

**BEFORE THE
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
UNITED STATES DEPARTMENT OF ENERGY
WASHINGTON, D.C.**

**Energy Conservation Program:
Energy Conservation Standards for Residential
Furnaces and Commercial Water Heaters**

**Notice of Proposed Interpretive Rule and Response to Petition for
Rulemaking**

84 Fed. Reg. 33011 (July 11, 2019)

Docket No. EERE-2018-BT-STD-0018

Comments of Petitioners

Spire Inc.

The American Public Gas Association

The American Gas Association

The National Propane Gas Association

The Natural Gas Supply Association

And

The National Association of Home Builders

The Air Conditioning Contractors of America

The Plumbing-Heating-Cooling Contractors—National Association

The National Multifamily Housing Council

The National Apartment Association

The National Leased Housing Association

The Manufactured Housing Association for Regulatory Reform

September 9, 2019

Introduction

As signatories to the petition for rulemaking that is the subject of the above-referenced proceeding (the “Petition”), Spire Inc. (“Spire”), the American Public Gas Association (“APGA”), the American Gas Association (“AGA”), the National Propane Gas Association (“NPGA”) and the Natural Gas Supply Association (“NGSA”) (collectively “Petitioners”) appreciate the opportunity to provide comments to the Department of Energy (“DOE”) on its proposed response to the Petition – most notably its proposed interpretive rule – published in the *Federal Register* on July 11, 2019 (hereinafter the “Proposal”).¹ Petitioners are joined in this submission by the National Association of Home Builders (“NAHB”), the Air Conditioning Contractors of America (“ACCA”), the Plumbing-Heating-Cooling Contractors—National Association (“PHCC-NA”), the National Multifamily Housing Council (“NMHC”), the National Apartment Association (“NAA”), the National Leased Housing Association (“NLHA”) and the Manufactured Housing Association for Regulatory Reform (MHARR), which – though not signatories to the Petition – will also be referred to by the collective term “Petitioners” for purposes of these comments.

Petitioners appreciate DOE’s thorough consideration of the issues raised by the Petition and support DOE’s proposal to issue an interpretive rule confirming that:

adoption of energy conservation standards that would limit the market to natural gas and/or propane gas furnaces, water heaters, or similarly situated products/equipment . . . that use condensing combustion technology would result in the unavailability of a performance related feature within the meaning of 42 U.S.C. [§§] 6295(o)(4) and 6313(a)(6)(B)(iii)(II)(aa).²

In general, Petitioners believe that DOE appropriately considered the Petition and comments submitted in response to its publication. Nevertheless, Petitioners believe that DOE should take more decisive action to resolve the issues raised by the Petition and to advance the rulemaking process in its pending residential furnace and commercial water heater rulemaking proceedings.³ Petitioners also respectfully urge DOE to clarify or reconsider its analysis in certain respects, as discussed in more detail below.

¹ *Granting in part and denying in part a petition for rulemaking; notice of proposed interpretive rule; request for comment*, Docket No. EERE-2018-BT0STD-0018, 84 Fed. Reg. 33011 (July 11, 2019). Petitioner’s previous comments in this proceeding, filed March 1, 2019 (“Petitioners’ Previous Comments”) are identified in the docket for this proceeding as Document No. EERE-2018-BT-STD-0018-0044.

² 84 Fed. Reg. at 33020-21.

³ Energy Conservation Standards for Residential Furnaces, Docket No. EERE 2014-BT-STD-031, and Energy Conservation Standards for Commercial Water Heaters, Docket No. EERE-BT-STD-042, respectively.

Discussion

A. Why We Are Here

The Petition seeks to resolve the issue of whether DOE can impose energy conservation standards that would make atmospherically vented gas products such as furnaces and water heaters unavailable. In practical terms, this issue matters because standards that would make atmospherically vented products unavailable to consumers would do more to promote electrification than to promote the efficiency of gas products. Petitioners are not “aggrieved by a proposed federal energy conservation standard whereby gas furnaces would consume less natural gas or propane gas” as one electrification advocate suggests;⁴ instead they are aggrieved by energy conservation standards for gas products that – by making important product characteristics unavailable – would force many consumers to give up gas appliances in favor of electric alternatives. That’s why the Petition was filed and why manufacturers of electric products have participated so vigorously in a proceeding that is specific to gas products.⁵

Suggestions that Petitioners are opposed to condensing technology or that favorable action on the Petition would “create missed opportunities for consumers, businesses, and governments”⁶ are meritless. Condensing gas products are already available to purchasers who want (and can reasonably use) them, and they increasingly dominate the market in regions in which the economic justification for them is strong. Petitioners do not oppose the operation of that market.⁷ However – as DOE has recognized – condensing products are not suitable for all installations, because they lack important performance characteristics (or “features”) that many consumers want or need due to the constraints of existing building configurations. The Petition seeks to preserve the availability of those product characteristics so that gas products will continue to be available to serve the full range of consumer needs. It is *the opponents of the Petition* – not the Petitioners – that seek to deny consumers access to the products that best serve their needs.

⁴ National Electrical Manufacturers Association comments identified in the docket for this proceeding as Document No. EERE-2018-BT-STD-0018-0046 (“NEMA Comments”) at p. 5.

⁵ DOE’s summary of the range of interests involved in this proceeding did not refer to electrification interests as such (*see* 84 Fed. Reg. at 33012 and 33014). However, such interests have vigorously opposed the Petition despite their lack of standing with respect to the issues involved. *See Hazardous Waste Treatment Council v. EPA*, 861 F.2d 277, 285 (D.C. Cir. 1988) (business interests seeking commercial advantage through governmental regulation of their competitors lacked standing to challenge purported regulatory laxity because they were not suitable advocates for the environmental interests embodied by the statute and had “no common law interest, much less a constitutional one, in having the government drive business [their] way”).

⁶ Comments submitted by the Attorney General of New York *et al* (“AG Comments”), identified in the docket for this proceeding as Document No. EERE-2018-BT-STD-0018-0049 at p. 9.

⁷ *E.g.*, “Comments of the American Public Gas Association,” Docket Number EERE-2014-BT-STD-0031, at pp. 34-37 (filed July 10, 2015) (“what APGA does not support is interfering with a well-functioning market with a standard that will promote fuel switching”).

The practical issue is that standards that would eliminate atmospherically vented gas products would too often result – not in the sale of more efficient gas products – but in the sale of *fewer gas products*. That difference in outcomes is critical, as illustrated by the impact condensing standards would have on low income consumers. Suggestions that favorable action on the Petition would be “quite harmful to the economic interests of consumers, especially low-income consumers”⁸ are based on the premise that condensing standards for residential furnaces would give low income renters the benefits of condensing gas furnaces, which they frequently would not. Existing multifamily properties provide much of the country’s affordable housing, and the owners and managers of older properties already face significant challenges to maintaining affordable housing options for renters. Unfortunately, it is this existing housing stock that faces some of the most serious technical impediments to the installation of condensing gas furnaces. Where it would be impractical to install condensing furnaces, the unavailability of atmospherically vented gas furnaces would force many property owners to turn to alternatives such as electric resistance heating, which would be the low-cost option in terms of initial investment and – in the context of multi-family housing – would often be the only *practical* option.⁹ While electrification advocates might be pleased with any outcome that results in the substitution of electric products for gas products, these scenarios would adversely affect all residents, but would impose the greatest burdens on low income renters who are least able to afford substantially higher utility bills.¹⁰

B. DOE Should Take Decisive Action to Resolve the Issues Raised by the Petition

Petitioners urge DOE to take further action consistent with its proposed interpretive rule by:

- Issuing written findings pursuant to 42 U.S.C. §§ 6295(o)(4) and 6313(a)(6)(B)(iii)(II)(aa), respectively, in its pending residential furnace and commercial water heater rulemaking proceedings;¹¹ and
- Withdrawing the pending proposed rules in those proceedings on the basis of those written findings.

Such findings are justified by the evidence, warranted by DOE’s proposed interpretive rule, and sufficient to establish that adoption of the pending proposals would be contrary to law. DOE

⁸ Comments of the National Consumer Law Center and Consumer Federation of America, identified in the docket for this proceeding as Document No. EERE-2018-BT-STD-0018-0050, at p. 1.

