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Ms. Brenda Edwards
U.S. Department of Energy
Building Technologies Program, Mailstop EE-5B
1000 Independence Avenue SW
Washington, DC 20585-0121

Re: Energy Conservation Standards for Hearth Products; Proposed Rule [Docket Number EERE-2014-BT-STD-0036-0010]

Dear Ms. Edwards:

These comments are submitted by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) in response to the U.S. Department of Energy's (DOE) notice of proposed rulemaking (NOPR) on energy conservation standards for hearth products appearing in the *Federal Register* on February 9, 2015. AHRI is the trade association representing manufacturers of heating, cooling, water heating, and commercial refrigeration equipment. AHRI's 315 member companies include many of the major manufacturers of gas-fired direct heating equipment (vented and vent-free) doing business in the U.S.

SUMMARY OF COMMENTS

AHRI has identified several issues with the Hearth Products NOPR, primarily that: (1) the NOPR was published prematurely and without statutory authority; (3) DOE's analysis of the social cost of carbon is flawed; (4) (2) Gas-fired vent-free heating products have been erroneously included in the scope of the NOPR. Gas-fired vent-free heating products are a "covered product" included in the "direct heating equipment" category (which was originally identified as "home heating equipment") under the Energy Policy and Conservation Act of 1975 (EPCA). As such these products are not subject to prescriptive design requirements.

Because the NOPR Was Published Prior to the Finalization of the Notice of Determination for Hearth Products, the Department of Energy (DOE) Lacks Statutory Authority to Promulgate the NOPR.

The D.C. Circuit unambiguously determined that DOE does not have statutory authority to promulgate energy efficiency regulations for decorative fireplaces or other

such “hearth products” that do not qualify as “Direct heating equipment.” *Hearth, Patio & Barbecue Assoc. et al. v. United States Dept. of Energy*, 703 F.3d 499, 506 (D.C. Cir. 2013). In order for DOE to promulgate such a regulation, it must “do so through the EPCA’s catch-all provision, § 6292(a)(20).” *Id.* at 509. Section 6292(a)(20) permits DOE to classify additional covered products in accordance with specific steps delineated in section 6292(b). Under this section, the DOE may classify a product for regulation only after (1) making a determination that regulation is necessary, appropriate, and justified by the purposes of EPCA; and (2) assessing the average annual per-household energy use of the new covered product and concluding that such use exceeds 100 kilowatt hours per year. DOE has started this process, but many interested parties have commented on the breadth of the proposed definition of the newly proposed covered product, which has a direct effect on the average annual household use of these products. Despite clear direction from the D.C. Circuit, DOE has persisted in drafting and publishing a NOPR without first meeting all requirements of 42 U.S.C. § 6292(b) and DOE’s regulatory requirements as set forth in the Process Rule, 10 C.F.R. § 430 Subpart C Appendix A. On the date that the NOPR was published, the DOE had only published a proposal for adding Hearth Products as a covered product (78 Fed. Reg. 79638) (Proposed Determination), but such a proposal lacks the force of law so long as it is not finalized, leaving the DOE without statutory authority for the present NOPR. Initiating the determination is not the same thing as making a determination. DOE has skipped a key step in the required rulemaking process—which is exactly what the D.C. Circuit expressly told the DOE it could not do. DOE has no more authority to regulate “Hearth Products” today than it did the day after the D.C. Circuit’s decision in “*Hearth Patio Barbecue Association.*” 703 F.3d at 509.

The definition of “Hearth Product” in the Proposed Determination is unlawfully overbroad and encompasses products that are already included in other “covered product” categories, such as gas-fired vent-free heating equipment. Under EPCA (42 U.S.C. § 6292(b)), and the Administrative Procedure Act (5 U.S.C. §§ 553, 706), the DOE bears the burden of taking all necessary procedural steps to promulgate and finalize a reasonable definition of hearth products prior to regulating such products. DOE must prove that the regulation of such products is necessary, appropriate and the energy use is sufficient to trigger EPCA coverage. In doing so, “the agency [must] maintain[] a flexible and open-minded attitude towards its [proposed] rules” and respond to all substantive comments made by impacted parties in response to the Proposed Determination. *Nat’l Tour Brokers Ass’n v. United States*, 591 F.2d 896, 902 (D.C. Cir. 1978). “The whole rationale of notice and comment rests on the expectation that the final rules will be somewhat different -- and improved -- from the rules originally proposed by the agency.” *Trans-Pac. Freight Conf. v. Fed. Mar. Comm’n*, 650 F.2d 1235, 1249 (D.C. Cir. 1980). By failing to equitably finalize the Proposed Determination, DOE has “jumped the gun” and undermined the basic rights of the regulated community while acting without statutory authority. Moreover, DOE is denying stakeholders opportunity to comment on the Proposed Determination by combining the determination process (required by 42 U.S.C. § 6292(b)) with a standard-setting rulemaking process under 42 U.S.C. § 6295. DOE must first consider the comments made in response to the Proposed Determination, incorporate those comments into an improved

