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Comments submitted via e-mail:

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U.S. Department of Energy

Building Technologies Program

**Re: Docket No. EERE-2018-BT-STD-0018  
Gas Industry Petition Regarding Energy Conservation Standards for Residential  
Gas Furnaces and Commercial Gas Water Heaters**

The undersigned state and local government entities appreciate the opportunity to comment on the October 18, 2018 petition<sup>1</sup> filed by the American Public Gas Association, Spire, Inc., the Natural Gas Supply Association, the American Gas Association, and the National Propane Gas Association requesting that the Department of Energy (DOE): (1) issue an interpretive rule stating that DOE's proposed energy conservation standards for residential gas furnaces and commercial gas water heaters<sup>2</sup> would result in the unavailability of "performance characteristics" within the meaning of the Energy Policy and Conservation Act of 1975, as amended, 42 U.S.C. §§ 6291, et seq. (EPCA); and (2) withdraw DOE's proposed energy conservation standards for residential gas furnaces and commercial gas water heaters based upon appropriate findings pursuant to 42 U.S.C. §§ 6295(o)(4) and 6313(a)(6)(B)(iii)(II). For the reasons set forth below, DOE must deny the petition.

As government entities charged with reducing the economic and environmental costs of energy use, we strongly support DOE's adoption of product standards that can achieve the maximum level of efficiency that is both technically feasible and cost-justified. DOE's efficiency standards have been highly effective in reducing consumer and industrial energy consumption and costs, as well as environmental impacts associated with operating common household and commercial equipment.<sup>3</sup> The petition, however, seeks DOE action that is contrary to these goals,

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<sup>1</sup> Notice of Petition for Rulemaking, Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters, 83 Fed. Reg. 54883 (November 1, 2018).

<sup>2</sup> DOE published proposed residential furnace standards in a March 12, 2015 Notice of Proposed Rulemaking (80 Fed. Reg. 13120 (NOPR) and in a September 23, 2016 Supplemental Notice of Proposed Rulemaking (81 Fed. Reg. 65720 (SNOPR) (Docket No. EERE-2014-BT-STD-0031) *available at* <https://www.regulations.gov/docket?D=EERE-2014-BT-STD-0031>. DOE published proposed standards for commercial water heating equipment on May 31, 2016 (81 Fed. Reg. 34440) (Docket No. EERE-2014-BT-STD-0042) *available at* <https://www.regulations.gov/docket?D=EERE-2014-BT-STD-0042>.

<sup>3</sup> According to DOE, national energy efficiency standards completed through 2016 are expected to save 71 quadrillion British thermal units (quads) of energy by 2020 and nearly 142 quads through 2030—more energy than the entire nation uses in one year. The cumulative utility bill savings to consumers are estimated to be more than \$1 trillion by 2020 and more than \$2 trillion by 2030. DOE further estimates that as a result of standards, a typical household saves about \$321 per year off its energy bills. As consumers replace their appliances with newer models, they can expect to save over \$529 annually by 2030. *See* DOE Fact Sheet, "Saving Energy and Money with

to EPCA's requirements, and to DOE precedent. Such action would effectively grandfather inefficient product designs and further unlawfully delay the benefits of final, improved efficiency standards for residential gas furnaces and commercial gas hot water heaters. The DOE should deny the petition because: (1) the relief the petitioners request would impermissibly further delay DOE's publication of final rules; (2) venting capabilities are not performance-related features for purposes of EPCA; and (3) granting the petition would result in lost economic and environmental benefits and interfere with state and local energy and climate goals.<sup>4</sup>

## I. Background

Congress' primary goals in adopting EPCA included reducing domestic energy demand and increasing energy efficiency. EPCA and its amendments authorize DOE to set minimum energy conservation standards for approximately 60 categories of appliances and equipment used in residences and businesses. The statute authorizes DOE to divide covered products into product classes by the type of energy used, capacity, or other performance-related features that justify a unique standard. In determining whether a different class or standard is warranted for a product, DOE must consider factors such as the product features' utility to the customer. 42 U.S.C. § 6295(q)(1).<sup>5</sup> A key part of EPCA's framework is its mandate that DOE conduct periodic reviews and update established efficiency standards<sup>6</sup> to ensure that they are as stringent as