⁹ As indicated in Spire’s comments on DOE’s pending proposal for residential furnaces, the cost and installation requirements for heat pumps makes them an unlikely option in scenarios in which building owners are unwilling or unable to install condensing gas furnaces. See Spire’s January 1, 2017 comments, identified as Document No. EERE-2014-BT-STD-0031-0309 in in Docket No. EERE-2014-031 (“Spire’s Residential Furnace Comments”) at pp. 32-33.

¹⁰ In fact, the proposed residential furnace standards would be harmful for low income consumers for a number of reasons and raise issues warranting an Environmental Justice review. See Spire’s Residential Furnace Comments at pp. 35-43.

¹¹ Energy Conservation Standards for Residential Furnaces, Docket No. EERE 2014-BT-STD-031, and Energy Conservation Standards for Commercial Water Heaters, Docket No. EERE-BT-STD-042.

notes that it intends to develop new supplemental proposed rules if its proposed interpretive rule is finalized and suggests that withdrawal of the two pending proposed rules (both of which would impose standards achievable only for condensing products) is therefore “unnecessary.”¹² Petitioners respectfully disagree.

If DOE adopts its interpretive rule as proposed, it will have determined that the pending proposals in DOE’s residential furnace and commercial water heater rulemaking proceedings are legally defective and cannot be adopted as proposed. In that case, a failure to withdraw those proposals would be a disservice to the public in at least three respects.

First, DOE has a statutory obligation to complete these rulemaking proceedings and it is important that it make constructive progress. If DOE issues its interpretive rule as proposed and the findings Petitioners have requested, it will have resolved an issue that has been a substantial impediment in both of the rulemaking proceedings at issue and – as DOE correctly notes – it will be necessary for DOE to prepare new proposed rules consistent with its interpretive rule. To do so, DOE will need to consider (or reconsider) a number of issues, including the issue of whether separate, more stringent standards for condensing products would be justified. Rather than devoting substantial time and resources to the consideration of such issues without the benefit of public input, DOE should expedite its rule development process by issuing notices confirming that new proposed rules will be required and requesting public comment to help inform the development of those proposals.¹³ This approach would also serve to give all interested parties a clearer understanding of the status of DOE’s deliberations and would document material progress in the respective rulemaking proceedings.

Second, withdrawal of the pending proposals is warranted to correct the public record. Both proposals were the subject of substantial adverse comment to which DOE has never responded. Far from being all-but-final products of agency deliberation, they were highly controversial proposals issued for notice and comment. Moreover, the standards proposed were objectively problematic – not just for the reasons stated in the Petition – but because they were based on analyses that significantly underestimated the installed cost of condensing products,¹⁴ significantly overestimated the value of potential energy savings,¹⁵ and relied upon a defective

¹² 84 Fed. Reg. at 33021.

¹³ As indicated in Petitioners’ Previous Comments, it would be particularly helpful for DOE to acknowledge the error in its modeling approach and take comment on the issue of how it should modify its analysis to ensure that model results are based on the economic consequences of efficiency investments that are reasonably representative of the efficiency investments that would occur only if new standards are imposed. *See* Petitioner’s Previous Comments at pp. 1-2 and 11-12.

¹⁴ *See* Spire’s Residential Furnace Comments at pp. 71-73 and 91-94; Spire’s August 30, 2016 comments, identified as Document No. EERE-2014-BT-STD-0042-0045 in in Docket No. EERE-2014-045 (“Spire’s Commercial Water Heater Comments”) at pp. 24-26 and 43-45.

¹⁵ *See* Spire’s Residential Furnace Comments at pp. 81-86; Spire’s Commercial Water Heater Comments at 35-39.

modeling approach that systematically skewed the results of its analysis.¹⁶ These objectively substantial criticisms (among others) were raised in robust comment submissions timely filed in response to both proposals. Subsequently, DOE received a formal request that these proposed rules be withdrawn as meritless.¹⁷ That request has been pending since early 2017, and DOE has publicly recognized that preparation of a supplemental proposed rule will be necessary at least in the residential furnace rulemaking. However, despite all of these facts, DOE has been subject to persistent criticism for its purportedly unjustified “failure” to adopt the proposed rules as final. Opponents of the Petition have advanced this familiar chorus, as though the outcome of these rulemaking proceedings had already been determined and the energy savings claimed to justify the proposed standards are real.¹⁸ These unjustified claims will persist – and will continue to have traction they don’t deserve – as long as the proposed rules are left pending as though they might still have merit. If DOE determines that its proposed rules are not, in fact, meritorious – a determination the proposed interpretive rule would require – it would be misleading for DOE to leave the proposed rules pending as the most recent embodiment of its views until such time as new proposed rules can be developed and issued. Transparency demands that DOE promptly correct the record that the proposed rules created by issuing notices documenting DOE’s determination that the proposed standards are unwarranted and cannot be adopted.

Third, DOE should note that its proposal not to take any near-term action consistent with its proposed interpretive rule is already being used to undermine the significance of DOE’s response to the Petition.¹⁹ DOE should not risk having the credibility of its response undermined by its own efforts to minimize the potential that litigation challenging its proposed interpretation might be filed sooner rather than later. Although Petitioners understand DOE’s desire to avoid litigation, that desire should not impair DOE’s ability to take meaningful action as requested by the Petitioners, because such action is warranted and would be easy to defend on the merits.

C. DOE Should Clarify the Text of its Proposed Interpretation

The Proposal presents DOE’s proposed interpretation of the Energy Policy and Conservation Act of 1975 (“EPCA”)²⁰ as follows:

¹⁶ See Spire’s Residential Furnace Comments at pp. 5-6 and 58-62; Spire’s Commercial Water Heater Comments at 23-24.

¹⁷ A copy of this request was submitted as Attachment A to Petitioners’ Previous Comments.

¹⁸ See *e.g.*, Comments of Pacific Gas and Electric Company, San Diego Gas and Electric, and Southern California Edison, identified in the docket for this proceeding as Document No. EERE-2018-BT-STD-0018-0045 (“Cal. Electric Comments”) at pp. 5-6; AG Comments at pp. 3-4.

¹⁹ For example, an Energywire report of July 3, 2019 quoted Steven Nadel, executive director of the American Council for an Energy-Efficient Economy, as follows: “Nadel noted that DOE stated the new rule was ‘just an interpretation.’ It’s like DOE is saying, ‘Don’t sue us now. This is not a final decision,’ he said).

²⁰ 42 U.S.C. 6291 *et seq.* As is customary for DOE, references to EPCA in this document refer to the statute as amended through America’s Water Infrastructure Act of 2018, Public Law 115–270 (Oct. 23, 2018).

adoption of energy conservation standards that would limit the market to natural gas and/or propane gas furnaces, water heaters, or similarly situated products/equipment (where permitted by EPCA) that use condensing combustion technology would result in the unavailability of a performance related feature within the meaning of 42 U.S.C. [§§] 6295(o)(4) and 6313(a)(6)(B)(iii)(II)(aa) and 42 U.S.C. 6316(a).²¹

In the interests of clarity, Petitioners urge DOE to conclude that standards limiting the market to products that use condensing combustion technology “would result in the unavailability of a performance characteristic or feature” within the meaning of the cited provisions. Petitioners do not believe that this would be any substantive change, but this wording more closely tracks the language of 42 U.S.C. §§ 6295(o)(4) and 6313(a)(6)(B)(iii)(II)(aa). In addition – as explained below – Petitioners are confused by the parenthetical clause and the citation to 42 U.S.C. § 6316(a) in DOE’s proposed interpretation and request that both be omitted.

Petitioners raised – and DOE proposes to address – a specific issue as to what constitutes a “performance characteristic” (or “feature”) for purposes of 42 U.S.C. §§ 6295(o)(4) and 6313(a)(6)(B)(iii)(II)(aa) (the “Unavailability Provisions”). The Proposal goes on to suggest that these provisions do not apply in cases in which DOE is adopting ASHRAE 90.1 standards pursuant to 42 U.S.C. § 6313(a)(6)(A)(ii)(I),²² and Petitioners infer that the parenthetical clause may be intended as a reference to that point. However, the question of when DOE’s authority is constrained by the Unavailability Provisions is a separate issue that has no bearing on question of what constitutes a “performance characteristic” (or “feature”) for purposes of those provisions.²³ In addition, the meaning of the parenthetical clause isn’t clear, and the placement of that clause in the text of DOE’s interpretation suggests that it speaks to the “performance characteristic” issue rather than to the applicability of the Unavailability Provisions. The reference to 42 U.S.C. § 6316(a) is confusing for a similar reason: that provision – rather than being another Unavailability Provision as its placement in the text suggests – is a complicated applicability provision that governs some of the cases in which the Unavailability Provisions apply. Again, that is an issue separate from that addressed by the text to which the citation is attached.

