Fed. Reg. 37,408, 37,446 (June 27, 2011).

⁵⁴*Id.*

Similarly, the Department has recognized different product classes for electric residential clothes dryers to address differences in product features concerning installation space constraints—*e.g.*, small laundry machine closets—and differences in electrical power supply.⁵⁵ It adopted a product class for tabletop water heaters in 2001 to accommodate “strict size limitations” for the products.⁵⁶ It similarly treats high-speed/small-diameter, highly decorative, and belt-driven ceiling fans as separate classes than standard ceiling fans to preserve consumer options.⁵⁷

Perhaps most importantly, the Department previously has recognized that condensing and non-condensing furnaces present significant design differences that warrant different product classes for the separately regulated furnace fans that work with them.⁵⁸ The Department created nine different classes of residential furnace fans based on “application-specific design differences” that impact energy consumption and are therefore “performance-related features.”⁵⁹ The Department

⁵⁵ 10 C.F.R. § 430.32(h)(3).

⁵⁶ Energy Conservation Program for Consumer Products: Energy Conservation Standards for Water Heaters, 66 Fed. Reg. 4,474, 4,478 (Jan 17, 2001).

⁵⁷ Energy Conservation Program for Consumer Products: Energy Conservation Standards for Ceiling Fans, 82 Fed. Reg. 6,826 (Jan. 19, 2017).

⁵⁸ Energy Conservation Program for Consumer Products: Energy Conservation Standards for Residential Furnace Fans, 79 Fed. Reg. 38,130, 38,142 (July 3, 2014); Technical Support Document: Energy Efficiency Program for Consumer Products and Commercial and Industrial Equipment: Residential Furnace Fans, Doc. No. EERE-2010-BT-STD-0111, 3-3-3-4 *available at* <https://www.regulations.gov/document/EERE-2010-BT-STD-0011-0111> (“Furnace Fan TSD”)

⁵⁹ 79 Fed. Reg. at 38,142.

explained that “[t]he presence of a secondary heat exchanger [in condensing furnaces] increases static pressure,” which causes furnace fans used with condensing furnaces to consume more electricity than furnace fans used with non-condensing furnaces.⁶⁰ Similarly, the Department noted that “[s]pace and design constraints are different for products installed indoors compared to outdoors,” and those constraints “will impact furnace fan performance differently because furnace fan energy consumption is dependent on clearances and airflow path.”⁶¹ That is, the Department focused on the impact design-specific factors had on the functionality and efficiency of the equipment when recognizing separate classes.

The Proposal’s suggestion that it views a product’s “utility” only “as an aspect of a product that is accessible to the layperson and is based on user operation and interaction with the product” is unreasonable and belied by these past rules.⁶² To justify this, the Proposal points to the fact that the Department has recognized user facing features, such as having a window on an oven door or a front loading washing machine door, as performance-related features because some consumers prefer those interfaces.⁶³ That is true as far as it goes. But regardless of whether consumers regularly interface with the condensing equipment in their gas-fired appliances, a

⁶⁰ Furnace Fan TSD at 3-4.

⁶¹ *Id.*

⁶² 86 Fed. Reg. at 48,051.

⁶³ *Id.*

furnace or water heater serves a consumer limited or no utility if it can only be used after renovating their home or business. And, as the Department recognized in the furnace fan rule, the “application-specific design” differences between condensing and non-condensing appliances create performance-related that must be differentiated.

Just like dryers that can fit in consumer’s apartment buildings without remodeling or losing living space serves an important utility, natural-gas appliances that function with existing chimneys and plumbing designed around non-condensing appliances serve an important utility. Just like air conditioners that can replace window units or other smaller units without requiring renovation provide an important feature and utility to consumers, natural-gas appliances that can replace existing non-condensing appliances without requiring renovation provide an important feature and utility to consumers. Just as the design demands for condensing and non-condensing furnaces warranted separate classes for the furnace fans that work with them, those design demands warrant separate classes for the furnaces themselves. While features that consumers regularly interface with, like oven windows and dryer doors are important performance-features too, it is absurd to suggest features that make the product work in a consumers’ existing homes or businesses are not.