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Appliance Equipment Standards in the United States," available at [https://www.energy.gov/sites/prod/files/2017/01/f34/Appliance%20and%20Equipment%20Standards%20Fact%20Sheet-011917\\_0.pdf](https://www.energy.gov/sites/prod/files/2017/01/f34/Appliance%20and%20Equipment%20Standards%20Fact%20Sheet-011917_0.pdf). National standards have also helped the United States avoid emissions of 2.6 billion tons of carbon dioxide (CO<sub>2</sub>) emissions, which is equivalent to the annual CO<sub>2</sub> emissions from nearly 543 million automobiles. See DOE Fact Sheet available at <https://www.energy.gov/sites/prod/files/2016/02/f29/Appliance%20Standards%20Fact%20Sheet%20-%202017-2016.pdf>.

<sup>4</sup> These comments build upon a long history of state engagement with DOE's appliance efficiency standards program, including regarding DOE's furnace standard rulemaking. For example, many of the undersigned states were joined in litigation against DOE in 2005 to compel compliance with statutory deadlines for the adoption of amended efficiency standards for furnaces and 21 other products (*New York, et al. v. Bodman*, 05 Civ. 7807, 7808 (S.D.N.Y. 2005)). This litigation resulted in a 2006 Southern District of New York Consent Decree establishing firm deadlines for DOE publication of final amended standards and obligating DOE to publish semi-annual reports regarding its progress on efficiency standards rulemaking. Following DOE's publication of a final rule establishing furnace standards in 2007, many of the undersigned states petitioned for judicial review, alleging among other things, that DOE's 80% Annual Fuel Utilization Efficiency (AFUE) standard for residential indoor furnaces was insufficiently stringent and that DOE had failed to adequately consider the benefits of a 90% AFUE standard (*New York, et al. v. Bodman*, 08-0311, 0312 (2d Cir. 2008)). DOE voluntarily remanded the rule, and after extensive stakeholder discussions, issued a Direct Final Rule in 2011 establishing a 90% AFUE furnace standard. When industry challenged the Direct Final Rule, many of the undersigned states filed an amicus brief in support of DOE (*American Public Gas Association, et al. v. DOE*, No. 11-1485 (D.C. Cir. 2011)). See also, Letter to DOE Secretary Chu dated December 6, 2012 on behalf of Attorneys General of Massachusetts, New York, Vermont, Oregon, Illinois, and the California Energy Commission regarding "Defending the Department's Energy Efficiency Standards for Natural Gas Furnaces"; Letter to J. Cymbalsky, DOE Building Technologies Program dated November 22, 2016 on behalf of Northeast Energy Efficiency Partnerships (NEEP), and various state energy agencies, including the Connecticut Department of Energy and Environmental Protection, the New York State Energy Research and Development Authority, the Rhode Island Office of Energy Resources, and the Vermont Public Service Department regarding Residential Furnace SNOPR available at <https://www.regulations.gov/document?D=EERE-2014-BT-STD-0031-0285>.

<sup>5</sup> See also, 42 U.S.C. §§ 6295(o)(4) and 6313(a)(6)(B)(iii)(II).

<sup>6</sup> 42 U.S.C. §§ 6295(m)(1); 6313(a)(6).

technologically feasible and economically justified. Meanwhile, EPCA prohibits DOE from setting a standard which would result in the loss of “performance characteristics (including reliability), features, sizes, capacities and volumes that are substantially the same” as those in currently available products. 42 U.S.C. §§ 6295(o)(4); 6313(a)(6)(B)(iii)(II).<sup>7</sup> And EPCA’s anti-backsliding provision, 42 U.S.C. § 6295(o)(1), prohibits DOE from weakening energy efficiency standards that have already been established by Congress or DOE.