Determination, then DOE can move forward with a standard rulemaking pursuant to 6295(b). Clearly, DOE has not made a full and thorough analysis of the problems with the Proposed Determination, if it is moving forward with a rulemaking without first addressing those problems. Moreover, DOE's conflating of the Proposed Determination with the rulemaking process undermines stakeholders' rights to challenge the DOE's determination before DOE takes regulatory action—without a final agency action on the Proposed Determination, stakeholders are without legal standing to assert their rights. There is no pressing need to move forward with the present NOPR without first thoughtfully finalizing the Proposed Determination to ensure stakeholders rights under the APA and EPCA.

The D.C. Circuit reminded DOE that “[a]ll questions of government are ultimately questions of ends and means” and that “Congress has established ... the means by which DOE could extend its regulatory authority.” *Hearth, Patio & Barbecue Assoc.*, 706 F.3d at 507. The court has already admonished the DOE for ignoring these procedures, but in issuing the NOPR, DOE has persisted in operating without authority. See *id.* As it stands, the NOPR must be withdrawn until DOE first takes the time to consider and address the comments submitted in response to the Proposed Determination and issue a final, reasonable determination.

DOE Failed to Collect Sufficient Information Prior to Publishing the NOPR.

Setting aside the fact that DOE is without statutory authority to publish the NOPR before a determination of “Hearth Products” as a covered class of products has been finalized, DOE's publication of the NOPR was premature because DOE failed to collect sufficient information about “Hearth Products” prior to publishing the NOPR. While the Proposed Determination included requests for some information on the energy use and characteristics of hearth products, absent a clear and final definition of “hearth product,” those questions cannot be answered with any significant level of detailed information. Historically, the DOE has conducted “Requests for Information” (RFI) prior to writing regulations of covered products. See, e.g., Energy Conservation Standards for Commercial Water Heating Equipment; Request for Information, 79 Fed. Reg. 62,899 (October 21, 2014). In this instance, however, DOE neglected to issue an RFI to develop its knowledge of the market and the product it is seeking to regulate. DOE's failure to issue an RFI is flawed for two reasons: (1) Hearth Products have never before been regulated by DOE, and therefore DOE has little knowledge and no experience of the products, the distribution chain, the market, the technologies relevant in the “Hearth Products” sphere; (2) DOE bears the burden of demonstrating that the regulation of “Hearth Products” is technically and economically feasible, and it cannot meet such a burden without sufficient information.

Because DOE was without sufficient information, it was forced to make assumptions about the “Hearth Products” market, many of which are not reasonable. For example, DOE's inclusion of gas-fired vent-free heaters in the definition of “Hearth Products” betrays a fundamental misunderstanding of the purpose and function of vent-free heating appliances. As discussed in more detail below, a vent-free heater is first

and foremost designed to heat the room into which it is installed. In some instances, vent-free heaters also incorporate features, such as artificial logs, that make the product more appealing to consumers but these features are merely ancillary to the primary function of a vent-free heater, which is to provide heat. DOE has not taken the time to develop a sufficient understanding of the products it is attempting to regulate, and thus the definition of “Hearth Products” from the Proposed Determination is incorrect and the publication of the NOPR based on such an erroneous definition is premature. AHRI recommends that DOE first revise the definition of “Hearth Products” in the Proposed Determination based on the comments it has received in response to the Proposed Determination and this NOPR, and then DOE should issue an RFI to build a sufficient base of knowledge before it attempts to promulgate any regulations.

DOE’s Reliance on Social Cost of Carbon (SCC) is Misplaced and the Cost Benefit Analysis Incorporating Monetized Costs of Carbon is Flawed.

