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Hearth, Patio & Barbecue Association Comments on California Energy Commissionâ€™s Draft Staff Report for Hearth Products

Additional submitted attachment is included below.

Before the California Energy Commission

In the matter of:	)	Docket No. 18-AAER-06
Phase 2 Appliance Efficiency Regulations	)	Comments of the Hearth, Patio & Barbecue Association on Draft Staff Report
	)	July 29, 2019

Introduction

The Hearth, Patio & Barbecue Association ("HPBA") appreciates the opportunity to provide comment to the California Energy Commission ("CEC") Draft Staff Report dated May 2019 and entitled "Efficiency Standards and Marking for Gas Hearth Products" (the "Draft Report").

HPBA is the principal trade association representing the hearth products and barbecue industries in North America. HPBA's members include manufacturers, retailers, distributors, manufacturers' representatives, service installation firms, and other companies and individuals who have business interests related to the hearth, patio, and barbecue industries. HPBA's core purpose is to promote the welfare of the industries it serves, and one of its critical roles is to serve as an advocate representing the interests of these industries and of its individual members in matters involving the development or implementation of laws or regulations that affect them. HPBA has numerous members that are residents of the State of California, that manufacture gas fireplaces and related products sold in the State of California, or that sell such products in California, and therefore has a keen interest in the subject of the Draft Report.

HPBA is especially appreciative of the CEC's 30-day extension of the deadline for submission of comment, without which preparation of this submission would not have been possible. Due to the unusual and unavoidable circumstances that prompted HPBA's request for a minimum 45-day extension, there are some issues that HPBA was unable to address in as much detail as it would have liked and a few potentially important issues that it was not able to address at all. While HPBA believes that the information provided in these comments provides a sufficient basis to conclude that the Draft Report requires a substantial overhaul, HPBA will understand if CEC staff have further questions after reviewing these comments, and requests the opportunity for further dialogue before the CEC proceeds.

Discussion

A. The CEC Should Not Follow in the Footsteps of Previous Unsuccessful Regulatory Efforts

As indicated in HPBA's previous comments in this proceeding, the CEC should view the previous attempts of the U.S. Department of Energy ("DOE") to regulate so-called "hearth products" as a cautionary tale rather than a model to emulate, and recognize that DOE's proposed standards for so-called "hearth products" was as an unjustified proposal – based on completely inadequate information and analysis – that DOE rightly declined to pursue. To understand the nature and continuing influence of mistakes of the past, a brief review of the relevant regulatory history is warranted.

DOE started with an effort to develop heating efficiency standards for vented gas "fireplace heaters" (products certified to the ANSI Z21.88 standard).[1] To assert jurisdiction over these products, DOE characterized them as a species of "direct heating equipment" ("DHE"), one of the categories of "covered products" specified by statute as being subject to appliance efficiency regulation. The understanding from the start of DOE's rulemaking process was that decorative vented gas fireplaces (products certified to the ANSI Z21.50 standard) were not DHE and thus would not be addressed in the rulemaking proceeding. Accordingly, from the beginning of DOE's rule development process through the issuance of a proposed rule in December of 2009, DOE's information collection efforts and regulatory analysis was limited to fireplace heaters.

Nevertheless, the resulting final rule, published on April 16, 2010,[2] did not just address fireplace heaters; it covered decorative vented gas fireplaces as well. This change was made without any additional notice or opportunity for comment, and without DOE having collected even the minimum information required to identify the issues relevant to decorative vented gas fireplaces.

The 2010 final rule was based on the premise that *all vented gas fireplaces are DHE*, which required DOE to completely nullify the longstanding distinction between fireplace heaters and decorative gas fireplaces. To accomplish this, DOE simply redefined all vented gas fireplaces as "vented hearth heaters" subject to the heating efficiency standards it had developed for fireplace heaters. DOE then "addressed" decorative gas fireplaces by characterizing them as products that generate little or no heat and purportedly relieving them of the need to comply with heating efficiency standards by providing an "exemption" for products with a maximum energy input of 9,000 Btu/Hr.[3] Because it takes more than 9,000 Btu/Hr to simulate a fire in a fireplace, this outcome effectively banned decorative vented gas fireplaces, leaving all vented gas fireplaces – both fireplace heaters and decorative vented gas fireplaces – subject to heating efficiency standards. At that time, an estimated 70% of all vented gas fireplaces were decorative vented gas

[1] 74 Fed. Reg. 65852, 65867 (December 11, 2009).

[2] 75 Fed. Reg. 20112 (April 16, 2010).

[3] 75 Fed. Reg. at 20129 (April 16, 2010).

fireplaces, not one of which had a maximum energy input of 9,000 Btu/Hr or less. HPBA had no choice but to file suit to challenge the final rule.

In response to the litigation, DOE issued a new proposed rule in July of 2011.[4] DOE proposed to eliminate the input restriction effectively banning decorative vented gas fireplaces, but it continued to characterize those products as DHE that – absent an "exemption" – would be subject to the heating efficiency standards imposed by the 2010 final rule. DOE took this position so that it could regulate decorative vented gas fireplaces through requirements imposed as conditions for "exemption" from the heating efficiency standards, including proposed labelling requirements and a ban on continuous pilot lights.[5] However, these requirements for decorative vented gas fireplaces were not the only price DOE proposed to exact for relief from the input restriction effectively banning such products; DOE also expanded the scope of regulation to include yet another category of products that had never been the subject of data collection or analysis: vented gas log sets. Remarkably, DOE took the position that its "vented hearth heater" definition could be interpreted to include vented gas log sets, and announced that this made such products retroactively subject to the heating efficiency standards imposed by its 2010 rule, notwithstanding the fact that gas log sets had never been considered in the development of that rule.[6] Having thus created the need to "exempt" vented gas log sets from the heating efficiency standards, DOE also proposed to regulate those products by conditioning their "exemption" on compliance with requirements including a ban on continuous pilot lights.[7] Importantly, DOE did not even attempt to justify its proposed bans on continuous pilot lights as energy conservation standards; instead it took the position that it was merely proposing to "clarify" the applicability of the previously-adopted heating efficiency standards and provide relief from those standards on what amounted to a "take it or leave it" basis. Accordingly, this initial proposal to ban continuous pilot lights was issued without any technical support document at all.

Despite understandably vigorous adverse public comment, DOE published a final rule less than four months later, in November 2011.[8] The only significant change from the proposed rule was that DOE recognized that it did not have sufficient information about vented gas log sets to know how to regulate them; as a result, the final rule defined vented gas log sets as "vented hearth heaters" that would be subject to heating efficiency standards in the absence of an exemption, and adopted an "exemption" to which it could later attach whatever conditions it liked.[9] HPBA filed suit challenging this final rule as well.

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[4] This proposed rule first appeared as an attachment to a DOE motion seeking to have HPBA's challenge to the 2010 rule held in abeyance pending further rulemaking and was subsequently published at 76 Fed. Reg. 43941 (July 22, 2011).

[5] 76 Fed. Reg. at 43941, 43943, and 43953.

[6] 76 Fed. Reg. at 43943, 43945 and 43948.

[7] 76 Fed. Reg. at 43943, 43953.

[8] 76 Fed. Reg. 71836 (November 18, 2011)

[9] 76 Fed. Reg. at 71839-40 and 71846.

HPBA's challenges to the 2010 and 2011 rules were consolidated before the United States Court of Appeals for the District of Columbia Circuit, and both rules were found unlawful and vacated in *HPBA v. DOE*., 706 F.3d 499 (D.C. Cir. 2013). Among other things, the court found that DOE had acted unreasonably in characterizing the products at issue as DHE and that DOE would not even arguably have the authority to regulate decorative vented gas fireplaces or vented gas log sets in the absence of a "coverage determination" designating them as "covered products" by rule.

DOE's response to this setback was to propose a "coverage determination" for "hearth products."[10] Having raised the stakes from fireplace heaters to all vented gas fireplaces in 2010 and raised them again to include vented gas log sets in 2011, DOE proposed to raise the stakes yet again by proposing coverage for "hearth products," a term for which it proposed an almost meaningless and intentionally open-ended definition. The intent – as admitted to one HPBA representative – was to cast a broad enough net to cover "whatever it is that you guys manufacture." Despite the obvious objection that this proposed definition was too uncertain in scope to permit the analysis required to support a coverage determination or to inform interested parties of the range of products at issue, DOE's next step was to issue proposed standards for "hearth products" before it had even reached a conclusion as to the range of products that category included.[11]

The standards proposed included the same sort of design and labelling requirements DOE had previously sought to impose as the price of relief from heating efficiency standards that were not even theoretically achievable for products other than vented gas fireplaces. DOE had never previously attempted to gather the information or conduct the analysis required to justify such requirements for vented gas fireplaces or gas log sets, let alone for any of the other products potentially at issue (which could literally have included anything from outdoor fireplaces to gas lights, cooking appliances, patio heaters, and products like the eternal flame on President Kennedy's grave). Despite this fact, DOE elected to skip the entire pre-proposal rule development process specified by its own procedural rules by jumping straight to a proposed rule seeking to impose preconceived requirements on a still unspecified universe of products.[12] DOE did prepare a regulatory analysis purportedly justifying the proposed requirements, but that analysis was grossly inadequate. Comment filed in response to the proposal represented the initial (and only substantial) exchange of information on many of the issues presented, and that comment demonstrated that the analysis provided in support of the proposed rule – the very analysis on which the Draft Report so extensively relies – was based almost entirely on inadequate data and arbitrary assumptions.[13]

DOE had seventeen months before the end of the Obama Administration to proceed with a final rule based on its "hearth products" proposal and elected not to do so. The decision not to proceed with the proposed rule was warranted on the merits in view of the extensive adverse

[10] 78 Fed. Reg. 79638 (December 31, 2013).