Petitioners do not believe that DOE needs to address the applicability of the Unavailability Provisions in the text of its interpretive rule, but – to the extent it chooses to do so – Petitioners request that DOE address the applicability issues in separate text rather than in the text of its interpretation as to what constitutes a “performance characteristic” (or “feature”) for purposes of those provisions.

In sum, in the in the interest of clarity, Petitioners request that DOE revise its proposed interpretation regarding the “performance characteristic” issue as follows:

²¹ 84 Fed. Reg. at 33020.

²² 84 Fed. Reg. at 33013, 33021.

²³ In cases in which the Unavailability Provisions don’t apply, DOE’s interpretation as to what constitutes a “performance characteristic” for purposes of those provisions would be irrelevant, and nothing in the interpretation Petitioners request suggests otherwise.

adoption of energy conservation standards that would limit the market to natural gas and/or propane gas furnaces, water heaters, or similarly situated products/equipment (~~where permitted by EPCA~~) that use condensing combustion technology would result in the unavailability of a performance characteristic or related feature within the meaning of 42 U.S.C. §§ 6295(o)(4) and 6313(a)(6)(B)(iii)(II)(aa) ~~and 42 U.S.C. 6316(a)~~.

If necessary, issues as to when that interpretation serves to constrain DOE's rulemaking authority can be addressed in an additional sentence.

D. DOE Should Clarify or Reconsider Aspects of its Analysis

1. DOE should renounce the asserted legal basis for its previous tentative conclusion that standards effectively banning atmospherically vented gas products are permissible.

As the Proposal states, DOE previously “viewed venting of condensing vs non-condensing as a technological and economic issue incidental to the appliance’s purpose of providing heat or hot water to a dwelling or business.”²⁴ Petitioners appreciate the fact that “DOE has now come to see that it may have been too narrow in its focus” and that “a consumer’s interaction with and perception of a furnace or water heater may go beyond its primary function.”²⁵ However, Petitioners respectfully submit that DOE should more clearly renounce the asserted legal basis for its previous tentative conclusion.

DOE’s previous tentative conclusion that condensing standards would not have the unlawful effect of making performance characteristics (or features) unavailable was based on specific legal grounds: the assertion that *the only product characteristics that EPCA protects* are characteristics that provide utility to consumers *beyond the basic function of the product at issue*. DOE was explicit on this point in the residential furnace rulemaking, stating that it “has no statutory basis” to protect product characteristics that “do not provide unique utility to consumers beyond the basic function of providing heat, which all furnaces perform.”²⁶ DOE then asserted that “the consumer utility of a furnace is that it provides heat to a dwelling, and that the type of venting used for particular furnace technologies does not impact that utility” or “provide any separate performance-related utility.”²⁷ These assertions did not reflect a factual conclusion that there is no difference between atmospherically vented products and condensing products, because DOE acknowledged that there are such differences and that – due to those differences – atmospherically vented products have advantages that condensing products lack. Instead these assertions amounted to a legal claim that those differences “don’t count” for purposes of the Unavailability Provisions.

²⁴ 84 Fed. Reg. at 33016.

²⁵ *Id.*

²⁶ 81 Fed. Reg. 65720, 65753 (September 23, 2016).

²⁷ 81 Fed. Reg. at 65752-53.

The first problem with this legal assertion is that nothing in the statute suggests that the only product characteristics protected under the Unavailability Provisions are those that provide utility to consumers *beyond the basic function of the product at issue*. The statute simply says that DOE may not adopt standards that are “likely to result in the unavailability . . . of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those” currently available to consumers.²⁸ Rather than applying these provisions of the statute as they are written, DOE asserted – without any legal basis– that there are performance characteristics or features that the Unavailability Provisions do not protect. Similarly, in interpreting the requirement that DOE consider “the utility to the consumer” of a feature when considering the need for separate product classes,²⁹ DOE’s position was that it only had to consider *certain kinds of utility*: “utility as an aspect of the product *that is accessible to the layperson and is based on user operation.*”³⁰ Again, this simply is not what the statute states. In both instances, DOE simply read unqualified statutory language to include qualifications of DOE’s own creation.

Because there is no legal basis to suggest that any performance characteristics that matter to consumers do not qualify as “performance characteristics” (or “features” for purposes of the statutory provisions that govern the need for separate product classes), DOE’s previous analysis was clearly “too narrow in its focus” and questions as to whether “a consumer’s interaction with and perception of a furnace or water heater may go beyond its primary function”³¹ are legally irrelevant. Under EPCA, the legally relevant question is whether atmospherically vented furnaces have “performance characteristics” (or “features”) that are important to consumers, and – as DOE has now recognized – they plainly do.³² There is no legal basis for DOE to dismiss the significance of such characteristics on the basis of abstract extra-statutory considerations such as whether those characteristics are “accessible to the layperson”³³ or have separate utility beyond the basic function of the product, and DOE should recognize these points expressly.

The root of the problem with DOE’s previous analysis was that it characterized the differences between condensing and atmospherically vented products strictly as a matter of cost, and dismissed them on the theory that all cost-related characteristics are “incidental to the appliance’s purpose” and thus do not qualify as characteristics warranting protection under EPCA.³⁴ As already indicated, this is incorrect as a matter of statutory interpretation, because there is no basis to dismiss characteristics that matter to consumers on the grounds of extra-statutory abstractions involving the nature of the characteristic involved. However, suggestions

²⁸ See 42 U.S.C. §§ 6295(o)(4) and 6313(a)(6)(B)(iii)(II).

²⁹ See 42 U.S.C. § 6295(q)(1)(B).

³⁰ 84 Fed. Reg at 33013.

³¹ 84 Fed. Reg. at 33016.

³² See 84 Fed. Reg. at 33016 and 33020.

³³ 84 Fed. Reg. at 33013.

³⁴ 84 Fed. Reg. at 33013; see 81 Fed. Reg. 65720, 65752 (September 23, 2016) (features that make a product less costly to install do not warrant protection because such features do not provide any separate utility beyond the basic product function).

that the difference in product characteristics between condensing products and atmospherically vented products is simply a matter of cost are also incorrect from a factual standpoint, because atmospherically vented products have operating capabilities that condensing products lack. If the market for residential furnaces were limited to condensing furnaces, these characteristics would be unavailable, and consumers would be left with no residential furnaces capable of operating with existing atmospheric venting systems, capable of operating with other commonly-vented appliances, or capable of operating without a condensate disposal system. The fact that unavailability of these characteristics would impose significant cost on consumers does nothing to change the fact that material differences in performance characteristics are involved or that those differences have significant utility for consumers.

For some consumers, the utility of these performance characteristics is the same utility DOE recognized in the case of vented clothes dryers: “the ability to have [the product] in a living area where vents are impossible to install.”³⁵ For others it is the same utility DOE recognized in the case of “space constrained” appliances: the ability to have a product that will fit into the space provided for the product without the need for building modifications.³⁶ For some consumers, these characteristics make it possible to replace one product without having to scrap another perfectly good appliance. For many consumers they make it possible to use the product without having to accept actively undesirable building modifications (such as modifications that require a sacrifice of existing window, balcony, or interior living space). There is simply no basis to characterize the loss of such utilities as a matter of cost rather than of the unavailability of performance characteristics for purposes of the Unavailability Provisions.