Provisional, Revisable, Imperfect and Incomplete Data such as the Monetization of SCC Cannot form the Basis for DOE’s Analysis

DOE itself acknowledges the uncertainty of its SCC claims repeatedly in the NOPR, including that the SCC estimates are “provisional.” 80 Fed. Reg. at 7,109, 7,110, 7,111. Even the interagency group that developed the SCC recognized that the underlying models were “imperfect and incomplete.” 80 Fed. Reg. at 7111. DOE states that a recent report from the National Research Council noted that any assessment would suffer from uncertainty, speculation and lack of information. 80 Fed. Reg. at 7109. One of the main reasons the analysis is uncertain is that it relies on Intergovernmental Panel on Climate Change (IPCC) analysis concerning climate sensitivity. But the IPCC has conceded that “[n]o best estimate for equilibrium climate sensitivity can now be given because of a lack of agreement on values across assessed lines of evidence and studies.” *IPCC, 2013: Summary for Policymakers* at 16 n.16, available at http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf.

The use of such analysis as the foundation of a proposed energy efficiency standard is not without real and irreparable harm to manufacturers, due to EPCA’s so-called “anti-backsliding” provision. 42 U.S.C. § 6313(a)(6)(B)(iii)(I). As DOE notes at page 7,087 of the NOPR, the “anti-backsliding” provision prohibits the Secretary from prescribing any amended standard that increases the maximum allowable energy use or decreases the minimum required energy efficiency of a covered product. So, when DOE’s states that “any value placed on reducing CO₂ emissions in this rulemaking is subject to change” (80 Fed. Reg. at 7,120) and that happens, there will be no remedy for manufacturers for an energy efficiency standard that was adopted based upon that “provisional,” “revisable,” “subject to change” and, it turns out, erroneous analysis. While the SCC may be revisable, DOE has taken the position that its energy efficiency standards are not. In fact, DOE cites uncertainties in estimating employment impacts in later years as basis for restricting its analysis to short term impacts (through 2023), yet relies on the SCC, which DOE admits is riddled with uncertainty, past the year 2100. 80

Fed. Reg. 7,121. For this reason alone, the use of the SCC in an energy efficiency standard cost benefit analysis under EPCA is entirely unfair and impermissible.

The Use of Monetized SCC as Determined on a Global Basis for the World Population is Outside of DOE's Regulatory Authority Under EPCA.

EPCA's focus is exclusively on benefits accruing within this nation. It is **not** an international statute and it is not an environmental statute.¹ EPCA authorizes DOE to conduct a national analysis of energy savings. There are no references to global environmental impacts in the statute. Hence, it is unlawful for DOE to rely on SCC figures at the global level. Global analysis is entirely foreign to EPCA Section 6313(a)(6)(B)(ii); see especially *id.* § 6313(a)(6)(B)(ii)(VI) (referencing weighing of “the need for **national** energy conservation”) (emphasis added). Note as well that EPCA originally arose out of the 1970s oil embargo and nothing in its subsequent amendments suggests a different statutory focus other than trying to improve the energy economics of the United States. To try to reframe EPCA into a globally oriented statute is to ignore that legislative history and evolution.

DOE specifically asserts that it had environmental rulemaking power in the NOPR. 80 Fed. Reg. at 7,093 (“DOE conducts an emissions analysis to estimate how standards may affect these emissions, as discussed in section IV.K.”) This statement is located under section G.1.f., “Need for *National Energy Conservation*” (emphasis added). In so doing, and by relying on global values, DOE has inserted environmental factors to such an extent that it is no longer determining energy efficiency “based solely on the energy consumed at the point of use”² as required by EPCA. By relying on this factor in the cost-benefit analysis, which Congress did not intend DOE to consider, DOE acted arbitrarily and capriciously under the APA. DOE might attempt to argue that environmental factors can be considered in light of Section 6295(o)(2)(B)(i)(VII) (“other factors the Secretary considers relevant”), but in this rulemaking DOE did not consider emissions costs as ‘other factors’.” 80 Fed. Reg. at 7,093.

Furthermore, even if inclusion of environmental factors as additional factors is authorized, DOE should not be able to analyze **global benefits** but look only to **national costs**. DOE's analysis contains a fundamental mismatch. The SCC is measured not just for consumers of products purchased in U.S. markets, but in reality across the entire global population, yet DOE's analysis of costs to consumers counts as consumers only those who make purchases of the covered products in the domestic market. DOE implicitly acknowledges this by repeatedly noting that two issues that should be considered:

¹ Compare DOE's list of SCC damages (net agricultural productivity, human health, increased flood risk) at 80 Fed. Reg. 7,109 to EPCA's list of factors the Secretary must consider (economic impact on manufacturers and consumers of the product, operating cost savings, direct energy savings, lessening of competition or utility, need for energy conservation) at 42 U.S.C. § 6313(a)(6)(B)(ii).