#### A. DOE’s Proposed Efficiency Standards for Residential Furnaces and Commercial Water Heaters

In 2015, after nearly a decade of litigation, negotiated rulemaking and public comment regarding appropriate standards for residential gas furnaces,<sup>8</sup> DOE published proposed standards that would increase the minimum efficiency standard for non-weatherized gas furnaces<sup>9</sup> and mobile home gas furnaces from 80% to 92% AFUE.<sup>10</sup> Based on comments received, DOE issued a supplemental proposed furnace rule in 2016. Supporting DOE’s proposal was its tentative conclusion that the proposed standards would achieve the maximum improvement in energy efficiency that was technologically feasible and economically justified and would result in significant energy savings and environmental benefits.<sup>11</sup> Moreover, DOE recognized that products meeting these standards were already commercially available. DOE estimated that energy savings from the proposed residential gas furnace standards would more than offset incremental costs over a furnace’s life, even taking into consideration potentially increased installation or retrofitting costs.<sup>12</sup> For example, the consumer impacts of the AFUE, stand-by and off-mode standards for indoor gas furnaces was an average savings of \$411 with a simple payback period of 7 years. For mobile home gas furnaces, DOE estimated consumer savings of \$1,050 with a simple payback period of 1.9 years.<sup>13</sup> DOE projected that the national energy

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<sup>7</sup> Congress envisioned the need to balance the preservation of product utility with product efficiency: “A valid standard may entail some minor loss of characteristics, features, sizes, etc.; for this reason, the Act requires that ‘substantially the same,’ though not necessarily identical, characteristics or features should continue to be available.” H. Rep. 100-111, at 23 (1987).

<sup>8</sup> See *fn. 4, supra*; SNOPR, II.B.2, “History of Standards Rulemaking for Residential Furnaces,” 81 Fed. Reg. at 65732-65735; Public comments filed in response to SNOPR *available at* <https://www.regulations.gov/docketBrowser?rpp=25&so=DESC&sb=commentDueDate&po=0&dct=PS&D=EERE-2014-BT-STD-0031>.

<sup>9</sup> DOE proposed to establish a separate class of small indoor gas furnaces with a capacity input of 55 kBtu/h or less. See 42 U.S.C. §§ 6295(o)(4); 6295(q) (authorizing separate class or special treatment based on capacity). These smaller furnaces would be subject to an 80% AFUE standard and therefore exempt from the 92% AFUE standard applicable to larger gas furnaces. DOE’s cost benefit analysis found that a less stringent standard for small furnaces was economically justified because it would reduce the number of consumers, especially low-income consumers who typically have smaller homes, who might experience net costs. 81 Fed. Reg. at 65752.

<sup>10</sup> AFUE is a measure of how efficiently a furnace converts fuel to energy. For example, a gas furnace with a 92% AFUE rating can turn 92% of the gas it consumes into heat.

<sup>11</sup> 81 Fed. Reg. at 65729.

<sup>12</sup> Consumers are generally affected by higher-efficiency heating products in two ways: they pay more in purchase price but reduce their operating costs. Occasionally, a consumer may choose to switch to an alternative heating system (i.e., electric heating).

<sup>13</sup> 81 Fed. Reg. at 65723, Table I.5. In calculating lifecycle costs and payback periods, DOE included total installed costs (product price and installation), operating costs (annual energy use, energy prices, repair/maintenance costs), product lifetime (est. 21 years), and discount rate. DOE’s discussion of installation costs included consideration of

savings for furnaces purchased over a 30-year period would total approximately 2.9 quadrillion BTUs, resulting in up to \$30.2 billion in consumer savings and \$13.1 billion in cost savings associated with decreased CO<sub>2</sub> and nitrogen oxide emissions.<sup>14</sup>