Sacrifices of window and balcony space are also a significant issue in the context of new construction, as illustrated by the following photograph of an apartment building with condensing furnaces. Condensing products are normally installed along an exterior wall with short horizontal venting directly through the wall. This requires a sacrifice of available window or balcony space that can be particularly obvious in the case of apartment buildings or townhouses. In the example shown in Figure 1, the furnace in each unit is located in a utility space (accessed from the balcony of each apartment) that consumes over half as much space as the balcony itself:

³⁵ 84 Fed. Reg. at 33013 *see* 76 Fed. Reg. 22454, 22485 (April 21, 2011) (discussing separate product classes and the unique utility that ventless clothes dryers offer to consumers). Although the venting issues are slightly different, the practical issues are similar and even more pronounced in the case of atmospherically vented furnaces than in the case of vented clothes dryers.

³⁶ 84 Fed. Reg. at 33016 and 33020. Although the particular characteristics involved are different (size in the case of space-constrained products and venting in the case of atmospherically vented furnaces), both characteristics provide exactly the same utility, though the value of that utility to consumers is generally far greater in the case of atmospherically vented furnaces than in the case of space-constrained appliances.

Figure 1



In similar buildings with atmospherically vented furnaces, the furnaces are generally located in the interior of the building (e.g., along the central hallway separating the apartments on one side of the building from those on the other) and vented vertically through the roof of building. The latter type of design eliminates the need for the vent-studded columns of vertically-stacked utility spaces along the outside wall of the building and the resulting loss of available window or balcony space.

Congress did not authorize DOE to impose energy conservation standards that would leave consumers to bear the collateral damage caused by the elimination of product performance characteristics, and it certainly did not authorize DOE to dismiss such damage merely by accounting for the out-of-pocket costs such damage would impose. In this regard, it is important to recognize that the range of issues that can appropriately be addressed as a simple matter of economic analysis is narrower than DOE has previously recognized.

EPCA expressly directs DOE to compare the savings in operating costs that a required efficiency improvement would provide “to any increase in the price of, or in the initial charges for, or maintenance expenses *of the covered product*” (*i.e.*, the product that is the subject of the standard).³⁷ One need not determine the precise limits of what qualifies as an “initial charge for” a product to conclude that the cost of substantial building modifications are beyond them. This

³⁷ 42 U.S.C. § 6295(o)(2)(B)(i)(II).

is especially true where a standard would result in the unavailability of product characteristics that many consumers need to be able to replace a product without having to accept *undesirable* building modifications, because it would be patently unreasonable to account for such scenarios as a mere matter of “installations costs” and force consumers to accept the undesirable building modifications (or do without the product in question). Similarly, it is objectively unreasonable to characterize the cost of scrapping and replacing a “stranded” (but otherwise perfectly good) *water heater* as part of the “initial charges for” (or “installation cost” of) *a furnace*. Rather than being “initial charges for” condensing products, these are costs of collateral damage caused by the unavailability of performance characteristics or features. The fact that these costs can be substantial makes the significance of the loss of product characteristics more obvious, but it does not make the issue one that is “primarily a matter of cost” rather than a matter of performance characteristics for purposes of the Unavailability Provisions.

This is clear as a matter of statutory interpretation, because adverse impacts on product reliability are a matter of product performance – not just cost – which is why the “incidence and cost of [f] repair” was specifically identified as a “performance characteristic” for purposes of the Unavailability Provisions.³⁸ Similarly, if the need for building modifications could be dismissed as a matter of “installation costs,” the ability of a product to “fit in standard building spaces” would not be protected under 42 U.S.C. § 6295(o)(4) as Congress plainly intended,³⁹ and the statute would not have specified separate product classes for three different categories of “direct heating equipment” that differ principally in the manner of their installation.⁴⁰ As a straight-forward matter of statutory interpretation, it is absurd to suggest that Congress intended to ensure the continued availability of products with the sizes – but not products with venting or other performance characteristics – needed to “fit in standard building spaces” without the need for building modifications. The governing principle is the same in both cases: *where it has been shown that buildings are architecturally designed to accommodate products with some characteristics but not others, DOE must preserve the availability of products with those characteristics instead of imposing standards that would require modification of the buildings designed for them.*

Petitioners have not previously focused on the comparative physical size of condensing and atmospherically vented products, in large part because the differences in venting requirements for condensing products generally present far more serious practical issues than differences in product size. However, DOE did request comment on the extent to which condensing standards would raise issues with regard to product size, and also discussed issues with respect to manufactured housing, a context in which space constraints are a particularly important

³⁸ H.R. Rep. 100-11 at 23 (1987).

³⁹ See H.R. Rep. No. 100-11 at 22 (1987).

⁴⁰ See 42 U.S.C. § 6295(e)(3). Opponents of the Petition suggest that Congress didn’t know what it was doing when it enacted this provision. See comments submitted by the Natural Resources Defense Council and EarthJustice identified in the docket for this proceeding as Document No. EERE-2018-BT-STD-0018-0055 (“NRDC/EarthJustice Comments”) at p. 12. However, this claim is insufficient to rebut the basic principle that the provisions of a statute must not be read in isolation, but as part of the statute as a whole, and interpreted in their context as part of a coherent and harmonious statutory scheme. *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 132-33 (2000).

consideration.⁴¹ In that regard, condensing products are at least typically larger than comparable atmospherically vented products, and even small differences can have significant practical impacts in cases in which (for example) a furnace and air handler must fit inside a closet or other confined space with required clearances on all sides.

2. DOE should reconsider its analysis concerning the significance of fuel switching in the context of efficiency regulation.

As the Proposal recognizes, opponents of the Petition argue that fuel switching “is a cost impact” that can be appropriately addressed in DOE’s economic analysis and that there is no reason to view fuel switching as a cause for concern.⁴² In fact, the potential for standards to cause fuel switching is a critical consideration in standards rulemaking for several different reasons.

First, fuel switching can occur because a standard would result in the unavailability of important product characteristics. This would be the case if condensing standards were imposed on residential furnaces or commercial water heaters, because there are many cases in which it would be impractical to install condensing products or in which such products could not be installed without the need for undesirable building modifications that purchasers would be unwilling to accept. Where this is the case, the Unavailability Provisions would not preclude the adoption of the standard because fuel switching would occur, but because of the unavailability of product characteristics that would cause that fuel switching to occur.

Second, it is important to recognize that the purpose of energy efficiency standards is to produce energy conservation benefits by increasing the efficiency of the products subject to those standards: a purpose that can be served only to the extent products with required efficiency improvements would actually be sold. While electrification advocates would be delighted with efficiency standards that would drive gas products out of the market, that is not a legitimate objective for regulation authorized by statutory provisions that are specifically designed to promote the efficiency of the regulated products.

The related point is that DOE must justify standards on the basis of *the economics of required efficiency improvements*, which DOE cannot do if – instead of accounting for the economics of cases in which poor economic outcomes would drive consumers to alternative products – it excludes those outcomes from its analysis and substitutes more favorable economic outcomes based on assumed product substitution. EPCA makes this explicit by requiring DOE to prepare and consider both “payback” and life-cycle cost (“LCC”) analyses in determining whether standards are economically justified. Specifically, DOE must consider:

- Whether “the additional cost to the consumer of purchasing a product complying with an energy conservation standard level will be less than three times the value of the energy . . .

⁴¹ 84 Fed. Reg. at 33016-17.

⁴² 84 Fed. Reg. at 33017-18.

savings during the first year that the consumer will receive as a result of the standard” (*i.e.*, a payback analysis);⁴³ and

- The “savings in operating costs throughout the estimated average life of the covered product . . . compared to any increase in the price of, or in the initial charges for, or maintenance expenses of” the product “likely to result from the imposition of the standard (*i.e.*, a life cycle cost analysis).⁴⁴

The statutory language makes it clear that both types of analysis are designed to assess the economic justification of standards through a comparison of the cost of required efficiency improvements and the operating cost savings those efficiency improvements would provide.

DOE recognizes that consumers may react to the increased cost of higher-efficiency products by declining to purchase such products, and consideration of such market impacts is critical for evaluation of some of the issues DOE must consider in standards development. However, *the way consumers would react* to the economics of required efficiency improvements does not change the economics consumers would be reacting to, and it is *those* economics – the economics of the required efficiency improvements – that payback and LCC analyses must address.