² 76 Fed. Reg. 51,281, 51,282 (“the Energy Policy and Conservation Act (EPCA) . . . requires that such measures be based solely on the energy consumed at the point of use.”).

First, the national operating cost savings are domestic U.S. consumer monetary savings that occur as a result of market transactions, while the value of CO₂ reductions is based on a global value. Second, the assessments of operating cost savings and the SCC are performed with different methods that use different timeframes for analysis. [2018-2047 for costs, “well beyond 2100” for SCC benefits]. 80 Fed. Reg. at 7,121. In making this statement, DOE also notes that “adding the value of consumer savings to the values of emission reductions provides a valuable perspective.” *Id.* But it is much more than that. It is used as an additional, separate factor that dominates what is clearly EPCA’s focus on national costs and energy savings. For example, on page 7,084 of the NOPR DOE summarizes “national economic benefits in costs” in Table I.2 – yet it includes CO₂ reduction, which is clearly measured on a global scale. The SCC analysis is the key driver of DOE’s economic justification, and it is irreparable when it is used to set standards and later turns out to be wrong. As such, it is not a basis for clear and convincing evidence under EPCA.

Even assuming DOE had the authority to turn EPCA into an environmental statute, there is also no reason why America’s contribution to climate change cannot be based on an analysis that compares costs to benefits on an apples-to-apples basis (*i.e.*, nationally). In fact, as noted above, DOE states explicitly that the interagency group that developed SCC determined that a range of discount rates should be used to calculate domestic effects.³ DOE’s departure from the statutory mandate in light of that ability is arbitrary and entirely without basis.

DOE’ Cost Benefit Analysis is Flawed Because it Measures Benefits Over a Time Period that Exceeds Three Times the Period for Which it Measures Costs.

While DOE bases its manufacturer impact analysis (“MIA”) and industry net present value (“INPV”) analysis on a 30-year period, it notes that the benefits from SCC extend beyond the year 2100. 80 Fed. Reg. at 7,085. In the NOPR, DOE also argues that costs and benefits include benefits to customers which accrue after 2050 from equipment purchased in 2021-2050, see 80 Fed. Reg. at 7,085 Table 1.2, and accounts for incremental variable and fixed costs incurred by manufacturers due to amended standards, some of which may be incurred in preparation for the rule. What benefits can possibly accrue to customers for equipment that is no longer expected to be in use and does not account for the additional costs of purchasing and installing new equipment? While it makes sense to include the R&D and other costs manufacturers will incur in order to comply with the amended standards, DOE provides no justification for the exclusion of any costs that manufacturers might incur after 2050, in measured harmony with the manner and time period that DOE uses to measure the benefits. These time frames for measuring the benefits of the proposed standard are so imbalanced that DOE’s entire cost benefit analysis is unreliable.

DOE wrongly assumes that SCC values will *increase over time.*

³ 80 Fed. Reg. at 7,110.

This is contrary to historical experience and to economic development science. The more economic development that occurs, the more adaptation and mitigation efforts are both undertaken by humanity and that a population living in a growing economy can afford to undertake. Adaptation and mitigation analysis is well known in climate science circles and we see no indication in this rulemaking that DOE paid any separate mind to this issue. See, e.g., IPCC, *Supplementary material to Chapter 18: Inter-relationships between adaptation and mitigation*, Climate Change 2007: Impacts, Adaptation and Vulnerability, available at <https://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter18sm.pdf>. Adaptation/mitigation is treated in the Interagency Working Group analysis but one of the three models used does “propagate forward” damage, though the other two do not. Compare Interagency Working Group on SCC, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866* at 5-6 (Feb. 2010), available at <http://www.whitehouse.gov/sites/default/files/omb/infoereg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf> with *id.* at 7 (indicating that developed countries can eliminate 90% of the economic impacts of climate change and that developing countries can eventually eliminate 50% of the economic impacts of climate change).