[11] 80 Fed. Reg. 7082 (February 9, 2015).

[12] See Appendix A to Subtitle C of 10 C.F.R. Part 430.

[13] See HPBA's May 11, 2015 submission in Docket No. EERE-2014-BT-STD-0036.

comment DOE received. Accordingly, it would be wrong – and frankly unfair – to characterize DOE's "hearth products" proposal as a meritorious proposal that DOE can reasonably be faulted for failing to pursue. In fact, it was the defective product of a truncated rule development process that – at the first opportunity for public comment – was shown to be based on inadequate (and often demonstrably erroneous) information.

The Draft Report appears to have adopted many problematic features from this unfortunate regulatory history, often without any apparent understanding of that history or the relevant context. One particularly conspicuous example is the proposal to adopt DOE's proposed "hearth products" definition, which was developed solely as an expedient means for DOE to resolve a legal issue the CEC does not appear to face: a statutory constraint that limits DOE's appliance efficiency jurisdiction to "covered products." DOE sought to vitiate that constraint by using an open-ended "hearth products" definition to define the scope of a "coverage determination." In effect, this definition would have allowed DOE to justify coverage for at least some products and later assert jurisdiction over a wide range of additional products – without the product-specific justification that coverage determinations require – simply by asserting that its "hearth products" definition already includes them. In short, the Draft Report proposes adoption of a definition that is a relic of the kind of definitional gamesmanship that plagued previous DOE rulemaking and that would serve no legitimate purpose in the legal framework governing CEC appliance efficiency regulation.

In addition, the Draft Report:

- Adopts the false premise that some gas fireplaces – rather than being fireplaces – are strictly utilitarian heating appliances that are necessarily improved by increases in heating efficiency;

- Repeats the false narrative that decorative gas fireplaces provide little or no heat to the space in which they are installed, a narrative that – rather than describing what decorative fireplaces are – was part and parcel of an effort to ban decorative vented gas fireplaces by redefining that category of products to include only products for which there is virtually no market: products that cannot produce the flames required for normal-sized fireplace products;

- Seeks to impose pilot light restrictions and labelling requirements that originated – not as purportedly-justified energy conservation standards – but as requirements imposed as the price of relief from unlawfully imposed heating efficiency standards;

- Erroneously assumes that continuous pilot lights on fireplace products provide little or no utility and can be eliminated at little cost and with minimal difficulty;

- Erroneously assumes that information concerning the use of one type of product can be expected to be representative of the use of materially different products; and

- Relies extensively on a DOE analysis that was prepared at the proposed rule stage of a truncated rule development process and thoroughly discredited by extensive adverse comment at the first opportunity for public input.

As a result, the Draft Report presents a series of recommendations to impose preconceived requirements on the basis completely inadequate information and analysis.

B. Scope and Definition

As already indicated, the Draft Report recommends adoption of a "hearth products" definition that serves no legitimate purpose. As a simple matter of legal drafting, that definition is essentially useless, because it fails to delineate any finite and identifiable range of products that have anything in common beyond the fact that they use natural gas to produce a visible flame. In fact, there is almost nothing left of the definition when it is stripped of disjunctive clauses stating that the definition covers products whether or not they have any of several particular attributes:

> "Gas hearth product" means a gas-fueled 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."~~

In sum, the definition literally includes any gas-fueled appliance that "presents a flame pattern" for any purpose whatsoever. The plain wording of this definition covers products the CEC does propose to regulate (including vented gas fireplaces), products the CEC may seek to regulate later (including fire pits and fire tables), products the CEC does not propose to regulate because it already regulates as a different category of products (including patio heaters), and a host of other products as varied as barbecue grills, gas lights, tiki torches, and pieces of flame art. A definition that literally covers products it is not intended to cover is a bad definition, as is a definition that conspicuously fails to distinguish products intended to be covered from those that are not. The proposed "hearth products" definition is bad for both reasons.

There is no reason for the CEC to use a definition as a vast net to haul in a sprawling universe of products that have almost nothing in common. If the CEC concludes that specific products warrant regulation, it must define each of those products clearly, and can then group them as appropriate by using a collective term that is defined to include only the specific products being grouped together. For example, the products the Draft Report proposes to regulate can collectively be described as "Gas Fireplace Products," and that collective term could be defined by reference to each of the specific products it includes.[14] Use of any broader definition would simply create unnecessary confusion as to what products are actually being regulated.

In defining individual products, it is imperative that the CEC use terms that have certain meaning and that are consistent with existing well-understood terminology. Any other approach is a recipe for confusion and the kind of definitional gamesmanship that previously resulted in decorative fireplaces being "defined" out of existence and standards that had been justified for

[14] For example, the term "Gas Fireplace Product" could potentially be defined as follows: "Gas Fireplace Product means a Vented Gas Fireplace or a Vented Gas Log Set."

one type of product being retroactively imposed on others. The CEC should also be careful to ensure that definitions are not only clear, but appropriately tailored to facilitate cogent regulatory analysis. For example – as discussed below – outdoor gas log sets and outdoor gas fireplaces should be defined separately because they differ in ways that require them to be considered separately for purposes of regulatory analysis.

For purposes of these comments – and in the interests of avoiding confusion – HPBA's comments will address the categories of products identified and defined below and will collectively refer to this range of products as "Gas Fireplace Products."

Vented Gas Fireplaces

Definition: "Vented Gas Fireplace" means any vented gas product (including fireplaces, fireplace inserts, and freestanding stoves) certified to the ANSI Z21.50/CSA 2.22 or Z21.88/CSA 2.33 standard.

This definition (particularly the reference to certification to the Z21.50 and Z21.88 standards) makes the scope of this category of products unambiguous. It includes:

- Both natural gas and propane products;
- Fireplace heaters and decorative fireplaces;
- Fireplaces, fireplace inserts and freestanding stoves;
- Indoor products as well as fireplaces designed to be installed in an exterior building wall with viewing panes facing both indoors and outdoors; and
- Products that simulate traditional solid fuel fireplaces, fireplace inserts or stoves as well as products that – though similar in technology and function – *do not* simulate traditional solid fuel products.

This definition does not require any incorporation of the referenced standards, because it is factually true that all vented gas fireplaces are certified to one of the two referenced standards and the fact that a product is certified to one of those standards eliminates a host of potential questions as to what products do or do not fall within the definition (including all of the questions addressed by the bullet points outlined above). In this respect, the bullet points outlined provide an explanation of what the definition – by its own terms – unambiguously covers (as opposed to an explanation of the "intent" of ambiguous definitional language).

Vented Gas Fireplace Heaters and Decorative Vented Gas Fireplaces

Aside from the obvious difference in physical form between fireplaces, inserts and stoves, there are two principal categories of Vented Gas Fireplaces: vented gas fireplace heaters and decorative vented gas fireplaces. If the CEC needs to define these categories of products, it is vital that it do so accurately, identifying and defining these categories of products as what they

are instead of (as the Draft Report proposes) creating new names and definitions that might or might not correspond to the two categories of Vented Gas Fireplaces that actually exist.

The two existing categories of Vented Gas Fireplaces are appropriately identified and defined as follows:

> "Vented Gas Fireplace Heater" means a vented gas product (including fireplaces, fireplace inserts, and freestanding stoves) certified to the ANSI Z21.88/CSA 2.33 standard.
>
> "Vented Gas Decorative Fireplace" means a vented gas product (including fireplaces, fireplace inserts, and freestanding stoves) certified to the ANSI Z21.50/CSA 2.22 standard.

Any additional words would serve only to decrease the clarity of these definitions, because there are separate ANSI standards specific to each of these categories and the question of how a given product should be classified can be conclusively resolved by determining which standard it is certified to. There is no reason for definitional language indicating that Vented Gas Fireplace Heaters (hereafter "Fireplace Heaters") are designed to provide heating utility or that Decorative Vented Gas Fireplaces (hereafter "Decorative Fireplaces") are not – or that the former may be equipped with thermostats and the latter may not – because those statements add nothing that would alter the scope of the respective definitions or make them any clearer. To the contrary, additional verbiage would serve only to undermine the clarity that reliance on the applicable certification standard provides, because – as a basic cannon of regulatory construction – the presence of additional verbiage in a definition ordinarily suggests that some additional meaning (presumably some narrowing of or addition to the scope of the definition) is intended, and no changes in the defined scope of the two existing categories of Vented Gas Fireplaces are warranted.