Unfortunately, DOE’s analysis in the residential furnace rulemaking “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.”⁴⁵ Specifically, in the residential furnace rulemaking DOE preferentially excluded high-cost efficiency investments from its analysis, assumed that purchasers in those cases would choose alternative products, and prepared purported payback and LCC analyses reflecting the investment outcomes for the resulting mix of products.⁴⁶ This analysis was problematic in several respects. Most obviously, it failed to answer the core question that payback and LCC analysis is supposed to address: the question of how the cost consumers would pay for a required efficiency improvement would compare with the operating cost savings that efficiency improvement would provide. In addition, rather than accounting for the unreasonable costs that would induce fuel switching, DOE’s analysis claimed regulatory benefits resulting – not from the efficiency improvements its proposed standards would require – but from assumed actions taken in response to the *costs of the required efficiency improvements*. By this logic, standards could be “economically justified” on the grounds that they are *so economically unjustified* that consumers would no longer purchase the regulated products at all.

DOE should recognize that the purpose of payback and LCC analysis is to determine what the economics of a required efficiency improvement would be, and that it is improper to skew that analysis by excluding unfavorable economic outcomes from its analysis on the basis of

⁴³ 42 U.S.C. § 6295(o)(2)(B)(iii).

⁴⁴ 42 U.S.C. § 6295(o)(2)(B)(i)(II).

⁴⁵ 84 Fed. Reg. at 33017.

⁴⁶ See Spire’s Residential Furnace Comments at pp. 6-7 and 62-65.

assumptions as to *how purchasers would be expected to react to the economics of those unfavorable outcomes*. By doing the opposite in the residential furnace rulemaking, DOE effectively used evidence that consumers would consider required efficiency improvements to be economically unjustified (*i.e.*, fuel switching in response to particularly unfavorable economic outcomes) as a basis to exclude unfavorable data from its analysis of the economics of the efficiency improvements at issue. In the future – to ensure that payback and LCC analyses appropriately accounts for the economics of required efficiency improvements – DOE should account for all of the relevant economic outcomes by assuming that the standard under consideration would not reduce the number of products sold.⁴⁷

3. DOE should acknowledge that the systemic error in its base-case efficiency assignment invalidates the economic analysis underlying its pending proposals.

As explained in Petitioners' Previous Comments, a systemic defect in DOE's economic analysis provides a separate and independently-sufficient basis for DOE to withdraw its pending proposed rules.⁴⁸ In short, DOE's modeling is supposed to provide an assessment of the economic impacts of the efficiency investments that would only occur if a proposed standard were adopted, and – due to the use of random base-case efficiency assignment – DOE's modeling fails to provide such an assessment. DOE's response – that its "base-case efficiency distributions . . . are not entirely random"⁴⁹ – is not responsive to the issue.

With respect to the commercial water heater rulemaking, DOE states that:

the no-new-standards case and the selection in the LCC model were . . . based on distributions of models in DOE's data base, which included all commercially-available equipment on the market at the time and which (due to the absence of shipments data) represents the best data available to the DOE at the time.⁵⁰

The fundamental problem with DOE's modeling approach is that it is supposed to analyze the economics of the efficiency investments that would occur only if a new standard were adopted but – instead of doing so – it analyzes the economics of a *random selection of all potential efficiency investments*, including those that consumers would make on their own in the absence of regulation. The suggestion that DOE's modeling was based on a reasonable assessment of the relative market shares of products with different efficiencies has no bearing on this issue, because the problem is not that DOE's analysis is based on the wrong *number* (or percentage) of

⁴⁷ While the adverse impact a standard would have on product sales should be ignored *for purposes of payback and LCC analysis*, it does not follow that it should be ignored for purposes of other analyses as well. For example, the impact a standard would have on product sales is critical in the consideration of manufacturer and utility impacts, and is also important when DOE is estimating the energy savings a standard would provide (because required efficiency improvements can only provide energy savings to the extent that the more efficient products are purchased and used). These differences in analytical approach are required by the different purposes the analyses serve.

⁴⁸ See Petitioner's Previous Comments at pp. 11-12 and Attachments A and B.

⁴⁹ 84 Fed. Reg. at 33018.

⁵⁰ *Id.*

efficiency investments; it is that its analysis is based on *the wrong efficiency investments*: a random selection of investments rather than those purchasers would decline to make in the absence of regulatory compulsion. As a result, DOE's payback and lifecycle cost analyses do not provide assessments of regulatory impacts (*i.e.*, of the efficiency investments that would occur only if new standards were imposed): they provide results for a random selection of all potential efficiency investments including those that consumers would choose to make on their own.⁵¹ Whether DOE's analysis was based on the right *number* of efficiency investments is completely beside the point.⁵²

With respect to the residential furnace rulemaking, DOE states that:

assignment of efficiency in the base case was based on both the region and specific building in which it is installed, with the market shares of furnaces first being assigned by region based on historical shipments data and then allocated to specific buildings based on the existing furnace being replaced.⁵³

Consideration of regional differences in market share simply ensures that DOE's analysis is based on the right number (or percentage) of efficiency investments in each region; it does not address the fundamental problem that DOE's analysis is not based on the *right* efficiency investments. The suggestion that baseline efficiencies are "allocated to specific buildings based on the existing furnace being replaced" also fails to address the problem, *because DOE's model randomly assigns the efficiencies of the existing furnaces being replaced*, with the result that efficiency assignments based on those efficiencies are equally random.

For an abstract illustration of the problem with DOE's analysis, consider a region in which condensing furnaces already account for 90% of all new furnace sales. For purposes of illustration, assume that:

- 10% of the new furnace installations in the region involve furnace replacement scenarios in which it would be particularly difficult to replace an atmospherically vented furnace with a condensing furnace (*i.e.*, "bad installations"); and
- 80% of the cases in which condensing furnaces are *not already being sold* are cases involving "bad installations."

Under these assumptions:

⁵¹ DOE had no basis to assume that the results for these two different universes of efficiency investments would be the same; it simply chose to characterize the wrong universe of efficiency investments as rule outcomes.

⁵² However, it should be noted that DOE did not consider the right number of efficiency investments either. Lacking any credible information about the distribution of commercial water heater efficiencies, DOE simply made the arbitrary assumption that sales are directly proportional to the number of available models, as though every individual model had the same number of sales. *See Spire's Commercial Water Heater Comments* at 12-13 and 24-26.

⁵³ 84 Fed. Reg. at 33018.

- 10% of the new furnace installations in the region would be “rule outcome” cases (*i.e.*, cases in which condensing furnaces would only be imposed if a standard requiring condensing furnaces were imposed);
- 80% of those “rule outcome” cases would involve “bad installations,” and
- The economics of the “rule outcome” cases would look relatively bad.

Under DOE’s modeling approach, DOE would use shipment data to conclude (correctly, based on the reality assumed above) that 10% of the new furnace installations in the region are “rule outcome” cases. However, instead of considering the economics of the actual rule outcome cases (80% of which would involve “bad installations”), DOE’s approach considers the economics of a random 10% of *all new furnace installations*, only 10% of which involve “bad installations.” The economics of this random selection of installations would obviously look much better than the economics of the actual rule outcome cases, and that is the point: because DOE’s analysis is based on the *wrong installations* it does not actually provide an assessment of rule impacts. The practical impact is equally obvious: to the extent purchasers acting in the absence of regulation have *any* statistically significant preference for good economic outcomes or aversion to bad economic outcomes (as they unquestionably do), DOE’s analytical approach produces a systematic overstatement of regulatory benefits and understatement of costs.

This fundamental problem with DOE’s modeling approach fatally undermines the economic analysis in support of DOE’s proposed rules in the residential furnace and commercial water heater rulemakings. As a result, there is no reasonable basis to conclude that the standards proposed are economically justified as EPCA requires. Neither the claim that DOE’s “base-case efficiency distributions . . . are not entirely random”⁵⁴ nor the explanation of the basis for that claim have any bearing on this issue. Withdrawal of DOE’s pending proposed rules is warranted for this reason alone.

E. DOE Was Right to Reject Adverse Comments on the Petition

Comments submitted in opposition to the Petition relied extensively on previous DOE statements that have already been addressed in these Comments, and suggest that the Petition seeks to reopen rulemaking proceedings in which the issues have already been resolved.⁵⁵ This is no argument at all, as agencies are free to reconsider their positions if they conclude that a change in position is warranted and provide a reasonable explanation for that change.⁵⁶ Moreover, as discussed above, the Petition concerns highly controversial notices of proposed rulemaking that were the subject of substantial adverse comments to which DOE has never responded. While

⁵⁴ 84 Fed. Reg. at 33018.