DOE’s use of SCC violates EPCA Section 6313(a)(6)(A)(ii)(II) and Section 6313(a)(6)(B)(ii)(I)-(VII) by Giving Emissions Savings Disproportionate Weight

EPCA requires that DOE consider seven different factors in determining whether the benefits of a proposed standard exceed its burdens. There is no indication in the statute or otherwise that Congress intended this to be anything other than a roughly equal weighting of factors where no particular factor is king over all the others. Yet through DOE’s inclusion of energy efficiency savings tied to global indirect emissions and SCC reductions that are provisional, revisable, imperfect, and incomplete, and that extend well beyond the life of the equipment and even the relevant period for measuring benefits relative to costs, it has formulated an amount of energy savings that is unsupported and insurmountable for those who would question the rule. This is true even if all of the other factors point in the direction of significant or even extreme burdens to customers and manufacturers. This is not the kind of balancing of factors that Congress envisioned, and nothing in Executive Order No. 12866 is to the contrary — costs and benefits of intended regulation must be considered *to the extent permitted by the law* — which in this case is the statutory seven-factor analysis in which no one factor is given weight over the others.

DOE’s SCC Analysis Fails the Information Quality Act’s Standards of Decision Making Based on Sound Science and as Such is not Clear and Convincing Evidence

The Information Quality Act (IQA)⁴ is contained in the Treasury and General Government Appropriations Act for FY 2001. The IQA provides in relevant part that the Office of Management and Budget (OMB) and the federal agencies must establish

⁴ Pub. L. 106-554, § 515, 114 Stat. 2763 (Dec. 21, 2000). The IQA is also set out at 44 U.S.C. § 3516.

guidelines “for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies.” IQA Section (a) & (b)(2)(A). There are several areas in which the interagency process used to develop SCC did not comply with the mandates of the IQA.

First, the interagency process was not transparent. The agencies involved were disclosed but not which of their personnel participated, or whether outside consultants were used. This violates the OMB guidelines. Second, the SCC estimates were not subjected to peer review. As noted above, DOE states in the NOPR that the National Resource Council (part of the National Academies of Science) criticized the models the interagency process used as “suffer[ing] from uncertainty, speculation, and lack of information about (1) future emissions of GHGs; (2) the effects of past and future emissions on the climate system, (3) the impact of changes in climate on the physical and biological environment, and (4) the translation of these environmental impacts into economic damages.” 80 Fed. Reg. at 7,109. Third, in order to translate certain predicted climate-change effects into economic damages, the interagency SCC analysis relies on arbitrary damages functions. As such, the SCC analysis violates EPCA.

Vent-Free Heating Appliances Are “Direct Heating Equipment” And Therefore May Not Be Regulated As “Hearth Products” Under EPCA

As mentioned above, DOE’s definition of “Hearth Products” incorrectly includes products already covered by DOE’s regulations as specified by the Energy Policy and Conservation Act. The proposed definition of a “Hearth Product” is: “a gas-fired appliance that simulates a solid-fueled fireplace *OR* presents a flame pattern (for aesthetics *OR* other purpose) and that *MAY* provide space heating directly to the space in which it is installed.” 80 Fed. Reg. 7,088 (emphasis added). Because of the open-ended language of the definition, according to the DOE, a “Hearth Product” could be interpreted to cover any appliance that burns gas and allows the consumer to view the flame. Nowhere in the Proposed Rule does DOE distinguish between products that are already encompassed within a covered-product category under EPCA, as is the case with gas-fired vent free heaters, and those new products it wishes to regulate, so-called “Hearth Products.” It is incumbent upon DOE to create a more specific definition and associated Proposed Rule only for those products that have not been expressly identified by Congress as “covered products.”

DOE has authority to classify types of products for regulation “other” than those delineated by Congress in EPCA. 42 U.S.C. § 6292(a)(20). DOE may not create additional categories of products that overlap with existing covered products. This is not only beyond DOE’s statutory authority, but it would lead to confusing and unmanageable results if certain products were double-regulated because they fall into two or more definitions. In particular, vent-free heaters were identified as a “hearth products” in the proposed rule, when in fact such products falls into the “direct heating equipment” type. According to the D.C. Circuit, the definition of “direct heating equipment” is functional. *Hearth, Patio & Barbecue Assoc.*, 703 F.3d at 506. Just as decorative fireplaces are not *designed* to heat a space, but to serve an aesthetic

purpose—vent-free heaters are designed to heat space. Some vent-free heaters have some secondary aesthetic properties, but the primary purpose of a vent-free heater is to provide heat to its immediate surroundings. The absence of a vent makes it impossible to do otherwise because the heat generated by the combustion of the gas is released directly to the immediate space, making vent-free heaters uniquely efficient. DOE has historically recognized that gas-fired vent-free heaters are direct heating equipment because in 1978, decades before the introduction of the NOPR, DOE promulgated a test procedure for unvented home heating equipment (now known as “direct heating equipment”), which includes gas-fired vent free heaters. 10 C.F.R. § 430, Subpart. B, Appendix G.