With respect to commercial water heating equipment, DOE's 2016 proposed standards would increase the minimum thermal efficiency required of gas-fired storage and instantaneous water heaters from 80% to either 94% or 95% AFUE, depending on the equipment type. According to DOE, the proposed standards would reduce national energy usage by 1.8 quadrillion BTUs, save commercial consumers up to \$6.8 billion, and reduce CO<sub>2</sub> emissions by 98 million metric tons over 30 years of sales.<sup>15</sup>

DOE received numerous comments during rulemaking, including substantial support from government entities, energy efficiency and consumer advocates, and regulated utilities. In its rulemaking, DOE also considered the comments of gas industry members asserting that the proposed minimum efficiency standards could only be met using condensing technology, which would eliminate non-condensing products from the market, and arguing, as petitioners do here, that the proposed standards would improperly eliminate a performance-related feature—that is, the ability to utilize conventional atmospheric venting without a plumbing connection to drain liquid condensate.<sup>16</sup>

#### B. Gas Industry Petition

Petitioners assert that DOE's proposed standards for residential gas furnaces and commercial gas water heaters can only be met by products with condensing combustion technology and would preclude the distribution in commerce of currently available non-condensing appliances that can operate utilizing conventional venting. Such standards, they contend, violate EPCA, 42 U.S.C. §§ 6295(o)(4) and 6313(a)(6)(B)(iii)(II), which prohibit the adoption of standards that result in the unavailability of an existing performance-related feature.

For the reasons set forth below, the gas industry petition must be denied.

#### II. DOE Must Deny the Petition Because Granting the Requested Relief—Withdrawal of the Proposed Rules—Would Impermissibly Delay DOE's Publication of Final Rules as Required by EPCA, 42 U.S.C. §§ 6295(m)(3)(A) and 6313(a)(6)(C)(iii)(I).

Petitioners' request that DOE withdraw the proposed furnace and water heater rules would, if granted, result in additional delay of the publication of final amended standards, in further violation of EPCA, which requires DOE to publish final rules prescribing amended

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basic new installations, replacement installations and difficult installations. *See* 81 Fed. Reg. at 65776. DOE also evaluated scenarios where consumers were predicted to fuel-switch. *See* 81 Fed. Reg. at 65812.

<sup>14</sup> 81 Fed. Reg. at 65722-65730.

<sup>15</sup> 81 Fed. Reg. at 34445.

<sup>16</sup> Gas furnaces and water heaters that use condensing combustion technology are more energy efficient because they can extract additional heat from combustion gases prior to venting. However, mechanical or horizontal venting and condensate drainage is typically required for their operation.

standards within two years of their being proposed.<sup>17</sup> DOE's statutory deadlines for promulgating final furnace and water heater standards expired in March 2017 and May 2018, respectively. DOE is now out of compliance with EPCA's two-year deadline for finalizing the proposed standards and cannot grant the relief the petitioners seek because to do so would cause the agency to be in further violation of the statute. *See South Carolina v. United States*, 907 F.3d 742, 758 (4th Cir. 2018), citing *Forest Guardians v. Babbitt*, 174 F.3d 1178, 1187 (10th Cir. 1998) (“[W]hen Congress by organic statute sets a specific deadline for agency action, neither the agency nor any court has discretion. The agency must act by the deadline.”)

EPCA mandates that DOE periodically review and update consumer and commercial product efficiency standards.<sup>18</sup> For example, EPCA, 42 U.S.C. §§ 6295(m) and 6313(a)(C)(6), requires DOE to consider amended standards for furnaces and water heaters at least every six years. Under EPCA's timeline for amendment of standards, DOE must first determine whether amendment of a product standard is warranted, based on whether an amended standard will result in significant energy conservation, is technologically feasible and cost-effective.<sup>19</sup> If DOE determines amendment of the standard is warranted, it must issue a proposed rule with the amended standard within the six-year review period.<sup>20</sup> It must furthermore *complete* the rulemaking and issue a final rule amending the product standard within two years of issuing a proposed rule.<sup>21</sup>

DOE published its proposed furnace rule in March 2015 and its proposed water heater rule in May 2016. DOE's two-year deadlines for finalizing each standard has lapsed.<sup>22</sup> The petition, filed in November 2018, well after the administrative comment period closed and the statutory deadlines for DOE to publish final rules passed, should not be considered by DOE and cannot be used to perpetuate DOE's unlawful delay.