As already indicated, one of the core defects of DOE's effort to regulate vented gas fireplaces was that DOE – rather than defining the existing categories of Vented Gas Fireplaces as what they are – sought to radically redefine that universe of products in order to eliminate the Decorative Fireplace category by making such products definitionally subject to the alternatives of compliance with heating efficiency standards designed for Fireplace Heaters or compliance with an energy input limit too low for normal fireplace products.

Unfortunately, the Draft Report adopts the same false narrative about Vented Gas Fireplaces that appeared in DOE's unlawful 2010 rule: a narrative that describes "heating" fireplaces as a species of product that "provides heat to the space in which it is installed" and "decorative" fireplaces as a species of product that "provides little or no heat to the space in which it is installed" or, at least, that "should not greatly affect the temperature conditions in the room in which it is installed."[15] This narrative does not describe what Fireplace Heaters and Decorative Fireplaces actually are; instead it describes the result of DOE's 2010 effort to redefine the universe of Vented Gas Fireplaces in a way that reclassified all such products (including

[15] Draft Report at p.13 (citing DOE's 2010 rule).

Decorative Fireplaces) as "heaters" and defined the "decorative" category of products as an empty set.

No matter whether or how the CEC ultimately regulates Vented Gas Fireplaces, it should describe those products accurately and define them as what they are. In that regard, the difference between Fireplace Heaters and Decorative Fireplaces is not that one produces heat and the other does not; it is that Fireplace Heaters are certified as products *appropriate for heating use* and Decorative Fireplaces are not. Suggestions that Decorative Fireplaces are "not a source of heat" are – as statements of fact – unambiguously false.

Vented Gas Log Sets

Definition: "Vented Gas Log Set" means a vented gas product that is sold for indoor use, designed to be installed permanently to a fixed gas supply system in the hearth of an existing solid fuel fireplace, and includes a burner system and artificial log or similar display.

This definition – based on the "gas log" definition in the Draft Report but with appropriate modification – covers indoor vented natural gas and propane log sets but not gas log sets sold for outdoor use, which are a separate category of products that – due to differences in product characteristic and use – must be considered separately for purposes of regulatory analysis.

Outdoor Gas Log Sets

Definition: "Outdoor Gas Log Set" means a gas log set that is sold for outdoor use, designed to be installed permanently to a fixed gas supply system in the heath of an existing outdoor solid fuel fireplace, and includes a burner system and artificial log or similar display.

This definition – based on the "gas log" definition in the Draft Report but with appropriate modification – covers outdoor gas log sets, a category of products that appears to be somewhat different than that contemplated by the Draft Report.

Outdoor Gas Log Sets are log sets designed to be installed in the hearth of an existing outdoor gas fireplace, though such products can be – and sometimes are – installed in what amounts to a fire pit or "campfire" type of installation. The Draft Report appears to confuse this category of products with prefabricated outdoor gas fireplaces; in fact, the photograph the Draft Report used as an example of an outdoor gas log set appears to show a prefabricated outdoor gas fireplace.

Outdoor Gas Log Sets and prefabricated outdoor fireplaces of the kind the Draft Report identified as a "gas log set" are significantly different products in several respects, the most important of which is that Outdoor Gas Log Sets are designed to be installed in existing masonry fireplaces. This imposes important design constraints, because the entire gas log set must fit inside the existing hearth, where it is difficult to conceal electronic components from view and shield them from excessive heat. This is not the case for prefabricated gas fireplaces, in which it is at least possible to have components built into the structure of the fireplace itself instead of having them located inside the firebox. Accordingly – in the context of potential restrictions on

continuous pilot lights – Outdoor Gas Log Sets and outdoor gas fireplaces must be considered separately for purposes of regulatory analysis.

Outdoor Gas Fireplaces

Definition: "Outdoor Gas Fireplace" means a gas fireplace that is sold for outdoor use, designed to be installed permanently to a fixed gas supply system, and includes a burner system in a fire chamber recessed in a non-combustible structure.

This definition covers outdoor fireplaces of the type used as an illustration of outdoor gas fireplace in the Draft Report, as well as prefabricated gas fireplaces such as that identified in the Draft Report as an outdoor gas log set.

C. Heating Efficiency Standards are Inappropriate for Gas Fireplace Products

Heating efficiency standards are not warranted for any of the products at issue. The reason for this can be stated in simple terms: the purpose of heating efficiency standards is to make heating products better (or at least more efficient) heaters, and heating efficiency standards for Vented Gas Fireplaces would not make such products better or more efficient gas fireplaces. Instead, heating efficiency standards for Vented Gas Fireplaces would serve only to limit the range of available products, thereby leaving some consumers without Vented Gas Fireplaces appropriate to their needs. To understand why this is the case, it is important to start with a clear understanding of what a fireplace is.

Fireplaces are architectural features that add to the appeal and market value of a home whether or not there is ever a fire in them. Many consumers purchase fireplaces (or homes with fireplaces) for those reasons alone, with the result that a substantial percentage of fireplaces see little or no active use.[16] The other defining characteristic of fireplaces is that – when they are in use – they provide a source of enjoyment that has unique aesthetic, social, and cultural appeal: the beauty and warmth (both literal and figurative) of a fire in a fireplace. While fireplaces can have real heating utility, their core appeal lies not in their heating utility *per se*, but in the unique combination of features that make a fireplace a fireplace. That is why there is very little regional correlation between fireplace ownership and heating needs, and why the percentage of homes that have fireplaces is actually higher in San Diego, California than it is in either Chicago, Illinois or Buffalo, New York.[17]

Vented Gas Fireplaces are *fireplaces*. They may be preferred to solid fuel fireplaces for any of a variety of reasons: they are cleaner and more convenient than traditional solid fuel fireplaces and direct-vent fireplaces conserve energy – even if they are never used – simply by eliminating

[16] J. Houck, Residential Decorative Gas Fireplace Usage Characteristics (2010). This report was submitted with HPBA's November 15, 2010 comments in Docket No. EERE-2009BT-TP-0013, available at: https://www.regulations.gov/document?D=EERE-2009-BT-TP-00130012

[17] J. Houck, Residential Decorative Gas Fireplace Usage Characteristics (2010) at pp. 2-4. This report was submitted with HPBA's November 15, 2010 comments in Docket No. EERE-2009BT-TP-0013, available at: https://www.regulations.gov/document?D=EERE-2009-BT-TP-00130012

thermal exchange through the "hole in the house" that traditional chimneys represent. In addition, Vented Gas Fireplaces do not produce the particulate emissions characteristic of traditional solid fuel fireplaces, which makes them desirable alternatives from an air quality standpoint and suitable for use in the homes of individuals with respiratory problems such as asthma and in jurisdictions in which air quality concerns have resulted in significant restrictions on the sale or use of solid fuel fireplaces.

It is true that Vented Gas Fireplaces can have significant heating utility, and Fireplace Heaters are specifically marketed as being appropriate for heating use. Such products can be very effective when used as part of a zone heating strategy to limit reliance on central heating systems, and many consumers choose Fireplace Heaters because they want products that would be suitable for such use. However, fewer consumers regularly use their Fireplace Heaters for utilitarian heating purposes, and very few do so *exclusively*. For consumers interested *solely* in utilitarian space heating, there are other space heater options that are both less costly and better tailored to strictly utilitarian heating use. Consumers only choose to invest in gas fireplaces – including Fireplace Heaters – if they want a *fireplace*: the kind of product that can be enjoyed during family gatherings and other social occasions, on romantic evenings, or when someone is simply curled up for the evening with a good book. Products that generate as much heat as possible so as to minimize main burner operation are obviously ill-suited for such use. Consequently, there is little or no demand for fireplaces that generate too much heat to permit a fireplace to be used *as a fireplace*, as high heating efficiency often would.[18] That's why the market for fireplaces with very high heating efficiency is small; as one HPBA member discovered, it is possible to make fireplaces that use condensing technology to reach very high levels of heating efficiency, it just isn't possible to sell very many such products.[19] By contrast, there is a market for very high-efficiency space heaters. In fact, Empire Comfort Systems, Inc. – the same HPBA member that found the market insufficient to sustain production of condensing gas fireplaces – continues to produce condensing room heaters, which are strictly utilitarian heating products.

One of the inherent problems with heating efficiency standards for gas fireplaces stems from the fact that appearance is a critical concern in the selection of Vented Gas Fireplaces, whether or not a fireplace is intended for any significant heating use. Because fireplaces are architectural features, they must provide an appropriate visual fit for the rooms in which they are installed – both as a matter of style and physical scale – and they must be capable of producing a volume of flame that will "look right" in relation to the size of the fireplace and the size of the room itself. Because flame volume is essentially proportional to Btu input, these important visual considerations effectively define a range of Btu inputs that would – with variations based on differences in individual taste – provide the appropriate visual "fit" for any given installation. Heating efficiency standards are problematic because – for fireplaces of any given size – increases in heating efficiency produce corresponding increases in heat output that would be

[18] HPBA illustrated this point in its previous comments by providing an example in which a fireplace with a heating efficiency of 67% would produce too much heat to permit more than relatively fleeting fireplace use. *See* HPBA's June 11, 2018 comments in this proceeding at p. 9 and note 15.