⁵⁵ See AG Comments at p. 6-8; Cal. Electric Comments at p. 11; Northeast Energy Efficiency Partnership comments identified in the docket for this proceeding as Document No. EERE-2018-BT-STD-0018-0048 at p. 1; NRDC/EarthJustice Comments at p. 13.

⁵⁶ *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502 (2009).

opponents of the Petition seem to suggest that the outcome of these proceedings had already been determined, the fact is that DOE's deliberations had not been concluded and *cannot lawfully be concluded* without consideration of substantial adverse comments in the record demonstrating that significant changes in DOE's proposed actions are necessary. Suggestions to the contrary notwithstanding,⁵⁷ DOE's obligation to comply with statutory deadlines does not obviate its responsibility to consider comment nor require it to proceed with its pending proposals without regard to its statutory obligations to comply with notice and comment requirements and ensure that new standards are lawful on the merits.

Besides urging DOE not to consider the issues raised by the Petition on the merits, comments submitted in opposition to the Petition largely mischaracterize the issues raised by the Petition and raise legal and factual arguments that DOE was right to reject.

1. Opponents of the Petition misread the legislative history.

The Natural Resources Defense Council, Inc. ("NRDC") and EarthJustice argue that the Unavailability Provisions only apply if the unavailability of the performance characteristics or features at issue would "completely destroy the market for a covered product."⁵⁸ This argument is based on a transparent misreading of (misquoted) legislative history that simply makes the point that standards can *result in the unavailability of product characteristics* by effectively pricing products with such characteristics out of the market. The legislative history states that 42 U.S.C. § 6295(o)(4):

"would forbid a standard for small gas furnaces being set at a level that would increase the price to the point that the product would be noncompetitive and that would result in minimal demand for the product."⁵⁹

In this example, "small" describes a product characteristic that would be made unavailable by a standard effectively pricing "small" products out of the market. The same point is stated more clearly in other legislative history as follows:

A standard would result in the "unavailability" of characteristics, etc., if, as a result of the standard, a product containing such a characteristic would become prohibitively expensive, i.e., if there would be minimal demand for the product having such characteristic.⁶⁰

⁵⁷ AG Comments at p. 4-5.

⁵⁸ NRDC/EarthJustice Comments at p. 3; *see* 42 U.S.C. § 6295(o)(4) ("... performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available...") and 42 U.S.C. § 6313(a)(6)(B)(iii)(II)(aa) ("... performance characteristics (including reliability, features, sizes, capacities, and volumes) that are substantially the same as those generally available...").

⁵⁹ S. Rept. 100-6 at 8-9 (January 30, 1987) reprinted in 1987 U.S.C.C.A.N. 52, 59.

⁶⁰ H.R. Rep. No. 100-11 at 22 (1987).

This legislative history is not relevant to the issues raised by the Petition. Standards that can be achieved only through condensing technology would make products with the characteristics atmospherically vented products offer unavailable by banning such products outright, not by pricing them out of the market. Nothing in the statute or the legislative history suggests that standards resulting in the unavailability of gas furnaces with such characteristics would be precluded only if the unavailability of those characteristics would “completely destroy the market” for gas furnaces.

2. Opponents of the Petition misread the statutory text.

NRDC and EarthJustice also argue that a difference in the placement of a parenthesis mark between the two Unavailability Provisions somehow “dooms” the Petition with respect to residential furnaces.⁶¹ However, NRDC and EarthJustice point out, the difference between the two provisions came to exist when 42 U.S.C. § 6313(a)(6)(B)(iii)(II) was adopted as a “technical correction” conforming the statutory provisions applicable to commercial products such as water heaters with those applicable to consumer products.⁶² There was no indication at the time that any substantive difference between the two provisions was intended, and there is no reason why it would make sense for any substantive difference to exist. Under the circumstances, it seems clear that the difference was merely a typographical error. In any event, it is difficult to see any material difference between the two provisions, because both cover “performance characteristics (including reliability)” and both cover “features, sizes, capacities, and volumes.” The only ostensible difference between them is whether “features, sizes, capacities, and volumes” are included (along with “reliability”) under “performance characteristics,” and it is difficult to see how that difference would matter. The ability of a product to function with atmospheric venting – and the ability to operate without generating liquid condensate – are “performance characteristics” in the literal sense that they relate directly to how the product performs and is capable of performing. While opponents of the Petition argue in circles trying to come up with some linguistic basis to argue that the specific characteristics that atmospherically vented products offer are somehow outside the scope of the protections the Unavailability Provisions provide, they ultimately fall back upon the same kinds of extra-statutory qualifications already discussed.⁶³ These efforts provide no basis to conclude that broadly-written statutory provisions that were intended “to ensure that an amended standard does not deprive consumers of product choices and characteristics, features, sizes, *etc.*”⁶⁴ should, in the case of atmospherically vented gas products, be read to fail in that purpose.

3. No material facts are in dispute.

Opponents of the Petition also fail to generate any credible dispute as to the material facts. In particular, there is no question that:

⁶¹ NRDC/EarthJustice Comments at p. 4-5.

⁶² See NRDC/EarthJustice Comments at p. 2, note 1.

⁶³ See NRDC/EarthJustice Comments at pp. 4-5, NEMA Comments at pp. 13-14.

⁶⁴ H.R. Rep. No. 100-11 at 22 (1987).

- Standards that could only be achieved through the use of condensing technology would make atmospherically vented products unavailable;
- Atmospherically vented products can do things that condensing products cannot (specifically, they can operate with the atmospheric venting systems built into most of the existing buildings in which gas products are installed and can operate without generating liquid condensate);
- The unavailability of products with these capabilities would generally leave purchasers seeking to replace existing atmospherically vented products without the type of replacement products for which their buildings were designed; and
- In such cases, atmospherically vented products generally cannot be replaced with condensing products without the need for building modifications.

Claims that “Petitioners have not shown that any characteristic of the performance of furnaces – whether reliability, safety, heating, serviceability, incidence and cost of repair, or something else – is substantially different depending on whether the furnace does or does not rely on condensing technology”⁶⁵ sound like factual claims but are not. They simply reflect the baseless assertion that the substantial differences in performance characteristics between atmospherically vented products and condensing products can be characterized as “installation characteristics” and dismissed with the *ipse dixit*⁶⁶ that “[e]ase of installation is not a performance characteristic.”⁶⁷ As already discussed, statements characterizing the issues involved as a matter of “increased cost of installation”⁶⁸ or “incremental costs”⁶⁹ that could be appropriately addressed in payback and lifecycle cost analysis are unreasonable efforts to reduce the loss of product characteristics to a matter of out-of-pocket costs, not factual claims that nothing more is involved. Opponents of the Petition do not actually contest the fact that more is involved, they simply ignore or seek to dismiss that fact. For example, a study prepared in opposition to the Petition repeatedly acknowledges that the installation of condensing appliances frequently presents non-economic problems for purchasers.⁷⁰ Although the report goes out of its way to characterize these other considerations as the “aesthetic” concerns of “building owners,” the reality is that condensing

⁶⁵ NRDC/EarthJustice Comments at p. 5.

⁶⁶ Literally “he said”: a bald assertion.

⁶⁷ NRDC/EarthJustice Comments at p. 4.

⁶⁸ NEMA Comments at p.4.

⁶⁹ Cal. Electric Comments at p. 3.

⁷⁰ See Investigation of Installation Barriers and Costs for Condensing Gas Appliances, identified in the docket for this proceeding as Document No. EERE-2018-BT-STD-0018-0062 (“Installation Barriers”) at p. 7 (“20% of the time . . . [Building owners/architects] have a vision [and] don’t want to see chases on the side of their building, gas exhaust fumes and smoke, etc.”); p. 3 (citing “the building owner’s design goals,” and “building aesthetics”) p. 6 (citing cases in which “[a] building owner does not want to drill through any walls or have any visible exterior vents” and acknowledging problems “caused by building owners’ refusal to allow a vent in a certain location”), p. 8 (citing “[s]pecific building owner preferences” and “owner aesthetic preferences”).

standards would leave many consumers facing the need to sacrifice window, balcony, or interior living space simply to replace an existing gas product. Rather than denying the existence of such considerations, the study simply declines to recognize them as a cognizable issue independent of out-of-pocket costs. As a result, the study only considers required building modifications to be “significant” – no matter what the impacts of such modifications might be – if their out-of-pocket costs would result in total “installation costs” that, by themselves, would be “more than double the total system cost of a typical retrofit.”⁷¹ Accordingly, the study’s claims that “significant” building modifications are only infrequently required are based on an unreasonable definition of “significance” and are not really responsive to the factual basis for the Petition.