Moreover, granting the petition would frustrate Congress' intent in specifying deadlines for DOE completion of agency action to amend energy efficiency standards under EPCA. Petitioners had ample opportunity to raise, and did raise, their concerns during DOE's rulemaking on revising the efficiency standards.<sup>23</sup> The time for DOE to entertain petitioners'

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<sup>17</sup> 42 U.S.C. §§ 6295(m)(3)(A) and 6313(a)(6)(C)(iii)(I).

<sup>18</sup> *See* 42 U.S.C. §§ 6295(f), (m); 6313(a)(5), (6).

<sup>19</sup> 42 U.S.C. § 6295(n)(2).

<sup>20</sup> 42 U.S.C. §§ 6295(m)(1)(B); 6313(a)(6)(C)(i)(II).

<sup>21</sup> 42 U.S.C. §§ 6295(m)(3)(A); 6313(a)(6)(C)(iii)(1).

<sup>22</sup> This is so even assuming the two-year period is measured from DOE's issuance of the September 2016 supplemental proposed furnace standards.

<sup>23</sup> Spire Inc./American Public Gas Association/American Gas Association et al. Request for Interpretation dated June 6, 2017 available at <https://www.regulations.gov/document?D=EERE-2014-BT-STD-0031-0316>; American Public Gas Association Furnace SNOPR Comments dated November 22, 2016 available at <https://www.regulations.gov/document?D=EERE-2014-BT-STD-0031-0292>; Spire Inc. Residential Furnace SNOPR Comments dated January 6, 2016 available at <https://www.regulations.gov/document?D=EERE-2014-BT-STD-0031-0309>.

request has passed. DOE has already missed its deadline for completing this rulemaking and must now act promptly without withdrawing the proposed rules as requested by petitioners.<sup>24</sup>

III. DOE Must Deny the Petition Because Venting Capability Is Not a Performance-Related Feature for Purposes of EPCA, 42 U.S.C. §§ 6295(o)(4) and 6313(a)(6)(B)(iii)(II).

Petitioners argue that non-condensing technology amounts to a performance-related “feature” within the scope of EPCA, 42 U.S.C. §§ 6295(o)(4) and 6313(a)(6)(B)(iii)(II). However, this argument was already made and rejected by DOE during its rulemaking on these revised efficiency standards. DOE explicitly rejected the gas industry’s repeated attempts to characterize a furnace’s compatibility with conventional venting systems as a performance-related feature or characteristic that would justify the creation of a separate product class with a lower efficiency standard. For example, in its notice of proposed rule and supplemental notice, DOE explained that when evaluating and establishing efficiency standards, DOE divides covered products into classes by the type of energy used, capacity, or other performance-related features that justify a different standard. In determining whether a feature justifies establishing a different standard, DOE considers factors such as the feature’s utility to the consumer, as opposed to “complicated design features, or costs that anyone, including the consumer, manufacturer, installer, or utility companies may bear.”<sup>25</sup>

In rejecting the gas industry’s argument that a furnace’s compatibility with conventional venting systems is a performance-related feature of a furnace, DOE noted that its 2009 standards for electric water heaters did not distinguish between water heaters that use heat pump technology and conventional water heaters that use electric resistance technology. In that rulemaking, DOE found no basis to establish separate product classes, even though water heaters using heat pumps require additional installation of a condensate drain while electric resistance water heaters do not. Similarly, in the as-yet published<sup>26</sup> final rule regarding efficiency standards for commercial packaged boilers, DOE determined that venting design was not a performance feature warranting maintenance of a separate product class and efficiency standard. In the case of commercial packaged boilers, DOE eliminated the class distinctions for mechanical and natural draft boilers,<sup>27</sup> instead imposing uniform standards notwithstanding potentially increased costs associated with mechanical draft boiler installations.<sup>28</sup> And while DOE recognized in its 2015

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<sup>24</sup> Petitioners are not without recourse: they can petition for judicial review of final standards ultimately promulgated by the agency.