In addition to supporting the 2021 January 2021 Final Rule’s interpretation of EPCA, the examples above show that it would be arbitrary and capricious to withdraw the January 2021 Final Rule. The Department cannot consider the space and functional constraints a “performance-related feature” justifying separate standards for the covered products discussed above, but not for furnaces, commercial water heaters, and boilers with similar constraints. The Department should follow its past practice and continue to recognize non-condensing furnaces that work in homes constrained by existing exhaust and plumbing systems as separate class from condensing products.

C. The record supports maintaining the January 2021 Final Rule.

In addition to the foregoing statutory constraints, the record before the Department unquestionably supports maintaining the January 2021 Final Rule e. It would be arbitrary and capricious to withdraw it.

i. The factual predicates to the rule remain uncontroverted.

The Secretary made factual findings supporting the January 2021 Final Rule that remain uncontroverted by the Proposal. As the Proposal acknowledges, in contrast to condensing appliances, non-condensing appliances: (1) “[a]void complex installations in certain locations constrained by space, existing venting, and available drainage,” (2) “avoid the encroachment on usable space that would occur in certain installations,” and (3) “do not enhance the level of switching that might accompany

standard setting absent a separate product/equipment class for non-condensing appliances.”⁶⁴ Each of these findings was supported by the record.

For example, the record shows that limiting consumer options to condensing units causes significant complications for millions of homes and businesses. More than half of all commercial buildings were constructed before condensing water heaters hit the market and have atmospheric venting systems for their gas heaters.⁶⁵

The chimney systems in most older buildings above three stories were built with atmospheric venting systems designed for gas volumes and heat from multiple non-condensing appliances.⁶⁶ Most older homes, particularly rowhouses and apartments in the Mid-Atlantic and Northeast, were built with atmospheric venting systems. The Department estimated that “upwards of 10 percent of households with gas-fired furnaces” faced difficult installation situations if non-condensing furnaces were eliminated.⁶⁷

As one commenter concisely put it, non-condensing furnaces and water heaters provide “‘unique utility’ in their ability to common vent with other gas appliances, vent into masonry chimneys, operate in unconditioned space without freeze protection, easily install in retrofit applications, and operate without the need

⁶⁴ See 86 Fed. Reg. 48,055.

⁶⁵ 84 Fed. Reg. at 33,015.

⁶⁶ *Id.*

⁶⁷ 86 Fed. Reg. at 4,796.

of condensate.”⁶⁸ AGA, along with our co-petitioners, further demonstrated there was no meaningful dispute that replacing a non-condensing appliance with a condensing appliance in a home or building designed for non-condensing appliances requires significant modification. With support from an expert affidavit, we showed that “in many cases the required building modifications would impose the need for unwelcome changes in floor plans or sacrifices of currently-occupied space, and in many cases the required modifications would not be practical at all.”⁶⁹

Similarly, the Department’s own analysis confirmed that the technical complications surrounding retrofitting buildings designed to accommodate non-condensing appliances with condensing appliances leads to fuel switching. As the Department put it, its own “data support the finding . . . that accounted for instances where installation of a condensing furnace was either too difficult or costly, with the result being substitution of another type of heating product.”⁷⁰

In short, the facts in the record support a finding that design-specific constraints related to non-condensing technology present important performance-

⁶⁸ Comments of Southern Company, Doc. No. EERE-2018-BT-STD-2018-0033 *available at* <https://www.regulations.gov/comment/EERE-2018-BT-STD-0018-0033>.

⁶⁹ Comments of Petitioners Spire Inc., et al., Doc. No. EERE-2018-BT-STD-0018-0044 *available at* <https://www.regulations.gov/comment/EERE-2018-BT-STD-0018-0044>.

⁷⁰ 84 Fed. Reg. at 33,017.

related features, valued by consumers, that justify treating non-condensing appliances as a separate class from condensing appliances.

ii. The Department’s proposed rejection of the factual predicates to the January 2021 Final Rule is arbitrary and capricious.