One particular *faux*-factual issue involves the question of whether there are cases in which it would be “impossible” to replace atmospherically vented gas products with condensing products. This purported debate is of limited legal significance, because it stems from the false premise that – unless “installation challenges” imposed by the loss of the product characteristics at issue would “absolutely preclude”⁷² the installation of condensing products – the unavailability of those characteristics can be dismissed as matter of out-of-pocket cost.⁷³ In any event, much of this debate is semantic. Petitioners have been reluctant to speak in terms of technical (as opposed to practical) “impossibility” because it is *technically possible* to put a man on the moon, and – in that sense – there is very little of a mechanical nature that is truly *impossible*. For example, the owner of a condominium unit who cannot install a condensing furnace without violating applicable restrictive covenants or compromising a common venting system serving appliances in other separately-owned condominiums could simply buy out as many neighbors as it takes to resolve these issues. It’s only money, after all, not a matter of *technical* or *physical* impossibility. However, it is only in that objectively ridiculous sense that it would always be possible to replace atmospherically vented products with condensing products. Petitioners think it is reasonable, speaking in practical terms, to say that it is impossible to install condensing products in circumstances of this kind, and that is certainly the kind of usage DOE employed when it referred to settings in which it is “impossible” to install vented clothes dryers.⁷⁴ It is therefore unreasonable to suggest that Petitioners have not shown that there are cases in which condensing products “cannot” be installed and are concerned only about cases in which the installation of condensing products would be “economically less convenient.”⁷⁵ Similarly, assertions that it is *always possible* (or only rarely “impossible”) to replace atmospherically vented product with condensing products are either false or limited to “physical” or “technical” impossibility⁷⁶ to an extent that makes them non-responsive to the point that there are many cases in which condensing products are not a practical option.

⁷¹ Installation Barriers at p. 3.

⁷² NRDC/EarthJustice Comments at p. 6 n.3

⁷³ Hence asserted puzzlement over whether “the installation challenges Petitioners allege mean that installing a furnace or water heater using condensing technologies is impossible, or only more expensive.” NRDC/EarthJustice Comments at pp. 5-6.

⁷⁴ 84 Fed. Reg. at 33013.

⁷⁵ NEMA comments at p. 10.

⁷⁶ See NRDC/EJ Comments at p. 5 (“physically impossible”).

There *are* many cases in which condensing products are not a practical option.⁷⁷ This has been documented repeatedly, including in numerous written comments volunteered in response to a survey addressing the cost of residential furnace replacements.⁷⁸ Based on a survey of fifteen individuals (including eleven installers), the study prepared in opposition to the Petition suggests that “[t]here is always a way of getting venting ‘done.’”⁷⁹ However, many other installers have had different experience, reporting that:

“There are multiple situations, especially in larger urban cities, where a condensing furnace installation is literally impossible. These include historic buildings, concrete buildings, and other buildings where distance to acceptable vent location violates manufacturer's install guidelines, or where the only way to vent a condensing furnace would be through other homeowner's condos.”⁸⁰

And:

“We have had several installations where upgrading to a condensing furnace was not possible, not because of costs, but simply not being able to conform to Code with the venting requirements.”⁸¹

⁷⁷ Affidavit of George L. Welsch, submitted as Attachment C to Petitioner's Previous Comments, at ¶¶ 11-14. See The Air-Conditioning, Heating & Refrigeration Institute's comment submission of July 10, 2015, available in Docket No. EERE-2014-BT-STD-0031 and identified as Document No. EERE-2014-BT-STD-0031-0159 (the “AHRI Furnace Comments”) at pp. 58-63.

⁷⁸ The survey is documented in a study (entitled “Survey of Furnace Installation Contractors” and dated June 2015) that was prepared by Shorey Consulting, Inc., and submitted as Appendix A to the AHRI Furnace Comments and included in Document No. EERE-2014-BT-STD-0031-0159. Written comments provided in response to the survey are included in Appendix C of that document (“Appendix C”). For relevant comment, see e.g., Appendix C at p. 14 (“Condensing furnaces “are great and we recommend them, but sometimes they just can't be installed”); p. 15 (There are cases in which condensing furnaces “could not be installed no matter what”); p. 16 (“[I]n some replacements it is impossible to get a high efficiency [product] installed”); p. 22 (“There are some installations where it is impossible to install a 90% furnace”); and p. 23 (“Sometimes an 80% furnace replacement is the only option due to building restraints” and “[o]f the standard (80%) efficient furnaces we installed, at least half of them were in homes where there was 0% chance of installing a high efficient furnace according to manufacturers' specifications and local codes”).

⁷⁹ Installation Barriers at p. 6.

⁸⁰ Appendix C at p. 23.

⁸¹ Appendix C at pp. 25-26. See also Appendix C at p. 13 (“Condensing furnaces are impossible to install in some older homes to satisfy the venting requirements”); p. 17 (“There are replacement applications that dictate an 80% furnace” because there is “physically no way to get a 90+ flues out of the premises”); p. 19 (“Sometimes it is impossible to find a safe location to vent a condensing furnace”).

Similarly, the study prepared in opposition to the Petition suggests that condensate disposal “would never prevent a retrofit project,”⁸² but other installers have had contrary experience.⁸³

Most importantly, it is not only cases of “practical impossibility” that count. While there are a significant number of cases in which the unavailability of atmospherically vented products would leave consumers with no practical gas replacement option, there are many more cases in which the unavailability of such products would leave consumers without any products they could use without having to accept substantial and often undesirable building modifications. As one installer put it, “[t]here are MANY installations in the replacement areas that there is NO practical way to vent a 90% to the exterior of the home without EXTENSIVE cost and remodeling involvement.”⁸⁴ As another explained:

“Not all homes are able to use sidewall vented units. Here in the northeast we have houses with finished basements with the units in the middle of the house. To replace the unit you have to rip apart the basement for the venting and intake. Also many houses do not have the window clearance and/or ground clearance for direct vent. And the chimney can't be lined for it because it is being used for multiple appliances.”⁸⁵

This is a volume problem by any credible measure: *nearly half* of all residential furnaces in the northern part of the country are located in finished basements, over ten percent nationwide are in apartments, many more are in townhomes, and these are all installations in which the replacement of atmospherically vented products would routinely require significant building modifications.⁸⁶ There is no factual basis to assert otherwise.

Conclusion

The purpose of EPCA’s Unavailability Provisions is to ensure that standards do not deprive purchasers of “product choices and characteristics, features, sizes, etc.” and that energy savings

⁸² Installation Barriers at p. 9.

⁸³ See Appendix C at p. 16 (“We have multiple locations” in which there is “no possibility of installing [a] condensate disposal system”); p. 13 (“In freezing locations, such as ventilated attics, 90+% condensing furnaces may not always fit the applications because of condensing lines freezing and furnaces failing to fire”); p. 15 (“We do not install condensing furnaces in non-conditioned spaces (attics) no matter what”); p. 24 (“We will not install a condensing furnace in an unconditioned attic”); and p. 27 (“I don’t recommend a 90% furnace” in attic installations because “[d]rain freezing can be a bad event and heat taped drains seem counterproductive”).

⁸⁴ Appendix C at p. 17 (emphasis in original). See also Appendix C at p. 19 (“There are many applications in the Boston area where a high efficiency condensing furnace is not possible without huge amounts of modifications to the building in order to vent outside”).

⁸⁵ Appendix C at p. 14. See also Appendix C at pp. 23-24 (“Some installations, because we are a “basement” area of the country will be VERY difficult/costly because of finished basements. This can make accessing an exterior wall next to impossible without tearing out drywall and creating a new chase way for PVC”); Affidavit of George L. Welsch at ¶¶ 11-14.