<sup>25</sup> 80 Fed. Reg. at 13137-13138; 81 Fed. Reg. 65752-65753.

<sup>26</sup> A suit brought by members of the undersigned to compel publication of those standards is currently pending in the United States Court of Appeals for the Ninth Circuit. *NRDC v. Perry*, Nos. 18-15380, 18-1545.

<sup>27</sup> The final rule maintains the class distinction for very large boilers because such boilers were outside the scope of DOE’s rulemaking.

<sup>28</sup> Air Conditioning, Heating, and Refrigeration Institute (AHRI) letter to DOE dated January 20, 2015 regarding Preliminary Technical Support Document on Commercial Packaged Boilers, Docket. No. EERE-2013-BT-STD-0030 (“[T]he minimum efficiency standards specified for commercial boilers ... have been applied to all models, natural draft or otherwise, for the past 20 years...we do not believe that need extends to creating a separate equipment class for those products in the efficiency standards.”) *available at* <https://www.regulations.gov/document?D=EERE-2013-BT-STD-0030-0037>.

electric clothes dryers standard that installation and venting challenges were the basis for creating a separate product class for ventless clothes dryers, it did so not because of the relative cost of installation but because of the *impossibility* of installation for small apartment dwellers in multistory buildings with no access to exterior venting.<sup>29</sup>

In the case of residential gas furnaces, DOE has already determined, as stated in its notice of the proposed rule, that the agency “maintains the view that the consumer utility of a furnace is that it provides heat to a dwelling, and that ... the methods by which a furnace is vented ... do not provide any separate performance-related utility, and therefore, DOE has no statutory basis for defining a separate product class based on venting and drainage characteristics.”<sup>30</sup> DOE’s reading of its authority under EPCA was grounded upon its larger policy concern:

Tying the concept of “feature” to a specific technology would effectively lock-in the currently existing technology as the ceiling for product efficiency and eliminate DOE’s ability to address technological advances that could yield significant consumer benefits in the form of lower energy costs while providing the same functionality for the consumer. DOE is very concerned that determining features solely on product technology could undermine the Department’s Appliance Standards Program. If DOE is required to maintain separate product classes to preserve less-efficient technologies, future advancements in the energy efficiency of covered products would become largely voluntary, an outcome which seems inimical to Congress’s purposes and goals in enacting EPCA.<sup>31</sup>

This same rationale and concern for maximizing efficiency while preserving consumer utility guided DOE to propose standards for commercial gas water heaters without regard to whether the heaters use condensing or non-condensing technology.<sup>32</sup> Thus, in both the furnace and water heater rulemakings, DOE rejected the argument raised by the gas industry petitioners that non-condensing technology constitutes a performance-related feature upon which the agency could justify creation of separate product classes or standards.<sup>33</sup>

To address the potential economic impact on consumers due to increased installation costs, DOE proposed a separate small furnace product class that would remain subject to the current 80% AFUE standard. This proposed exception from the heightened 92% AFUE standard for small furnaces would serve to reduce the number of consumers for whom installation of a condensing furnace could result in net increased costs (i.e., consumers in smaller homes,

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<sup>29</sup> 80 Fed. Reg. at 13137-13138. *See also* 42 U.S.C. §§ 6295(q); 6295(o)(4); 74 Fed. Reg. 65852, 65871 (December 11, 2009) (Electric Water Heater NOPR); 75 Fed. Reg. 22454, 22485 (April 21, 2011) (Residential Clothes Dryers NOPR).

<sup>30</sup> 81 Fed. Reg. at 65752-65753.