[19] One HPBA member actually produced such fireplaces, but ultimately discontinued production due to lack of sales.

excessive for some of the installations for which fireplaces of that size are desired. In fact, even moderately high heating efficiency standards would substantially limit the range of installations in which it would be reasonable to put "normal-sized" gas fireplaces into "normal-sized" rooms. In short, the percentage of Fireplace Heaters with very high heating efficiencies is not small because consumers are being ill-served by the market; it is small because the market for such products is small.

To illustrate the problem, consider what the proposed heating efficiency standard requiring a Fireplace Efficiency ("FE") of 70% would do to the market for what the Draft Report identifies as the average-sized Fireplace Heater: a product with an energy input of 35,000 Btu/Hr.[20] At a heating efficiency of 70%, such a product would have a nominal heat output of 24,500 Btu/Hr, and basic "rule-of-thumb" calculations are sufficient to show that this would be far too much heat output for installations in average-sized homes anywhere in the State of California.

For example, one basic formula for determining the "ideal fireplace heat output" for rooms of a given size[21] produces the following results for homes in the range of climate zones that exist in California:

Room Area (Square Feet)	Ceiling Height (Feet)	"Ideal" Gas Fireplace Heat Output (Btu/Hr)
300	8	2,400-9,600
400	9	3,600-14,400
500	9½	4,750-19,000
600	10	6,000-24,000

Another "rule of thumb" tool (a "Btu calculator")[22] employs a different approach (accounting for differences in home insulation but not differences in climate zone) but provides comparable results for similar-sized rooms in homes with average insulation:

Room Area (Square Feet)	Ceiling Height (Feet)	Gas Fireplace Heat Output (Btu/Hr)
300	9	6,075
400	9½	11,400
500	10	12,000
600	11	13,300

According to the above results, the "average" fireplace heater with a heating efficiency of 70% FE would generate more heat than would be "ideal" even for a twenty-by-thirty square foot room with a ten-foot ceiling in a home in the Sierra Nevada Mountains. To put these numbers into

[20] Draft Report at p. A-18.

[21] Under this formula, the "ideal heat output" for a gas fireplace is equal to the square footage of the room in which it is to be installed multiplied by the ceiling height (in feet) and a factor of one to four based on the applicable climate zones in California. *See* https://www.thisoldhouse.com/ideas/all-about-gas-fireplaces

[22] https://www.northlineexpress.com/btu-calculator.html

further perspective, data from the National Association of Home Builders indicates that – in new homes built in 2012 – the only rooms with an average size of over 600 square feet were Great Rooms present in less than half (46%) of the largest category of new homes (*i.e.*, homes of 3,000 square feet and up).[23]

This relatively simple analysis is sufficient to show that there are relatively few homes in which it would be reasonable to install a 35,000 Btu/Hr fireplace with a heating efficiency of 70% FE. A standard requiring a minimum heating efficiency of 70% FE would not magically increase the number of homes in which the heat generated by such products would be a blessing rather than a curse; nor would it make materially smaller but more heat-efficient gas fireplaces look anything other than under-sized in installations for which a 35,000 Btu/Hr gas fireplace is desired. All the standard would do is leave many of the consumers who want 35,000 Btu/Hr Fireplace Heater without any that they could reasonably use.

The reality is that consumers want Fireplace Heaters that give them the look they want and the ability to put their fireplace to heating use *as efficiently as possible without compromising their ability to use the product as a fireplace*. In each case, the ideal level of heating efficiency depends not just on the relevant installation conditions, but on the extent to which the consumer is willing to compromise core fireplace attributes for heating efficiency or *vice versa*. Heating efficiency standards would deny consumers the ability to make such choices on their own, and there is no sound basis to suggest that this would benefit consumers in any way.

The Draft Report acknowledges that gas fireplaces generally are not operated strictly in response to heating needs; as a result, increases in heating efficiency cannot be expected to produce energy savings by reducing the burner operating hours required to satisfy heating needs. However, the Draft Report advances the novel theory that heating efficiency standards for Fireplace Heaters will provide energy savings – not because the fireplaces themselves would consume less energy – but because higher heating efficiency would translate into increased heat output that would automatically produce energy savings by reducing central furnace operating hours. There are several problems with this theory.

First, appliance efficiency regulation – almost by definition – must be designed to reduce the amount of energy the regulated product consumes, either by limiting the amount of energy the product consumes per hour of operation or by increasing the service the product can provide per hour of operation. As a result, there is no obvious legal basis for the CEC to impose standards on one product for the purpose of causing collateral impacts on the energy consumption of another completely separate appliance.

Second, the analysis in the Draft Report makes the unwarranted assumption that – if heating efficiency standards were imposed – consumers would continue to purchase products of the same size and operate them in the same way despite the resulting increases in heat output. There is

[23] http://nahbclassic.org/generic.aspx?genericContentID=216616

simply no basis to believe that this would be the case; to the contrary – as already indicated – standards in the range the Draft Report proposes would require efficiency increases that would commonly result in overheating serious enough to preclude that outcome. Moreover – for fireplaces of similar size – products with high heating efficiency can impose installation constraints that lower efficiency products do not, including the need for greater clearances and special venting to prevent overheating that could otherwise be damaging to artwork or electronic devices. Accordingly – even in cases in which substitution of higher-efficiency products would not result in unacceptable overheating – there would be cases in which it would be difficult, at best, to substitute higher-efficiency products for lower-efficiency products of a similar size. For these reasons alone, the energy conservation benefits envisioned by the Draft Report would be largely – if not entirely – illusory.

Third, the Draft Report makes the unwarranted assumption that increases in fireplace heat output would automatically translate into substantial reductions in central heating load. Fireplace Heaters can be used as a very effective means to reduce central heating loads, but this generally requires conscious use of zone heating to reduce reliance on central heating through a thermostat set-back strategy or by limiting the need to have central heating systems turned on at all. In the absence of such a strategy, potential impacts on central heating loads are more difficult to assess.

In some cases, consumers use Fireplace Heaters to provide heat to space that is otherwise unheated. In these cases, the "heating" function can be expected to be characterized as "supplemental" or "secondary" because central heating is still the primary heating system for the residence as a whole, yet the heat output of the Fireplace Heater would have no direct influence on the central heating system.

In other cases, consumers use Fireplace Heaters to provide heat to space that is *inadequately* heated, generally because that space is relatively isolated from thermostatic controls for the central heating system. In those cases, the basic problem is that the temperature in the space in question has little impact on the temperature where the thermostat for the central heating system is located, so it is unreasonable to assume that heat additions would have a substantial impact on thermostatic operation of the central heating system.

More broadly, the impact of fireplace use on central heating thermostats is inherently dependent on the relative locations of the fireplace and the thermostat and the degree of thermal isolation between the two. The Draft Report seems to assume that central heating systems are always co-located with Fireplace Heaters – so that all of the fireplace heat output would operate directly on the central heating thermostat – which would violate the basic principle that central heating thermostats should not be located where they would be exposed to direct sunlight, cooking appliances, or other localized sources of heat.

Fireplace Heaters can provide excellent heating utility – in a variety of different ways – but there is simply no basis to conclude that higher heating efficiency would produce energy savings by reducing the main burner operating hours of Fireplace Heaters. Nor is there any basis to conclude that higher heating efficiency would result in desirable increases in the heat output of Fireplace Heaters. To the contrary, complaints that Fireplace Heaters produce too much heat are not uncommon, and manufacturers have had to develop specialized venting systems to divert

excess heat generated by Fireplace Heaters with lower heating efficiencies than the Draft Report proposes to require. In fact, simple "rule of thumb" calculations are sufficient to show that the proposed standards would result in increases in heat output that would be actively undesirable for most consumers. For all of these reasons, it is abundantly clear that higher heating efficiency (or higher heat output) would not even generally make Fireplace Heaters better Fireplace Heaters.

Finally, basic information required for an analysis of the proposed heating efficiency standards is lacking. There is no credible basis for many of the key assumptions relied upon in the Draft Report's regulatory analysis, including – as explained below – assumptions concerning the average energy input or baseline efficiency of Vented Gas Fireplaces. More importantly, there is no basis at all for Draft Report's assessment of the compliance costs an efficiency standard of 70% FE would impose. As already indicated, the true cost of such a standard is that the bulk of the market for Fireplace Heaters would be eliminated: manufacturers might be able to *produce* more Fireplace Heaters with the required heating efficiency, but they could not reasonably expect to *sell* them. In any event, the Draft Report grossly underestimates the cost of producing compliant products. A heating efficiency standard of 70% FE would effectively ban the vast majority of existing Fireplace Heaters, leaving many manufacturers without any viable Fireplace Heater products.[24] Manufacturers generally would not be able to modify existing designs to meet the standard, because any such modifications would require recertification of the product – a substantial cost in itself – as well as redesign efforts not just to increase the heating efficiency of the unit, but to address the insulation, clearance, and venting issues the increase in heat output would raise. In many cases, the effort required would be little different than the effort to develop a completely new product. In addition, increases in heating efficiency do not simply impose the cost of increasing thermal efficiency; they also generally require substantial increases in insulation and the use of more costly materials such as ceramic glass in lieu of tempered glass. By inspection, the CEC's estimate of the cost of required efficiency improvements is low by a wide margin.