DOE May Not Prescribe Design Requirements for Direct Heating Equipment.

The Proposed Rule is premised on the design requirement prohibiting the use “standing pilots” in Hearth Products. Congress specified that DOE’s authority to prescribe design requirements is limited to certain products. 42 U.S.C. § 6291(6), see also *Hearth, Patio & Barbecue Assoc.*, 703 F.3d at 509 (“Congress ... specifically limited [DOE’s] authority to impose design requirements to just a handful of product classes. Emphatically, DHE [is]... *not* among them.”) (internal citations omitted). Accordingly, since gas-fired vent-free heaters are direct heating equipment they may not be subject to DOE’s design requirements. *Id.*

DOE Identified Issues

The NOPR identifies several issues on which DOE seeks comment. Although we are providing comments for some of the issues below, our fundamental position is that this rulemaking should not be addressing any type of gas-fired unvented heating product. For the most part these comments are specific to the analysis of unvented fireplace/stove inserts and unvented gas log sets. The fact that the analysis specific to these products is flawed underscores our fundamental position.

1. DOE seeks comment on the proposed definition for hearth products found in the December 2013 NOPD (78 FR 79638) and the range of products covered by the proposed rule if this definition were applied in the final rulemaking. DOE requests comment on which products would fall into each of the product groups as currently defined (1. Vented fireplaces/stoves/inserts, 2. unvented fireplaces/stoves, inserts, 3. Vented gas log sets, 4. unvented gas log sets, and 5. outdoor) and whether additional clarifying criteria should be added to the definition to cover intended products. DOE requests comment on which hearth products that are “gas appliances that simulate a solid-fueled fireplace or presents a flame pattern” may by the proposed definition be grouped into the hearth product category, but may warrant a different design standard due to such factors as utility of the feature to users. (See section III.A.)

The proposed definition for hearth products is imprecise and overly broad. It includes products that should not be part of this rulemaking such as unvented fireplaces/stoves and unvented gas log sets. These products fall under the general heading of gas-fired vent free heaters, which is a subcategory of direct heating equipment already covered by DOE regulations.

Also, the NOPR fails to include a definition of constant-burning pilot light. Since the proposal bans the use of such devices, we believe it is essential that DOE clearly define the product that is being banned. The gas controls industry has long standing definitions covering various types of ignition systems and devices that are used in the various consensus Z21/Z83/CSA safety standards. Combining the industry definitions for “continuous ignition source” and “pilot,” we recommend the following definition:

Constant-burning pilot light: A gas flame(s) utilized to ignite gas at a main burner(s) which, once placed in operation, remains ignited continuously until it is manually interrupted.

2. DOE seeks input on the assumption that should standing pilot ignitions be disallowed, electronic intermittent ignitions would provide the same level of safety as a standing pilot and whether a standing pilot provides a means for ensuring that gas is lit prior to opening the gas valve and ensuring that oxygen levels in a the room remain at a safe levels prior to the main burner ignition. DOE request comment on whether there are any ANSI safety standard certification, building code, or other industry safety standard that may preclude a manufacturer from selling a particular hearth product with an electronic intermittent ignition. (See section III.B.)

We will address this issue only as it relates to the gas fired vent free heaters addressed in the NOPR. To our knowledge there are essentially no models of gas vent free heaters that are equipped with electronic, intermittent ignition systems. The current standing pilot ignition systems incorporating an Oxygen Depletion Sensor (ODS) have been in use on these products since at least the 1980's and have proven to be a reliable and durable combination of an ignition system and safety device. Requiring these ODS pilot ignition systems to be replaced by an electronic ignition system will force the industry to use ignition systems for which there is no field record of their use on these products.

3. DOE seeks comment on its tentative conclusions regarding hearth product definitions and categorizations as they pertain to active mode energy use. (See section III.C and chapter 3 of the TSD.)

No comment.

4. DOE seeks comment on its screening analysis including any potential impacts on product utility or availability. (See section III.G.1.d and chapter 4 of the TSD.)

