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*Comment Received From: Air-Conditioning, Heating, and Refrigeration Institute (AHRI)*  
*Submitted On: 12/23/2020*  
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**AHRI Comments in Response to California Title 24 CASE Team  
Final Report and Workshop on All-Electric Multifamily Compliance  
Path**

*Additional submitted attachment is included below.*

December 23, 2020

California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814  
Docket office, Ms-4

Submitted to

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Re: AHRI Comments in Response to California Title 24 CASE Team Final Report and Workshop on All-Electric Multifamily Compliance Pathway

Docket: 19-BSTD-09

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Dear Commissioners,

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) respectfully submits this letter in response to the CASE Team Final Report and Workshop held on December 8, 2020, regarding the All-Electric Multifamily Compliance Pathway.

AHRI represents 332 air-conditioning, heating, refrigeration, and water heating equipment manufacturers. In North America, the annual output of the HVACR and water heating industry is worth more than \$44 billion. In the United States, the industry supports 1.3 million jobs and \$256 billion in economic activity annually. AHRI represents the majority of the manufacturers of boilers, furnaces, water heaters, and central air conditioners and heat pumps.

### **Federal Preemption**

The CASE Report states that “there is no federal efficiency standard for commercial size HPWHs, as defined by 10 CFR 431.102,” and that “heat pump water heaters falling into the regulated category (less than 120 gallons) can be used for central water heater design, the proposed measure does not require HPWHs that fall into this category, thus the proposal does not trigger preemption.”

Federal regulations do not limit the capacity of a consumer heat pump water heater, and therefore, all commercial heat pump water heaters, regardless of capacity, are preempted products. 10 CFR §431.1 establishes the Federal regulations for commercial and industrial equipment, and defines a commercial heat pump water heaters (CHPWH)

in Part 10 CFR §431.102 as a “water heater (including all ancillary equipment such as fans, blowers, pumps, storage tanks, piping, and controls, as applicable) that uses a refrigeration cycle, such as vapor compression, to transfer heat from a low-temperature source to a higher-temperature sink for the purpose of heating potable water, and has a rated electric power input greater than 12 kW. Such equipment includes, but is not limited to, air-source heat pump water heaters, water-source heat pump water heaters, and direct geo-exchange heat pump water heaters.”

The CASE report specifies capacity as measured by gallons as the defining point between federally regulated and unregulated products. However, the U.S. Department of Energy (DOE) uses the appliance’s amperage and wattage requirements of 12 kW and above for commercial appliances. Regardless, HPWHs are regulated by DOE, and they have an established test procedure by DOE in Appendix E to Subpart G of Part 431—*Uniform Test Method for the Measurement of Energy Efficiency of Commercial Heat Pump Water Heaters*. These definitions do encompass the products that are being mentioned, and therefore, the federal regulations preempt any efficiency, testing requirements that CEC would try to enact. While AHRI recognizes that DOE has not established minimum COP requirements for commercial HPWHs, these are still federally regulated products, and alternative efficiency testing cannot be required.

States are expressly preempted from setting energy use regulations for products that DOE regulates.<sup>1</sup> Under Energy Policy and Conservation Act (EPCA) preemption provision, state regulations “concerning” the “energy efficiency” or “energy use” of covered products “shall [not] be effective.”<sup>2</sup> Courts have interpreted this preemption provision to be expansive, finding that the term “concerning” suggests Congress intended the provision to have a “broad preemptive purpose.”<sup>3</sup> The purpose of preemption is to maintain a national approach to appliance regulation.

In enacting EPCA, Congress noted that preemption applies to an “entire product type as listed in the coverage section” of EPCA.<sup>4</sup> In effect, Congress intended that 42 U.S.C. § 6297 would “preempt State law under most circumstances.”<sup>5</sup> Congressional intent is clearly reflected in the legislative history: “There is no doubt that Congress intended to preempt state regulation of the energy efficiency of certain building appliances in order to have uniform, express, national energy efficiency standards.” H.R. Rep. No. 100–11 at 19.

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<sup>1</sup> *Air Conditioning, Heating & Refrigeration Inst. v. City of Albuquerque*, No. 08-633, 2008 WL 5586316, No. 08-633 at \*6 (D. N.M. Oct. 3, 2008); *Nat’l Elec. Mfrs. Ass’n v. Calif. Energy Comm’n*, No. 2:17-CV-01625-KJM-AC, 2017 WL 6558134 at \*5 (E.D. Ca. Dec. 21, 2017).

<sup>2</sup> See 42 U.S.C. § 6297(b).

<sup>3</sup> See *id.*; see also *Metro. Life Ins. Co. v. Massachusetts*, 471 U.S. 724, 739 (1985); *Nat’l Elec. Mfrs. Ass’n*, 2017 WL 6558134 at \*5.

<sup>4</sup> H.R. Rep. No. 100–11, at 20 (1987). See also S. Rep. No. 93-526, at 46 (1973) (discussing “components” of a “climate-conditioning system”).

<sup>5</sup> *Air Conditioning, Heating & Refrigeration Inst.*, 2008 WL 5586316, at \*7

It is AHRI's contention that based on the above information, the proposed measure does trigger preemption for commercial heat pump water heaters.

### **Technical Concerns**

The CASE Report contains both prescriptive and performance compliance pathways for domestic hot water to attain the state's decarbonization goals of zero emission buildings. While AHRI appreciates the intent of these requirements, we find the requirements to be overly prescriptive in nature regarding both the appliance functionality and also the installation requirements.

The CASE Report's prescriptive option for central heat pump water heaters requires that the appliance be certified to draft JA14 *Qualification Requirements for Central Heat Pump Water*, a recirculation loop tank, a loop tank heater capable of multi-pass operation, a setpoint of at least 140 °F for the primary storage tank, piping requirements to ensure efficient operation, and a minimum heat pump compressor cut-off less than or equal to 40 °F. The overly prescriptive nature of the proposed requirements would potentially serve to stifle innovation in a rapidly advancing technology in its infancy. AHRI supports the use of performance-based requirements to allow consumers the opportunity to utilize appliances that would further the state's goals of zero emission while maintaining their comfort and meeting their hot water expectations.

The proposed JA14 establishes performance testing that requires HPWH to be tested under multiple conditions, including four inlet ambient air temperature points, four inlet water temperature points, and three outlet water temperature points. The U.S. Code of Federal Regulations 10 C.F.R. 431.106 and ASHRAE 118.2 *Method of Testing for Rating Residential Water Heaters and Residential-Duty Commercial Water Heaters* require commercial heat pump water heaters to be tested using a single nominal supply water temperature, single outlet water temperature, and single inlet ambient air temperature to determine compliance. Industry is strongly opposed to the burdensome testing requirements laid out in draft JA14. The requirement far exceeds both the federal regulation and the industry developed consensus standard. Additionally, this is a lengthy and expensive testing burden for manufacturers.

Thank you for the opportunity to submit these comments. We look forward to working with you to promulgate effective regulations for the use of commercial heat pump water heaters in the State of California. If you have any questions regarding this submission, please do not hesitate to contact me.

Regards,

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