⁸⁶ See AHRI Furnace Comments at pp. 62-63.

are achieved “without sacrificing the utility or convenience of appliances to consumers.”⁸⁷ These provisions were intended, among other things, to preserve the availability of product characteristics that purchasers need to be able to use products without having to modify their existing buildings to do so. This is clear from the expressly stated intent that standards preserve “the availability of sizes that fit in standard building spaces”⁸⁸ and from the fact that Congress provided separate product classes for each of the three standard types of installations for direct heating equipment.⁸⁹ In general, the building modifications necessary to enlarge the “standard building space” for an appliance pale in comparison with building modifications required to replace atmospherically vented furnaces or water heaters with condensing products. There is no basis to suggest that Congress intended to spare purchasers from the need for the lesser kinds of modifications but not the greater; nor is there any basis to suggest that – by some accident of legislative drafting – Congress produced such a result inadvertently. Arguments to the contrary are based on abstract qualifications that have no statutory basis, have not been consistently applied, and serve only to confound an otherwise easy issue of statutory interpretation.

Petitioners commend DOE’s willingness to take a fresh look at the relevant issues and welcome its proposal to recognize that condensing standards would indeed run afoul of the constraints imposed by the Unavailability Provisions. Petitioners urge DOE to recognize the issues presented are, in fact, straight-forward, and to take action to ensure that they are conclusively resolved.

Petitioners specifically urge DOE to withdraw the pending proposed rules in the residential furnace and commercial water heater rulemaking proceedings. Such a withdrawal is warranted not only by DOE’s proposed interpretive rule, but by the fact that the economic justification for the standards proposed in both proceedings was based on defective modeling that resulted in a systematic overstatement of regulatory benefits and systematic understatement of the costs imposed. Rather than waiting until it has invested all the time required to prepare new proposed rules, Petitioners urge DOE to promptly acknowledge both problems with its pending proposals and request comment as to how it should address these problems in the development of new proposals. This approach would correct the existing record in both rulemaking proceedings, document material progress in the resolution of key issues, and provide a constructive basis for further progress in both proceedings.

Signatories

The following parties are signatories to these comments:

Spire

Spire Inc. is a holding company that owns and operates Spire Missouri Inc., the largest natural gas distribution company in the state of Missouri, Spire Alabama Inc., the largest natural gas distribution company in the state of Alabama, Spire Gulf Inc. and Spire Mississippi Inc.,

⁸⁷ H.R. Rep. No. 100-11 at 22-23 (1987).

⁸⁸ H.R. Rep. No. 100-11 at 23 (1987).

⁸⁹ 42 U.S.C. § 6295(e)(3).

operating in the Gulf Coast region of Alabama and in Mississippi, respectively. Spire's utility companies have been distributing gas in one form or another in their respective service areas for more than a century and a half. Today, they collectively provide natural gas distribution service to more than 1.7 million residential, commercial and industrial customers.

[The American Public Gas Association](#)

The American Public Gas Association (APGA) represents the interests of approximately 1,000 public gas systems in the United States. APGA members are retail distribution entities owned by, and accountable to, the citizens they serve. They include municipal gas distribution systems, public utility districts, county districts, and other public agencies that own and operate natural gas distribution facilities in their communities. Public gas systems' primary focus is to provide safe, reliable, and affordable natural gas service to their customers. APGA members serve their communities in many ways. First and foremost, they deliver natural gas for cooking, cleaning, and heating, as well as for various commercial and industrial applications.

[The American Gas Association](#)

The American Gas Association (AGA), founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are more than 74 million residential, commercial and industrial natural gas customers in the U.S., of which 95 percent — more than 71 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 one-fourth of the United States' energy needs.

[The National Propane Gas Association](#)

The National Propane Gas Association (NPGA) is the national trade association of the propane industry with a membership of about 2,800 companies, and 38 state and regional associations that represent members in all 50 states. Membership in NPGA includes retail marketers of propane gas who deliver the fuel to the end user, propane producers, transporters and wholesalers, and manufacturers and distributors of equipment, containers, and appliances. Propane gas fuels millions of installations nationwide for home and commercial heating and cooking, in agriculture, industrial processing, and as a clean air alternative engine fuel for both over-the-road vehicles and industrial lift trucks. Residents throughout the country utilize propane to fuel home furnaces, but propane is uniquely popular in rural regions. Thus, the potential impact of the proposal on residential furnaces in the South and among low-income residents is an important concern to members of NPGA.

[The Natural Gas Supply Association](#)

The Natural Gas Supply Association (NGSA) represents integrated and independent companies that supply natural gas. Founded in 1965, NGSA is the only national trade association that solely focuses on producer-marketer issues related to the downstream natural gas industry.

[The National Association of Home Builders](#)

NAHB is a Washington, DC-based trade association that is affiliated with more than 660 state and local home builders' associations (HBAs) located in all 50 states and Puerto Rico and represents more than 140,000 members – many of whom will be directly affected by DOE's proposed rule. NAHB's builder members will construct 80 percent of the new housing units projected for this year; NAHB's *The Leading Home Suppliers* Council represents the nation's top manufacturers; the more than 14,000 firms that belong to NAHB Remodelers comprise about one fifth of all firms that specify remodeling as a primary or secondary business activity; and the NAHB Multifamily Council is comprised of more than 1,000 builders, developers, owners, and property managers of all sizes and types of condominiums and rental apartments. NAHB's members represent all aspects of the housing industry and work in concert to ensure that all Americans have access to safe, decent and affordable housing, whether they choose to buy a home or rent.

[The Air Conditioning Contractors of America](#)

The ACCA is the nation's premier trade association for heating, ventilation, air conditioning, and refrigeration contractors. ACCA's member companies provide quality service in heating, air conditioning, refrigeration, building and home performance, solar, hydronics, and plumbing. ACCA has created the nationally recognized and industry endorsed standards needed to ensure HVACR systems are properly installed and maintained.

[The National Multifamily Housing Council](#)

Based in Washington, D.C., the National Multifamily Housing Council (NMHC) is the leadership of the apartment industry. We bring together the prominent owners, managers and developers who help create thriving communities by providing apartment homes for 39 million Americans and contributing \$1.3 trillion annually to the economy. NMHC provides a forum for insight, advocacy and action that enables both members and the communities they help build to thrive.

[The National Apartment Association](#)

The National Apartment Association (NAA) serves as the leading voice and preeminent resource through advocacy, education and collaboration on behalf of the rental housing industry. As a federation of nearly 160 affiliates, NAA encompasses over 82,000 members representing more than 9.7 million apartment homes globally. NAA believes that rental housing is a valuable partner in every community that emphasizes integrity, accountability, collaboration, community responsibility, inclusivity and innovation.

[The National Leased Housing Association](#)

The National Leased Housing Association is widely recognized as the only national organization serving all major participants – private and public – in the multifamily rental housing field. NLHA is a vital and effective advocate for 500-member organizations, including developers, owners, managers, public housing authorities, state housing finance agencies, local governments, investment bankers, attorneys, accountants, architects, non-profit sponsors and syndicators involved in government related rental housing. This unique coalition is committed to public and private sector interaction as the most pragmatic means of meeting this nation's rental housing needs.

[The Plumbing-Heating-Cooling Contractors—National Association](#)

The Plumbing-Heating-Cooling Contractors - National Association (PHCC) is a 135 year old association representing over 3200 contractor members who employ approximately 60,000 technicians. These contractor members believe in providing the best products and services for their consumer clients and support a practical and achievable approach to energy conservation.

[The Manufactured Housing Association for Regulatory Reform](#)

MHARR is a Washington, D.C.-based national trade association representing the views and interests of producers of manufactured housing regulated by the U.S. Department of Housing and Urban Development (HUD) pursuant to the National Manufactured Housing Construction and Safety Standards Act of 1974, as amended by the Manufactured Housing Improvement Act of 2000, 42 U.S.C. 5401, et seq. (2000 reform law). MHARR was founded in 1985. Its members include independent manufactured housing producers from all regions of the United States.

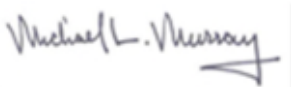
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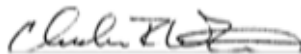
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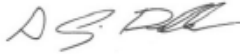
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