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Hearth, Patio & Barbecue Association (HPBA) comments to 2019 Energy Standards

Additional submitted attachment is included below.



To: California Energy Commission - Docket No. 17-BSTD-01
RE: 2019 Energy Code & CBECC-Res Software

The Hearth Patio & Barbecue Association (HPBA) applauds the work of the California Energy Commission (CEC) and its efforts to reduce energy use in residential construction. Hearth products, such as direct vent gas fireplaces, can help builders and the CEC work towards reducing energy needs in new and existing homes. To this end, the HPBA is happy to work with CEC staff towards a solution that includes hearth appliances being properly modeled in the CBECC software and integrated into the proposed 2019 Energy Code.

The HPBA maintains that hearth appliances provide advantages with respect to home energy conservation. These advantages include:

- Zone heating: Direct vent hearth appliances (fireplaces, stoves) are, by their nature, zone heaters, and are typically installed in central or higher occupancy rooms. As such, hearth appliances can occasionally be used instead of the home's central heating system for mild heating demands.
- Reduced energy use: By way of zone heating, the need to use the home's central heating systems is decreased, thereby reducing overall energy use.
 - In certain climate zones with lower energy usage, and modest solar heat gain, a zone heater could be a significant heating source, possibly supplanting the use of the central furnace.
 - The value of a zone heater is further improved by additional construction changes proposed in the energy code, making the hearth appliance more effective at heating the home.
- Increased comfort through radiant heat: Hearth appliances provide both convective and radiant heating to the space, unlike a central furnace which only provides convective heating. The "feel" of the radiant heat from a hearth appliance provides a comfort level that is not matched by a central heating system. Homeowners who feel warm are less likely to turn on the central heating system, again saving energy.

To properly reflect the advantages of hearth appliances, the HPBA respectfully proposes that the CBECC-Res software be updated with the following changes:

- Add sub-zones: Currently the CBECC-Res software allows for multiple heating zones, but it does not allow for sub-zones, as would be necessary to model a supplementary zone heater *within* the heating zone of the central furnace system. That is to say, while the overall home can be modeled using a central furnace, a fireplace cannot be modeled unless it is in a separate zone, one which is not covered by the central heating system. The inability of the



software to properly model a fireplace will therefore not accurately reflect the energy savings provided by zone heating.

- Update zonal control credit: When using the zonal control credit (sleeping vs. living zones), energy savings shown by the software is minimal. The HPBA believes this does not properly reflect real-world energy savings.
- Show and adjust setback temperatures: Also when using the zonal control credit, the CBECC-Res software does not currently show, nor provide a means of adjusting the setback temperature of the sleeping zones. Currently the values used by the software are unknown.
- Add radiant heat calculation: As mentioned previously, hearth appliances provide radiant heat in addition to convective heat, providing a greater sense of warmth in the rooms they serve. While the comfort level may be difficult to quantify, the actual sensible heat from the appliances can be estimated and added to the CBECC-Res software.

Summary:

Energy conservation is in everyone's best interest, and the HPBA supports the CEC's efforts to reduce energy usage. However, we want to ensure that homeowners have choices in how they heat their homes. Hearth appliances provide homeowners with heating and comfort options that not only increase the value of the home, but can provide strong advantages towards reducing the home's heating energy needs. The HPBA looks forward to working with the CEC to help implement these changes.

Thank you for your consideration.