The Department’s rejection of the some of the factual predicates to the January 2021 Final Rule fail to adequately grapple with the facts and circumstances and would render a final rule arbitrary and capricious. Several of these issues are addressed below.

First, the Department argues “[t]here is no noticeable difference to the consumer in access or output based upon the type of technology or venting used by the appliance.”⁷¹ This is not true. The record for the January 2021 Final Rule shows that for millions of applications the appliances with condensing technology simply would not work (or would present hazardous conditions) if the appliances were installed within existing home and business venting and plumbing systems.⁷² Consumers will notice the difference.

Second, the Department asserts, without evidence, that it “understands” “there are technological solutions for most difficult installation situations.” But it fails to cite any evidence for those solutions or subject any particular solution to comment

⁷¹ 86 Fed. Reg. at 48,054.

⁷² *Id.* at 48,055.

regarding its feasibility.⁷³ Rather, it capriciously speculates that consumers can use unnamed “new technology” to overcome installation problems constraints.⁷⁴

Third, the Department similarly speculates that “[t]echnological solutions should also resolve the specific issue of orphaned water heaters” (*i.e.*, where “a non-condensing furnace and non-condensing water heater share a common vent, but, upon replacement . . . with a condensing furnace they can no longer share the same venting.”).⁷⁵ To support this, the Department cites a study from Oak Ridge National Laboratory that identified potential approaches to address venting gas from orphaned water heaters. But this kind of desktop study, without proof of actual application, cannot rebut the evidence in the record that the Department’s proposed interpretation would lead to orphaned water heaters.⁷⁶ For example, surveys and comments from actual installation contractors, who actually install the equipment, showed that common atmospheric venting systems prevent use of condensing furnaces.⁷⁷ Furthermore, the installation codes for gas appliances, the National Fuel Gas Code (ANS 223.1/NFPA 54) and the International Fuel Gas Code that are adopted and

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵86 Fed. Reg. at 48,055.

⁷⁶ *See, e.g.*, Comments of Southern Co., *supra* n. 63; Comments of Petitioners Spire Inc., et al., Doc. No. EERE-2018-BT-STD-0018-0044 at 5-10 (March 1, 2019).

⁷⁷ *See id.*; Request for Interpretation, Doc. No. EERE-2014-BT-STD-0031-0316 at 3-4 n. 6 (June 6, 2017) available at <https://www.regulations.gov/document/EERE-2014-BT-STD-0031-0316>.

enforced in the majority of states and jurisdictions within the United States do not permit venting a condensing type of vented gas appliances (positive venting pressure) with a non-condensing type of vented appliance (negative venting pressure) because of safety concerns. Even if the technological issues were overcome, replacement natural gas furnaces, commercial water heaters, and boilers would remain unavailable to consumers without violating the installation codes.

Fourth, the Department speculates that its interpretation would not lead to significant fuel switching, baldly citing to its “expectations.”⁷⁸ But the Department cites no evidentiary support for its expectations. On the contrary, it asserts that a primary “solution” to the fact that condensing units will not work in systems designed for non-condensing units is fuel switching: “The second option for resolving installation situations would be for the consumer to replace a gas fired furnace or water heater with an electric heat pump or water heater, thereby obviating the need for extensive changes to existing venting.”⁷⁹

If the Department had evidence to support these assertions, it should have included it in the Proposal to allow stakeholders a meaningful opportunity to comment. As it stands, the assertions are arbitrary and capricious and would render any final rule based on them unlawful under the Administrative Procedure Act.

⁷⁸ 86 Fed. Reg. at 48,056.

⁷⁹ 86 Fed. Reg. at 48,055-56.

V. CONCLUSION

For the reasons stated above, the Department should withdraw the Proposal, retain the January 2021 Final Rule, and move forward with a rulemaking to consider separate amended energy conservation standards for condensing and non-condensing furnaces, commercial water heaters, and boilers.

Respectfully submitted,
[DRAFT]

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