D. Testing and Recertification Requirements

Because heating efficiency standards are not justifiable for any of the products at issue, there is no basis for the CEC to impose heating efficiency testing requirements. Nevertheless, there are several additional points that warrant mention.

1. Vented Gas Fireplaces

    a. General Considerations

As stated in HPBA's previous comments in this proceeding, it is vital – to the extent any efficiency testing requirements are imposed – that any testing requirements be fully consistent with testing requirements that are already in place in Canada. In short, it is imperative that an

[24] In view of the proposed compliance deadline and the time required for product redesign and certification, many manufacturers would be unable to field any "compliant" Fireplace Heater products in time to avoid the need to stop selling any Fireplace Heaters in California.

efficiency rating of 50% FE (or any other FE) mean the same thing in California that it does in Canada.

It is also important to ensure that any testing requirements imposed do not impose a need for duplicative testing. At a minimum, this means that, to the extent possible, all testing requirements – including sample selection, the number of data points required, limitations on the range of acceptable testing facilities – be consistent with those required for compliance with Canadian testing requirements. In this regard, it is important to recognize that Canada "got there first." As a result, existing efficiency testing has generally been performed for purposes of compliance with Canadian requirements, and any CEC requirement for which the data from such testing would be inadequate will impose a need for repeat testing.

To the extent new testing is required, the CEC should recognize that testing capacity is limited and may not be sufficient to permit required testing to be completed before applicable compliance deadlines. In particular, the need for retesting would exacerbate a significant testing backlog that has already developed due to a 2020 deadline for the certification of solid fuel appliances imposed by Federal New Source Performance Standards. This is an issue that the CEC should explore carefully if efficiency testing requirements are imposed to ensure that any testing requirements are phased-in (or compliance deadlines are otherwise scheduled) to ensure that compliance is achievable.

A related concern is that CEC requirements could potentially require the recertification of numerous products, which is a considerably more costly and time-consuming exercise than efficiency testing and is often performed by the same testing laboratories. For example, the proposed heating efficiency standard would require the vast majority of existing Fireplace Heaters to be modified to achieve the minimum efficiency standard or – because it would generally be easier to develop new Fireplace Heaters than to modify existing products to achieve a heating efficiency of 70% FE – recertified as Decorative Fireplaces. These recertification costs would be substantial and are not adequately accounted for in the Draft Report's analysis. However, the CEC needs to recognize that the need for product recertification would also likely exceed available laboratory capacity, imposing additional cost and significant market disruption depending on the requirements imposed and compliance deadlines specified. Such problems would obviously exacerbate difficulties imposed by testing requirements alone and must therefore be considered together in determining the costs testing requirements would impose and the deadlines by which compliance could reasonably be achieved.

b. Heating efficiency testing requirements for Decorative Fireplaces are unwarranted

The Draft Report recommends heating efficiency testing requirements for Decorative Fireplaces without accounting for the burdens such testing would impose or providing a credible explanation of the need for such testing. Testing plainly isn't needed to inform consideration of the need for heating efficiency standards for Decorative Fireplaces,[25] because no amount of data could make heating efficiency standards justifiable for products not intended for utilitarian heating use.

[25] Draft Report at p. 36.

Even assuming some legitimate need for heating efficiency data for Decorative Fireplaces, HPBA sees no justification for the CEC to impose heating efficiency testing requirements – with all the attendant burden (presumably including compliance certification requirements) for the purpose of obtaining information that would largely duplicate information that is already publicly available.

2. Heating efficiency testing requirements would be unreasonable for Gas Fireplace Products other than Vented Gas Fireplaces

There is no appropriate heating efficiency test procedure for Gas Fireplace Products other than Vented Gas Fireplaces, nor can efficiency test procedures for Vented Gas Fireplaces be reasonably modified for the testing of other products. There are several core problems involved.

First, test procedures for Vented Gas Fireplaces are based on test procedures originally designed for products that provide warmed air for circulation to a living space. With the exception of some Vented Gas Fireplaces, none of the products under consideration in this proceeding are designed to provide heat by that means. Instead, the heat produced by Vented Gas Log Sets, Outdoor Log Sets, and Outdoor Gas Fireplaces is overwhelmingly in the form of radiant heat rather than warmed air, and the test procedures for Vented Gas Fireplaces does not provide a reasonable measure of radiant heat output or efficiency. Accordingly, "Fireplace Efficiency" or similar measures of fireplace heating efficiency would not be meaningful for such products.

Second, the test procedures for Vented Gas Fireplaces require that flue gas temperatures be measured at a specified location in the product's flue, and gas log sets (and most Outdoor Gas Fireplaces) do not have flues. In the case of Vented Gas Log Sets, the product operates with the flue provided by the existing fireplace in which it is installed. As a result, Vented Gas Log Sets could only be tested after they are installed, and the results of such testing would vary considerably from installation to installation due to variations in the existing fireplaces in which they are installed. While the same is generally true of Outdoor Gas Log Sets, those products can also be installed where there is no flue at all (*e.g.*, as where a log set is installed in what amounts to an outdoor fire pit). Outdoor Gas Fireplaces may also lack a flue for a different reason: some outdoor gas fireplaces are designed as what amount to vent-free products (*i.e.*, as open-hearth products without any venting for either combustion air or exhaust gases).

Finally, the calculations imbedded in the test methods for Vented Gas Fireplaces assume product use patterns that are at least supposed to be representative of Vented Gas Fireplace use, and there is no basis to conclude that the use patterns for Vented Gas Fireplaces would be representative of any of the other products at issue, all of which serve a different range of purposes and – particularly in the case of outdoor products – are used under materially different circumstances.

E. Marking and Automatic Shut-Off Requirements

1. Marking requirements for Decorative Gas Fireplaces are unwarranted

Labelling requirements originated as part of since-vacated requirements that DOE imposed as the price for relief from its since-vacated heating efficiency standards for "vented hearth heaters." Since then, labelling requirements have routinely appeared as a part of a preconceived set of "decorative fireplace" requirements for which no clear justification exists. Natural Resources Canada ("NRCan") proposed a labelling requirement of this kind, but ultimately concluded that no such requirement was warranted.[26]

The marking requirements proposed by the Draft Report are particularly troubling. To begin with, the proposed rule text that – read literally, and in the context of other California labelling requirements – would appear to require that Decorative Fireplaces be disfigured by a "permanent" and "conspicuous" marking bearing the false statement that such products are "not a source of heat." HPBA objects to both the form and substance of this proposed requirement.

Labelling requirements should never require that products sold on the basis of their visual appearance be permanently disfigured. HPBA appreciates representations made at the CEC's June 6, 2019 Staff Workshop that the words "permanent" and "conspicuous" in the proposed rule text were not intended to mean what they seem to say, but those words nevertheless do seem to say that products sold as attractive architectural features must bear a "permanent" and "conspicuous" label.[27] Accordingly, HPBA requests that any labelling requirement for Decorative Fireplaces be worded so as to make it clear that required labels can be removable or that any permanent label can be concealed behind a panel (or otherwise out-of-sight) so as not to disfigure products for which an attractive appearance is essential.

Second, labelling requirements should never be used to mislead the public, and the wording for the proposed labelling requirement ("not a source of heat") is misleading at best. Consumers would not benefit from labelling suggesting that Decorative Fireplaces don't produce heat, and they would certainly be harmed to the extent they are left shivering during a power outage, laboring under the misconception that there is some reason why they should be reluctant to use their Decorative Fireplace for emergency heating. The most accurate statement concerning Decorative Fireplaces would probably be: "Not Recommended for Regular Heating Use."

2. Automatic shut-off requirements for Decorative Gas Fireplaces are unwarranted

The Draft Report recommends a requirement that Decorative Fireplaces have an automatic main burner shut-off that would turn the product off if it is left with its main burners operating for more than twenty-four hours continuously. The Draft Report does not appear to provide any

[26] The final rule was published at Canada Gazette, Part II, Volume 153, Number 12, Registration SOR/2019-164, June 3, 2019, and is available at: www.gazette.gc.ca/rp-pr/p2/2019/2019-06-12/html/sor-dors164-eng.html

[27] Draft Report at p. 41.

justification for this proposed requirement, and HPBA is not aware of any information suggesting that such a requirement would provide significant energy savings or be economically justified. In fact, it is hard to imagine any normal circumstances in which a Decorative Fireplace would be unintentionally left on for twenty-four consecutive hours, and harder still to see how such an odd circumstance could provide a sufficient basis to impose the cost of the proposed solution on the entire population of Decorative Fireplace consumers.

HPBA presumes that the Draft Report proposed this requirement on the grounds that NRCan had previously proposed such a requirement. NRCan has since decided against the adoption of this requirement[28] and HPBA urges the CEC to do the same.