<sup>31</sup> 80 Fed. Reg. at 13138.

<sup>32</sup> 81 Fed. Reg. at 34462-34463.

<sup>33</sup> 80 Fed. Reg. at 13127-13138 (Furnace NOPR); 81 Fed. Reg. 65752-65753 (Furnace SNO PR); 81 Fed. Reg. at 34462-34463 (Water Heater NOPR).

rowhouses, and multifamily homes).<sup>34</sup> According to the Air Conditioning, Heating, and Refrigeration Institute, this was “a reasonable solution to balancing efficiency and costs.”<sup>35</sup>

Moreover, DOE’s rulemaking record suggests that petitioners’ claims regarding increased consumer costs and challenging installation scenarios are overstated.<sup>36</sup> For example, DOE determined that the product price of condensing furnaces was approximately \$200-\$500 more than non-condensing ones and that on average retrofit installation costs amounted to a little over \$500. Based on these estimates, and consumers’ projected operational savings, DOE concluded that furnaces compliant with the new standards would enable consumers to recoup their costs within the first seven years of ownership.<sup>37</sup> DOE also noted that in Canada, where the condensing standard has been in effect since 2012, survey information revealed that residential furnace retrofits have not been a significant concern.<sup>38</sup>

Finally, recent market research contradicts petitioners’ claims regarding the impracticality or impossibility of condensing appliance retrofit installations. This research, conducted on behalf of a group of American and Canadian stakeholders who collectively represent utilities, energy efficiency organizations, and regulatory agencies,<sup>39</sup> examined the nature and extent of barriers encountered during actual installations of condensing gas appliances. Based on in-depth interviews with installers, distributors and subject matter experts from around the United States in both the residential and commercial specialties, the researchers found that less than 5% of retrofit installations required significant modifications (i.e., building or site modifications where the installation cost would be more than double the total system cost of a typical retrofit). Contractors indicated condensing equipment typically could be integrated with only minor changes to existing venting and plumbing infrastructure. Condensate management, orphaned water heaters, or chimney relining were not identified as significant concerns. Interviewees noted that even in “difficult” cases, technical solutions were always available. By contrast, Petitioners have proffered no new evidence to support their claims.

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<sup>34</sup> DOE estimates that the percentage of consumers who would experience a net cost under the 92% AFUE standard for non-weatherized gas furnaces is 11.1% and for mobile home gas furnaces is 8.2%. See 81 Fed. Reg. at 65837.

<sup>35</sup> See DOE discussion of AHRI comments at 81 Fed. Reg. at 65753.

<sup>36</sup> 81 Fed. Reg. at 65773-82.

<sup>37</sup> DOE estimated that commercial gas-fired storage water heaters and storage-type instantaneous water heaters would yield average life cycle cost savings of \$794 with a simple payback period of 4.3 years. 81 Fed. Reg. at 34444.

<sup>38</sup> 81 Fed. Reg. at 65779.

<sup>39</sup> See 2050 Partners, Inc., “Memorandum Report: Investigation of Installation Barriers and Costs for Condensing Gas Appliances,” February 20, 2019, filed as attachment to Comments of NEEA, NEEP, NYSERDA, National Grid, NRCAN, NCLC, and PG&E in Response to Gas Industry Petition dated March 1, 2019 *available at* <https://www.regulations.gov/docket?D=EERE-2018-BT-STD-0018>. Sponsors of the report include the Northwest Energy Efficiency Alliance (NEEA), Northeast Energy Efficiency Partnership (NEEP), New York State Energy Research and Development Agency (NYSERDA), National Grid, Natural Resources Canada (NRCAN), Natural Resources Defense Council (NRDC), National Consumer Law Center (NCLC), and Pacific Gas & Electric (PG&E).