The NOPR will require that an external electric supply be provided to gas vent free heaters. This will negate a utility that is significant and much appreciated by consumers. Specifically, during times when an electrical power outage, the gas fired vent free heater can provide needed heat to a home. At a minimum, the room in which the heater is installed will be warm.

Furthermore, there is an ease of installation of gas vent free heaters that will be diminished if a source of electricity must be available in the location where the products are installed.

5. DOE seeks comment on its assumptions regarding the electrical energy consumption of the ignition module for hearth products. (See section III.I and chapter 7 of the TSD).

No comment.

6. DOE seeks comment on its list of identified technologies for reducing the fuel consumption of hearth products. (See section IV.A.3 and chapter 3 of the TSD.)

No comment.

7. DOE seeks comment on its general engineering analysis approach for hearth products. (See section IV.C and chapter 5 of the TSD.)

The engineering analysis mistakenly identifies differences in the pilot ignition systems provided on unvented fireplace inserts and unvented gas fireplace inserts. The same ignition system is used on either type of unvented heating product.

8. DOE seeks comment on the availability and applicability of intermittent pilot ignition components for hearth products. (See section IV.C.1 and chapter 5 of the TSD.)

No comment.

9. DOE requests comment on its assumption that ignition component costs for vented fireplaces, inserts, and stoves are equivalent. (See section IV.C.1 and chapter 5 of the TSD.)

No comment.

10. DOE requests comment on the derived manufacturer production costs and markups. (See sections IV.C.3.e and IV.C.4 and chapter 5 of the TSD.)

No comment.

11. DOE seeks input on the representative input capacities (kBtu/h) used to calculate the fuel used by the standing pilot for each of the five hearth product groups identified in the proposal and discussed in Chapter 7 of the TSD. In particular, the agency seeks input on whether the RECS 2009 annual space heating energy consumption numbers for vented and unvented fireplaces is representative of all hearth products and any data that would be helpful in estimating the energy consumption for the hearth product groups identified. DOE also seeks comment on the average on time per cycle assumption of 30 seconds for intermittent pilot ignition and any data indicating specific on-time per cycle for different product groups to help inform the energy use analysis. (See section IV.E and chapter 7 of the TSD.)

The analysis of the 2009 RECS data has a fundamental error that leads us to question the validity of the analysis. In the presentation at the March 17, 2015 public meeting, it was noted on Slide 39 that products that did not use the fireplace for heating were “Out of Sample.” But those decorative fireplaces are specifically the product that is the subject of this rulemaking. As the proposed definition indicates, hearth product may provide spade heating. The fact that the RECS data indicates that a fireplace is not used for space heating does not in any way reflect the potential for the product to provide space heating. Thus, it appears the analysis of the RECS data has missed a significant segment of the products that should have been analyzed. Also, there is a discrepancy between the “count” and “# of Households” information for the vented and ventless samples. Specifically, the ratio of the “count” values for vented and ventless is just over 3 to 1. Yet, the ratio of the “# of Households” values for vented and ventless is just over 2.5 to 1.

12. DOE requests comment on the assumed pilot light usage, specifically the percentages of consumers who operate their hearth product standing pilots year round, for only the heating season, only when operating the unit, the treatment of LPG units, and the treatment of heat input into the space by the standing pilot. (See section IV.E and chapter 7 of the TSD.)

The useful heat contribution of gas vent free heaters has been incorrectly analyzed. During the entire heating season, the energy from the pilot is providing useful heat to the residence. That pilot energy, when the heater is not in use, is countering an equal number of Btus that are part of the residence’s hourly heat loss that is occurring during the entire heating season. During this time there is no standby loss from the pilot.

13. DOE requests comment on the assumption to not apply a trend to its manufacturer selling price, as well as any information that would support the use of alternate assumptions. (See section IV.F.1 and chapter 8 of the TSD.)

No comment.

14. DOE requests comment on installation and retrofit assumptions regarding electrical connections and grounding. (See section IV.F.1 and chapter 8 of the TSD.)

DOE has underestimated the cost of installing an electrical outlet as part of a replacement installation of a gas vent free heaters.