F. The Proposed Ban on Continuous Pilot Lights is Unwarranted

The premise that the elimination of continuous pilot lights would save energy and benefit consumers is the product of experience with products such as residential furnaces: products that lurk out of sight, cycle on and frequently under automatic control, had continuous pilot lights that could only be turned on by someone on their hands and knees with a flashlight and a screwdriver, and could be converted to intermittent pilot ignition ("IPI") systems with relative ease and without any substantial loss of utility for consumers. Gas Fireplace Products are not just different; they are different in every relevant respect:

- They are products that are prominently located in living areas with their combustion chambers intentionally displayed, with the result that the glow of a pilot light is likely to be visible every night when the lights are turned out;

- They are generally "attended appliances" with main burners that are used comparatively infrequently and only through the conscious action of the consumer;

- Their continuous pilot lights frequently have user-friendly dial and push-button pilot light controls;

- Their continuous pilot lights provide unique utility for many consumers; and

- They have inherent characteristics that make the use of IPI technology particularly challenging.

In short, the products at issue already give consumers the ability to eliminate unnecessary pilot light use, and:

- The premise that they will fail to do so because the products at issue are out-of-sight, out-of-mind is invalid;

[28] Canada Gazette, Part II, Volume 153, Number 12, Registration SOR/2019-164, June 3, 2019, available at: www.gazette.gc.ca/rp-pr/p2/2019/2019-06-12/html/sor-dors164-eng.html

- The premise that they will fail to do so because the operation of pilot light controls is difficult and/or would be frequently required is significantly less valid; and

- The premise that continuous pilot lights could be eliminated relatively easily and without loss of consumer utility is also invalid, for reasons that differ depending on the type of product at issue.

While all three of these points undermine the case for a regulatory ban on continuous pilot lights, it is the third that has been the real impediment for the gas fireplace industry. The industry recognized that the elimination of continuous pilots could potentially produce energy savings and has invested considerable resources in efforts to develop alternatives to continuous pilots. As a result, there has been a dramatic trend away from the use of continuous pilots on Vented Gas Fireplaces, and HPBA has pursued an industry initiative designed to hasten that trend despite significant resistance from retailers and consumers.

The challenges for other Gas Fireplace Products are more serious. HPBA explored the possibility of an industry initiative to eliminate continuous pilot lights on a wide range of outdoor gas products but determined that such an initiative had little potential to conserve energy and would have undesirable collateral safety impacts. For gas log sets, there are fundamental physical and mechanical challenges that limit the potential for electronic alternatives as replacements for continuous pilots. Work on electronic alternatives continue – and reliance on continuous pilots has declined, but – at this point – it appears that the elimination of continuous pilot lights on Vented Gas Log Sets would likely damage the market for those products.

1. <u>Continuous pilot lights on Vented Gas Fireplaces</u>

HPBA does not believe a ban on continuous pilot lights on Vented Gas Fireplaces is warranted. In short, the use of continuous pilot lights on vented gas fireplaces is already being phased out, and there is no need for the State of California to impose regulatory burdens (including compliance certification requirements, *etc.*) to hasten market developments that are occurring anyway. In that regard, it is important to recognize that the Draft Report has substantially overestimated the percentage of Vented Gas Fireplaces currently being sold with continuous pilot lights, substantially overestimated the energy savings elimination of continuous pilot lights would have, and substantially underestimated the difficulties and costs efforts to further accelerate the existing market trend away from reliance on continuous pilot lights would have.

In assuming that a ban on continuous pilot lights is warranted – and that straight intermittent pilot ignition ("IPI") technology provides a ready alternative – the Draft Report fails to consider some important questions, among which are:

- Why hasn't there already been widespread adoption of straight IPI technology in the gas fireplace industry?

- Why were IPI systems with a continuous pilot ignition ("CPI") function and "on demand" ignition systems developed by the gas fireplace industry exclusively to provide an alternative to straight IPI systems for Vented Gas Fireplaces?

- And why have some retailers reported that they choose to activate the CPI function on IPI products they sell?

The basic answer is that it is difficult to ensure that Vented Gas Fireplaces with straight IPI ignition systems will not experience potentially significant operational problems in some installations. The specific technical issues are – as already indicated – related to differences between Vented Gas Fireplaces and the types of products for which IPI systems were designed.

As discussed in HPBA's previous comments in this proceeding, products such as furnaces are installed in out-of-the-way locations, have small, unobstructed combustion chambers, and are typically power vented with pre-purge and post-purge operating cycles. As a result, main burner ignition is easily accomplished, and relatively minor ignition issues tend to go unnoticed by the consumer. By contrast, Vented Gas Fireplaces are located directly in living spaces where they can be seen and enjoyed, have large glass-fronted combustion chambers with burners and other features designed to create realistic, active yellow flames, and must typically operate with natural flue draft systems that can vary considerably based on individual product installation. When outside temperatures are low, the heat from a Vented Gas Fireplace must initially overcome a column of cold air in the vent system, and this can present significant challenges with longer-vent installations, particularly with more heat-efficient designs that employ heat exchangers or flue restrictors to raise thermal efficiency and control excess air. With a cold start-up, these factors can cause serious operational problems such as start-up lag, flame lift, burner outage, draft reversal, and delayed main burner ignition. In Vented Gas Fireplaces, any such issues would occur under the immediate observation of the consumer and – particularly in the case of delayed ignitions – can be quite alarming. A pilot light – by warming the flue and establishing proper draw prior to main burner ignition – provides a means to address all of these issues, thereby significantly reducing the potential for operational and maintenance problems. IPI systems with a CPI (or "cold climate") function were created because of concerns that, in some installations, the ability to provide a continuous pilot flame would be needed to ensure proper product operation. Similarly, CPI functions are activated when installers fear that unnecessary operational problems are likely to occur if they are not, or (less ideally) to resolve operational problems after they have occurred.[29]

The industry has been working to overcome these issues and to overcome significant consumer and dealer skepticism as to the adequacy of the solutions. As a result, the prevalence of continuous pilot lights in Vented Gas Fireplaces has declined dramatically, and – with the development of "on demand" systems – it has become possible (and is rapidly becoming more common) for CPI functions on IPI systems to be converted into "on demand" functions. The premise that regulatory action is necessary to eliminate continuous pilot lights on vented gas fireplaces is questionable at best, and – in view of the challenges involved – there is a real

[29] It should be noted that the importance of the ability to warm the vent system of a Vented Gas Fireplace prior to main burner ignition depends in part on the combination of features and functions a product provides (including, as noted above, features designed to increase thermal efficiency). As a result, the inability to provide a pilot flame would effectively constrain design choices, thus limiting what product designers are able to achieve.

possibility that exigencies imposed by regulatory deadlines for specified design standards could cause more problems than regulation would be worth.

2. Continuous pilot lights on Vented Gas Log Sets

A ban on continuous pilot lights for Vented Gas Log Sets is not warranted, but the issues involved are materially different than they are in the context of Vented Gas Fireplaces. Unfortunately, the Draft Report failed to identify or address several of these issues.

One of the key issues involves adverse impacts that a ban on continuous pilots would have on the performance and utility of Vented Gas Log Sets. Vented Gas Log Sets are designed to be installed directly in the hearth of existing wood-burning fireplaces, and one of the attributes that sets them apart from Vented Gas Fireplaces is the unmatched realism they provide. That important attribute would obviously be compromised to the extent that a Vented Gas Log Set has visible hardware components sitting in plain view in the fireplace hearth. Log set manufacturers can and do work to minimize the visibility of hardware components that would otherwise mar the realism their products offer, but – with the constraint that their products must fit entirely inside an existing fireplace hearth – there are obvious challenges involved. Electronic ignition systems are problematic in this respect because they require significant additional hardware, some of which is sufficiently heat-sensitive to further constrain design options and compromise the ability to preserve the visual appeal of the product. In short, a requirement that Vented Gas Log Sets be equipped with electronic ignition systems would undermine one of the primary features of contributing to the market appeal of such products: their realistic appearance.

Vented Gas Log Sets are the most clearly "decorative" of all indoor Gas Fireplace Products, but – like traditional wood-burning fireplaces that may have little net heating utility in a normally heated home – they offer considerable emergency heating utility when central heating systems are out. With the increasing prevalence of severe weather events associated with climate change, it is important to recognize that Vented Gas Log Sets with continuous pilot lights provide an emergency heating utility that products with ignition systems that require electricity do not: the ability to operate – reliably and indefinitely – without any electrical power supply. Products with battery power (or battery back-up) systems do not provide equivalent capability for the simple reason that they are dependent on batteries. While battery back-up systems are an excellent option for consumers who choose them, they impose a need for additional heat-sensitive hardware that can be problematic for Vented Gas Log Sets, and their effectiveness requires a degree of vigilance with respect to battery replacement that is too often found wanting when an emergency actually arises.

This is not an issue to be casually dismissed, because – as experience has shown – battery shortages are a serious problem whenever weather-related disasters occur. As the *New York Times* reported in the wake of Hurricane Sandy:

> Even now, nearly two weeks after the superstorm made landfall in New Jersey, batteries are a hot commodity in the New York area. Win Sakdinan, a spokesman for Duracell

says that when the company gave away D batteries in the Rockaways, a particularly hard-hit area, people "held them in their hands like they were gold."[30]

When the grid is down, the even better "gold" would be a fireplace that needs no electricity and no solid fuel: a Vented Gas Log Set with a continuous pilot light.

In addition to failing to consider adverse impacts on two of the most valued characteristics of Vented Gas Log Sets, the Draft Report failed to consider the adverse environmental impacts that a ban on continuous pilot lights could be expected to have.