#### IV. DOE Must Deny the Petition Because It Would Result in Lost Economic and Environmental Benefits and Interfere with State and Local Energy and Climate Goals

If DOE grants the petition, the resulting delay in adopting updated standards will create missed opportunities for consumers, businesses and governments to conserve energy and reduce the economic and environmental costs of energy production and use. Notably, DOE finalized the current standards for indoor residential gas furnaces in 2007. The standard was set at 80% AFUE, a level already met in 2007 by 99% of furnaces sold.<sup>40</sup> DOE withdrawal of the proposed new standards would improperly prolong the time that less efficient appliances stay on the market. Given the long lifespan of furnaces and water heaters, together with the fact that manufacturers need not comply with final standards until three- to five- years after publication, the lost consumer savings and increased environmental costs would be significant.

Delayed standards also hamper state and municipal energy efficiency, clean energy, and climate goals.<sup>41</sup> For example, significant improvements in energy efficiency will be needed to meet efficiency targets under various renewable energy or climate policies. A recent analysis estimated that direct emissions from buildings due to fossil fuel sources combusted on site for heating and cooking increased by 10% in 2018.<sup>42</sup> In light of the preemptive effect of national appliance and equipment standards under EPCA, 42 U.S.C. § 6297, states rely on DOE to fulfill its statutory duty to develop and adopt aggressive standards to support their renewable energy and climate policy goals.

Finally, the Energy Efficiency 2018 market report of the International Energy Agency (IEA) highlights the value and untapped potential of energy efficiency savings to help achieve global energy sustainability.<sup>43</sup> According to the IEA, increased efficiency could account for nearly half of the CO<sub>2</sub> emissions reductions needed to attain a sustainable development scenario in 2040, and American leadership in setting efficiency standards will help drive the deployment of more efficient appliances and equipment around the world. With the United Nation's IPCC Special Report on Global Warming of 1.5 °C<sup>44</sup> highlighting the urgent need for energy solutions that will help avert potentially catastrophic climate change and the 2018 National Climate Assessment offering similar warnings regarding climate change and the dire need to curb our national consumption of carbon-based energy,<sup>45</sup> DOE must promptly publish final energy

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<sup>40</sup> See <https://appliance-standards.org/product/furnaces>.

<sup>41</sup> See, *i.e.*, New York State Energy Research and Development Authority, "New Efficiency: New York – A milestone energy efficiency target and comprehensive strategy," Report and Factsheet available at <https://www.nyserda.ny.gov/About/Publications/New-Efficiency>; New York City, , City of New York, *One City Built to Last: Transforming New York City's Buildings for a Low-Carbon Future* (2014) at 6, available at <http://www.nyc.gov/html/builttolast/assets/downloads/pdf/OneCity.pdf>.

<sup>42</sup> See Rhodium Group, "Preliminary U.S. Emissions Estimates for 2018," available at <https://rhg.com/research/preliminary-us-emissions-estimates-for-2018/>.

<sup>43</sup> IEA, "Energy Efficiency 2018" (October 2018) available at <https://www.iea.org/efficiency2018/>

<sup>44</sup> IPCC, "The Special Report on Global Warming of 1.5 °C" (October 2018) available at <http://www.ipcc.ch/report/sr15/>.

<sup>45</sup> USGCRP, 2018: Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II (Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C.

conservation standards for residential furnaces and commercial water heaters and not further delay the crucial energy efficiency savings that will result from these standards.

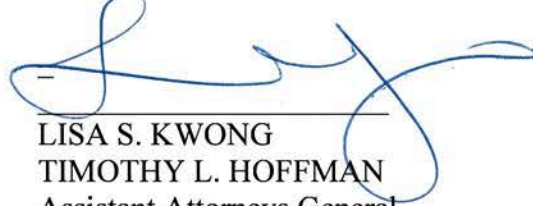
V. Conclusion

For the foregoing reasons, DOE must deny in its entirety the gas industry's petition requesting that DOE issue an interpretive rule treating non-condensing technology as a "feature" under EPCA and that DOE withdraw its proposed rules for residential gas furnaces and commercial gas water heaters.

Respectfully submitted,

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