15. DOE requests comment on intermittent pilot ignition module repair frequency and cost components applied in the life-cycle cost and payback period analysis. The agency requests input on the use of \$142.89 as the bare material cost of repair of the intermittent pilot compared the bare material cost of a standing pilot of \$43.72. In addition, the agency requests comment on the labor hours associated with the repair of both the standing pilot and intermittent pilot, which were both determined to be 1.50 labor hours as referenced in Section 8.2.3.2 of the TSD. DOE also requests comment on whether consumers may choose to replace the entire product as opposed to repair the failed ignition device and at what price point consumers would make that decision and for which hearth products. (See section IV.F.2.c and chapter 8 of the TSD.)

No comment.

16. DOE requests comment on lifetime assumptions applied in the life-cycle cost and payback period analysis where DOE assumes the minimum lifetime of both the hearth product and ignition system to be 5 years and 1 year, respectively and that for purposes of the life-cycle cost analysis that any repair costs would be free to the consumer during this warranty period. In addition, DOE requests comment on the product lifetime distribution for hearth products that are average are assumed to be 15 years and for hearth product ignition systems are assumed to be 7.3 years as laid out in Section 8.2.3.3 of the TSD. DOE requests input on lifetime for products identified in the five different hearth product groups (vented fireplaces, unvented fireplaces, vented log sets, unvented log sets, and outdoor) that may inform the lifetime distribution analysis. (See section IV.F.2.d and chapter 8 of the TSD.)

No comment.

17. DOE requests comment on the estimated base-case efficiency distribution. (See section IV.F.2.f and chapter 8 of the TSD.)

No comment.

18. DOE requests comment on its assumption that switching from gas to electric hearth products due to the imposition of the design standard would be negligible. (See section IV.G and chapter 9 of the TSD.)

No comment.

19. DOE requests comment on DOE's methodology to correlate housing starts with hearth products shipments. In addition, DOE requests comment on the assumed three-

to-one ratio between non-HPBA and HPBA shipments used to develop the total patio heater shipments assumptions. DOE also requests comment on the assumed fraction of match-lit shipments for each hearth product group and the use of the midpoint of the HPBA range as representative of the market shares of match lit units for each product group as represented in Table 9.3.2 of the TSD. DOE also requests comment on the assumed 0.754 ratio of housing starts to hearth products shipments as discussed in section 9.5 of the TSD and what percentage of these hearth products are connected to natural gas pipelines versus homeowners' propane storage tanks. (See section IV.G and chapter 9 of the TSD.)

No comment.

20. DOE requests comment on expected industry capital and product conversion costs. For the capital conversion costs, DOE requests comment on the determination that the design standard would primarily entail a component swap, in which manufacturers would assemble hearth products using a different set of purchased parts for the ignition system and that re-tooling or reconfiguring production facilities likely would be limited. In particular, DOE requests comment on the assigned nominal capital conversion cost per manufacturer, equivalent to \$10,000, to account for any one-time capital investments and calculated industry conversion costs of \$0.9 million as discussed in Chapter 12.4.6 of the TSD. For the product conversion costs, DOE requests comment on the conversion cost estimates on the assumption that manufacturers would incur limited costs related to R&D, testing and certification, and development of marketing materials in order to bring into compliance models not currently offered with the option of an electronic ignition system. In particular, DOE requests comment on the assumed product conversion cost of \$10,000 in fixed costs per model to arrive at the total industry product conversion costs of \$7.8 million. DOE also requests comment on the number of hearth product manufacturers who may need to invest in capital equipment, assumed to be 90 manufacturers, and the number of hearth product models, assumed to be 781 models, that may need model redesigns in order to comply with the proposed standards. (See section V.B.2 and chapter 12 of the TSD.)

No comment.

21. DOE requests comment on potential impacts of an energy conservation standard on domestic production employment. (See section V.B.2 and chapter 12 of the TSD.)

No comment.

22. DOE requests comment on product-specific regulations that take effect between 2018 and 2024 that would contribute to manufacturers' cumulative regulatory burden. DOE requests information identifying the specific regulations, as well as data quantifying the associated cost burden on manufacturers. (See section V.B.2 and chapter 12 of the TSD.)

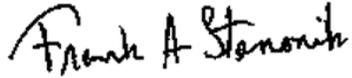
No comment.

23. DOE requests comment on the approach for estimating monetary benefits associated with emissions reductions. (See section V.B.6 and chapter 14 of the TSD.)

See commentary above on Social Cost of Carbon.

AHRI appreciates the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact me.

Respectfully Submitted,

A handwritten signature in black ink that reads "Frank A. Stanonik". The signature is written in a cursive, slightly slanted style.

Frank A. Stanonik
Chief Technical Advisor