Again, Vented Gas Log Sets are designed to be installed in existing wood-burning fireplaces. As such, these products serve primarily as a means to convert existing solid fuel fireplaces to gas, sometimes for the specific purpose of reducing particulate air emissions to address either ambient air quality individual respiratory health concerns, and the environmental benefits of such installations are substantial. At the same time, it should be recognized that purchasers of Vented Gas Fireplaces already have fireplaces; as a result, purchases of such products are highly discretionary and thus likely to be negatively influenced by the increase in product cost and decrease in product appeal or utility that a ban on continuous pilot lights would impose. While such a loss of sales should be a concern for several reasons, the CEC should recognize that even a small adverse impact on Vented Gas Log Set sales could have adverse air quality impacts.

In any event, the case that a ban on continuous pilot lights on Vented Gas Log Sets would be economically justified is lacking. As indicated in Section G of these comments – there is no credible information concerning the product or pilot light use patterns for Vented Gas Log Sets. In addition, the Draft Report's estimate of the cost of eliminating continuous pilot lights on Vented Gas Log Sets appears to be low by a very wide margin. For products designed to be installed in existing fireplace hearths, the use of electrical ignition systems is generally rendered more difficult – and costly – by the absence of an available electrical supply, and this factor alone robs the Draft Report's cost estimate of credibility.

An additional concern is that a ban on continuous pilot lights for Vented Gas Log Sets would impose regulatory burdens (at a minimum, compliance certification requirements) on a large population of products for which the ban would provide no regulatory benefits. In particular, a large percentage of the Vented Gas Log Sets sold in California are products, certified to the ANSI Z21.84 standard, that operate by direct main burner ignition. By definition, these products cannot have continuous pilot lights and products should not be subject to regulations designed to eliminate features they cannot have to begin with.

3. Continuous pilot lights on Outdoor Gas Log Sets

A ban on continuous pilot lights for Outdoor Gas Log Sets is unwarranted, again for a unique combination of reasons.

[30] http://www.cnbc.com/id/49774891

As is the case with Vented Gas Log sets, Outdoor Gas Log Sets are designed to be installed in the hearths of existing wood-burning fireplaces. As a result:

- Requirements for electronic ignition would create the same issue – discussed in the context of Vented Gas Log Sets – with respect to adverse impacts on the appearance of Outdoor Gas Log Sets: additional hardware would be required that would be difficult to conceal and difficult to shield from excessive heat;[31] and

- Although compromises in emergency heating utility would not be an issue for outdoor products, requirements for electronic ignition could – by increasing the cost or decreasing the appeal of Outdoor Gas Log Sets – cause adverse environmental impacts by leaving conventional wood-burning fireplaces in operation.

In addition, the CEC needs to consider the possibility that a ban on continuous pilot lights could – in the case of Outdoor Gas Log Sets – have adverse safety impacts. When HPBA considered an initiative to eliminate the use of continuous pilot lights on products such as outdoor fire pits, it discovered that the principal ignition alternative for such products was direct main burner ignition and that – in the relatively few cases in which continuous pilots were used on such products – they provided a means to minimize the risk of delayed main burner ignition involving the sudden ignition of a significant amount of gas. In this regard, the Outdoor Gas Log Set category differs from the Vented Gas Log Set category in three significant respects:

- It includes propane-fueled "match-lit" products (which are not permitted indoors due to safety concerns);

- It consists of products suitable for operation under the more variable conditions likely to be encountered outdoors; and

- It consists of products that are not necessarily installed in existing fireplaces with functioning flue systems (in particular, Outdoor Gas Log Sets can be used in a broader range of installations, including installations that are essentially fire pits).

In short, it appears that Outdoor Gas Log Sets – in at least some installations – may be little different than the products HPBA was considering at the time it concluded that a ban on continuous pilot lights on products such as gas fire pits could potentially have negative safety consequences.

For practical purposes, there is reason to doubt that such a ban would produce significant energy savings. In particular, continuous pilot lights have a tendency to blow out in exposed outdoor environments, and – although some Outdoor Gas Log Sets that do have continuous pilot lights – there is no basis to conclude that substantial numbers of such products are sold and actually left with their pilot lights burning indefinitely. At best, a ban on continuous pilot lights for Outdoor

[31] In addition, in the case of Outdoor Gas Log Sets, electrical ignitions systems would also be more costly due to the need for them to survive exposure to weather (including precipitation and low temperatures) and by the need to install an outdoor electrical line.

Gas Log Sets would impose compliance obligations for a large population of products while providing uncertain benefits for a far smaller population of products. In any event, as discussed in Section G of these Comments, HPBA does not believe that there is sufficient credible evidence for the analysis required to justify a ban on continuous pilot lights for Outdoor Gas Log Sets.

4. Continuous pilot lights on Outdoor Gas Fireplaces

HPBA does not believe that there is any basis to conclude that a ban on continuous pilot lights for Outdoor Gas Fireplaces would produce any significant energy savings, because both the prevalence of continuous pilot lights in such products and the potential for such pilot lights to be left burning is unknown but likely to be limited. There are several factors involved.

First, many Outdoor Gas Fireplaces have open combustion chambers in which continuous pilot lights would have a tendency to blow out. As a result, both the prevalence of continuous pilot lights and the potential for continuous pilot lights to be left burning is likely to be low.

Second, many prefabricated outdoor fireplaces have simple dial and push-button pilot light controls that make it easy for consumers to avoid unnecessary pilot light use;

Third, many prefabricated outdoor fireplaces are designed to be fueled by propane cylinders, in which case the standard procedure would be to turn off the flow of gas at the cylinder when the product is not in use and the potential for unnecessary pilot light use would be limited by the volume of the cylinder. While HPBA understands that products designed only for use with propane cylinders would not be considered to be permanently installed "to a fixed gas supply system" and thus would not be subject to any of the proposed requirements, it appears that most Outdoor Gas Fireplaces capable of operating from propane cylinders are designed to operate from either a cylinder or a fixed gas supply system. Such products would presumably be defined as products subject to any ban on continuous pilot lights imposed, but many of those products, as installed, would not be appropriate targets for a ban on continuous pilot lights.

For these reasons, a ban on continuous pilot lights on Outdoor Gas Fireplaces could be expected to impose compliance obligations on a relatively substantial population of products that includes a relatively small percentage of products for which there would be any significant potential for regulatory benefits.

G. The CEC Lacks Sufficient Information to Provide any Credible Justification for the Proposed Requirements

One of the greatest challenges to the analysis of proposed regulation of Gas Fireplace Products is that most of the basic information required for regulatory analysis is lacking. There are a number of reasons for this, one of which is that efforts to regulate gas fireplace products only go back a short span of years and have commonly consisted of hasty efforts to justify preconceived requirements without any of the front-end data collection and analysis that is normally the first step in rule development. Another is that the products at issue are complicated, the issues they raise are complicated, and the pace of relevant technological and market changes has been such

that information concerning the prevalence of continuous pilot lights – for example – quickly becomes outdated.

The Draft Report reflects considerable effort to collect and consider relevant information, but the available information is insufficient to justify the standards proposed. As already indicated, one of the principal problems with the Draft Report is its extensive reliance on analysis that DOE provided in support of its proposed standards for so-called "hearth products." That analysis was arbitrary and unsupported by substantial evidence, and – to the extent the CEC relies on that analysis – its own analysis will also be arbitrary and unsupported by substantial evidence. Another major problem is that the Draft Report includes a number of arbitrary assumptions of its own.

1. The Draft Report's analysis is based on erroneous information and arbitrary assumptions concerning the prevalence of different products and product characteristics

The Draft Report's conclusions with respect to the prevalence of product characteristics are arbitrary because they are based largely on the arbitrary assumption that the percentage of products sold with particular features is the same as the percentage of available products (*i.e.*, unique models) that have those features.[32] In effect, this amounts to an assumption that product sales are evenly divided among all available models, and that plainly isn't the case. To the contrary, there is a considerably larger market for some product sizes than others, and the same is true of product styles, product features, and product price points. Previous HPBA efforts to collect shipment data for Vented Gas Fireplaces revealed that there were some unique models with total U.S. shipments in the single digits and others with total U.S. shipments in the thousands. Accordingly – while information on the range of available models provides an indication of the range of products that appeal to at least some segment of the overall market – it does not provide any reasonable indication of how many of each type of product is being sold. For example, one HPBA member manufactures one basic outdoor log burner system with six different ignition system options, three of which include continuous pilots. The Draft Report assumes that – because half of the available models have continuous pilots – half of the products being sold have continuous pilots. However, it is arbitrary to assume that all models are equally popular, and in fact they are not: only nine percent of the products in question are being sold with continuous pilots.

The Draft Report suggests that information from previous DOE analysis was also considered, but – as discussed in the comments HPBA submitted to DOE – that information was baseless and demonstrably in error. [33] The Draft Report also suggests that information from manufacturer interviews was also considered, but – absent some far more comprehensive dialogue than has occurred – information from individual manufacturers cannot be expected to provide sufficient information for any reliable assessment of industry-wide shipments coming from numerous manufacturers and passing through different distribution chains to serve materially different segments of the market (*i.e.*, the home-builder market, the mass retail market, and the specialty retail market).

[32] Draft Report at pp. A-3, A-4, and A-7.

[33] See HPBA's May 11, 2015 submission in Docket No. EERE-2014-BT-STD-0036.

Another systemic issue is that the Draft Report appears to assume that the prevalence of particular products and product features would remain static in the absence of regulation when – in fact – there are significant relevant market trends that are already occurring and that can be expected to continue. For example, there has been a substantial market trend away from the use of continuous pilot lights in Vented Gas Fireplaces and – based on data HPBA collected in response to DOE's "hearth products" rulemaking – the Draft Report's estimate of the current prevalence of continuous pilots on such products seems improbably high.[34] Similarly, it appears that the Draft Report's estimate of the prevalence of products with IPI systems that have a CPI function has already become outdated as a result of a rapid transition from IPI systems with a CPI function to IPI systems with an "on demand" function.

2. <u>The Draft Report's analysis is based on inadequate information and arbitrary assumptions concerning product and pilot light use patterns</u>

There is no credible data concerning the main burner or pilot light use patterns for outdoor gas log sets or outdoor gas fireplaces. The Draft Report seems to assume that the use patterns for outdoor fireplace products can be expected to be essentially the same as those of indoor fireplace products, but there is absolutely no factual basis for such an assumption and the assumption itself has no more logical appeal than a claim that the annual hours of use of a barbecue grill can be expected to be the same as that of kitchen stove.

The Draft Report's assumption that use patterns for Vented Gas Log sets might be similar to those for Vented Gas Fireplaces is not as obviously illogical, but the absence of credible data make it speculative and the Draft Report's suggestion that the use of such products should be assumed to be more representative of heating use than "decorative" use[35] is hard to reconcile with the fact that Vented Gas Log Sets are the most clearly "decorative" of all indoor Gas Fireplace Products.

The situation is different in the case of Vented Gas Fireplaces: there is lots of available data, but there are numerous problems with that data. In fact, data concerning fireplace use generally consists of survey data that – for any of several reasons – tends to be skewed in ways that result in an overstatement of active product use. One of the inherent problems with such survey data is that individuals tend to be less likely to respond to surveys about products they don't actively use, and that problem is frequently exacerbated when studies preferentially target information about active product use or intentionally exclude survey responses indicating little or no product use from the data set considered. The design of questionnaires and interview guides can also significantly skew the data obtained, by – for example – limiting the scope of questions asked or the range of responses permitted.

[34] In 2015, HPBA collected actual product shipment data and obtained ignition system information for nearly 300,000 Vented Gas Fireplaces shipped in 2014 (approximately 75% of total 2014 Vented Gas Fireplace shipments as reported through HPBA's normal data collection activity). That data indicated that less than 11% of Vented Gas Fireplaces were being shipped with continuous pilot lights at that time.

[35] Draft Report at p. A-11.

For example, the Draft Report relies on a study based on a web-based survey in which responses appear to have been weighted in a way that appears to reduce the impact of low use responses while amplifying the impact of a small number of responses indicating extraordinarily high product use.[36] More obviously, the study effectively ruled out "no use" responses by limiting the range of responses to a low of 5 or fewer uses, requiring separate responses for both the heating and non-heating seasons, and "counting" each of these responses as 2.5 uses, thereby assuming a minimum of 5 uses (not merely hours, but *uses*) per year rather than zero.[37] The elimination of any "zero" responses is significant in view of the fact some gas fireplaces are not used at all and the safe assumption that – particularly in substantial parts of southern California – many are never used outside the traditional winter holiday season. The results of studies can also be seriously skewed by misguided efforts to adjust product use estimates based on questionable distinctions between "heating" and "decorative" use. Often such efforts are undermined by the fact that survey responses fail to define such distinctions in any useful way, but often there are more obvious problems, such as the Draft Report's arbitrary assumption that all products sold as Fireplace Heaters are *used* for primary or secondary heating.[38] That assumption – coupled with the Draft Report's assumption that the overwhelming majority of Vented Gas Fireplaces are Fireplace Heaters[39] – appears to have led to the conclusion that the overwhelming majority of Vented Gas Fireplaces are used significantly more intensively than the average Vented Gas Fireplace.

Credible data concerning pilot light use is even more elusive. Survey data is typically all but useless due to evident confusion in the survey responses and the fact that the products addressed are not representative of products currently on the market.[40] As a result, estimates are typically based on the application of arbitrary assumptions to inadequate information concerning product use patterns. For example, DOE's analysis for its proposed "hearth products" standards did not provide any credible "determination" that there are "three possible pilot operating hour (POH) scenarios";[41] it simply assumed the existence of three scenarios that excluded the possibility that *anyone* simply leaves their pilot lights off.

Conclusion

The Draft Report addresses a range of superficially similar but materially different products that are available to serve a range of different consumer needs and preferences. In recent years there has been a tendency to presume that energy efficiency regulation of these products is warranted, to lump such products together as targets for regulation without an adequate understanding of

[36] Slap, D., H. Willem, S. Price, H-C Yang, and A. Lekov, June 2017, Survey of Hearth Products in U.S. Homes. LBNL-2001030, Berkeley California: Lawrence Berkeley National Laboratory (the "LBNL Study") at pp. 19-21 and 38-39. The fact that this study appears to rely on discredited information from DOE's analysis in its "hearth products" rulemaking does nothing to enhance its credibility.

[37] LBNL Study at 25.

[38] Draft Report at p. A-2.

[39] Draft Report at p. A-4.

[40] The study the Draft Report relies on is undermined by both problems.

[41] Draft Report at p. A-11.

their differences, and to pursue their regulation on the basis of preconceived ideas and conspicuously inadequate information and analysis. CEC appears to be pursuing this course.

As these comments have shown, the requirements proposed in the Draft Report are preconceived requirements that have never been the subject of adequate regulatory analysis demonstrating that they are appropriately justified. The problem is not merely that the data necessary to justify these requirements is lacking (though it certainly is); it is that the presumption that such requirements would benefit consumers is unwarranted and, in some cases, demonstrably in error.

The presumption that heating efficiency standards for Vented Gas Fireplaces would benefit consumers is false, and the Draft Report's proposed heating efficiency standards for Fireplaces Heaters – rather than giving consumers the benefit of welcome improvements in heating efficiency – would destroy the bulk of the Fireplace Heater market. The problem is not that manufactures could not produce products that would satisfy the proposed standard (though that is far more difficult than the Draft Report assumes); it is that manufacturers could not *sell* such products because, due their disproportionate heat output, the market for them would be very small.

Suggestions that Decorative Fireplaces provide "little or no heat to the space in which [they are] installed" or "should not greatly affect the temperature conditions" in the rooms in which they are installed are also false. Rather than describing what Decorative Fireplaces are, such statements provide a false narrative to justify efforts to eliminate the Decorative Fireplace category by limiting it to products for which there is no substantial market: "fireplaces" that – unlike traditional wood-burning (or any other) fireplaces – are specifically designed to produce little or no heat. Decorative Fireplaces are not designed for utilitarian heating use, but that does not mean that they are specifically designed to minimize heat output. To the contrary, even consumers with no interest in heating utility want fireplaces to produce some amount of heat, because the warmth of the radiant heat fireplaces provide is a source of aesthetic enjoyment that fireplace owners expect.

The assumption that bans on continuous pilot lights provide an easy opportunity for energy savings is also invalid in the case of Gas Fireplace Products. For these products, as compared to products such as gas furnaces, the potential energy savings from a ban on continuous pilot lights are significantly lower and the complications involved – both in terms of costs and potential adverse collateral impacts – are significantly greater.

In the case of Vented Gas Fireplaces, the prevalence of continuous pilot lights has fallen dramatically due to ongoing industry trends, and already appears to be significantly lower than the Draft Report assumes. In the case of Vented Gas Log Sets a ban on continuous pilot lights raises serious issues with respect to adverse impacts on product appearance and utility, as well as a potential for adverse collateral environmental impacts. The same is true (for slightly different reasons) in the case of Outdoor Gas Log Sets, for which a ban on continuous pilot lights also raises the possibility of adverse safety impacts. For Outdoor Gas Fireplaces, a ban on continuous pilot lights would appear to be a particularly inefficient way to pursue dubious energy savings.

In its prior comments, HPBA urged the CEC to at least narrow its focus this proceeding to a discrete range of products that could reasonably be grouped together for purposes of regulatory analysis: Vented Gas Fireplaces. By seeking to address several other materially different categories of products, the Draft Report dramatically expanded the range of relevant issues and created the need to address entire categories of products for which remarkably little data is available. These considerations significantly compounded the difficulties involved in responding to the Draft Report and made it substantially more difficult for HPBA to give the entire range of issues the attention they deserve. HPBA again urges the CEC to narrow its focus to permit a more orderly and effective dialogue going forward.

HPBA believes that a substantial overhaul of the Draft Report is warranted, and requests the opportunity for further dialogue to facilitate that process before the CEC proceeds further.

Respectfully Submitted,

Ryan Carroll
Vice President – Government Affairs
Hearth, Patio & Barbecue Association
1901 N. Moore St., Suite 600
Arlington, VA 22209