

**DOCKETED**

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## **2022 15-Day Express Terms Energy Code Update Rulemaking**

*Additional submitted attachment is included below.*



July 30, 2021

Payam Bozorgchami  
California Energy Commission (CEC)  
1516 9th Street  
Sacramento, CA 95814

RE: Docket No. 21-BSTD-01, 2022 15-day Express Terms Energy Code Update Rulemaking

Dear Mr. Bozorgchami:

On behalf of Bradford White Corporation (BWC), thank you for providing an opportunity to comment on docket 21-BSTD-01, 2022 15-day Express Terms Energy Code Update Rulemaking.

BWC is an American-owned, full-line manufacturer of residential, commercial, and industrial products for water heating, space heating, combination heating, and water storage. In California, a significant number of individuals, families, and job providers rely on our products for their hot water and space heating needs.

As a manufacturer of water and space heating products, we have made substantial investments in products that provide significant energy efficiency and environmental benefits, such as heat pump water heater (HPWH) technology and Ultra Low NO<sub>x</sub> gas water heaters. As a testament to these efforts, our company has been recognized as an ENERGY STAR<sup>®</sup> Partner of the Year in both 2020 and 2021.

We thank the CEC for their diligence in the pre-rulemaking workshops, the 2022 Energy Code Express Terms, and the 2022 Energy Code Update Rulemaking. BWC makes the following recommendations and comments.

**Sections 110.3(c)2 and 110.8(d)2 Unfired service water heater storage tank**

BWC applauds CEC's recognition of an energy efficiency minimum for unfired hot water storage tanks (UFHWST), and the corresponding edits to Section 150.0(j)1 and Section 160.9(f). Accordingly, we bring to CEC's attention Section 110.3(c)2 of the Energy Code which reference 'unfired service water heater storage tank' and Section 110.8(d)2 which references 'unfired water storage tank.' The aforementioned equipment are actually UFHWSTs, and as such, CEC's mandatory requirement exceeds a federal requirement; in addition, it gives rise to the following questions:

- What research and analysis did CEC complete to determine that wrapping a UFHWST with R-3.5 insulation is a mandatory requirement?

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- What research and analysis did CEC complete to determine that wrapping a UFWHST with a combined R-value of at least R-16 is a mandatory requirement?
- What research and analysis did CEC complete to determine the heat loss of the tank surface based on an 80°F water-air temperature difference shall be less than 6.5 Btu per hour per square foot?

### **ANSI/CTA-2045-B requirements**

BWC notes the 15-day language now includes ANSI/CTA-2045-B requirements for a HPWH in Sections 150.2(a)(1)(D) and 150.2(b) Additions and alterations to existing single-family residential buildings and Section 180.2 Alterations to multifamily buildings. Section 110.12 Mandatory requirements for demand management has no ANSI/CTA-2045-B requirements; similarly, Appendix JA13 Qualification requirements for heat pump water heater demand management systems has no ANSI/CTA-2045-B requirements. We recommend CEC remove ANSI/CTA-2045-B requirements from the 15-day code language as the mandatory requirements for demand responsive controls are outlined in Section 110.12 of the Energy Code. Consistent requirements for demand response controls in the Energy Code are necessary as to not create confusion among utilities, manufacturers, architects, engineers, inspectors, and installers.

### **Subchapter 11 Multifamily Buildings – Performance and Prescriptive Compliance Approaches** **Section 170.2(d) Water Heating Systems**

CEC has laid out installation requirements in 170.2(d)2, which are overly prescriptive. Due to their increased complexity, it is critical that plumbers and installers receive the necessary training regarding proper sizing, installation, troubleshooting, and maintenance of central HPWHs. We believe CEC had good intentions with the requirements of 170.2(d)2 as HPWHs, especially central HPWHs, are a relatively new technology, and it begs the following questions:

- What research and analysis did CEC complete to determine proper installation, proper commissioning, and proper maintenance of the various technology and manufacturer models of central HPWHs?
- Has CEC considered references to *storage tank* be updated to *thermal storage*, as to not exclude technologies?

We recommend that CEC should defer the proper sizing, installation, troubleshooting, and maintenance of central HPWHs as designated by their manufacturer. The overly prescriptive requirements are unnecessarily restrictive and limit improvements in known and unknown technologies.

Accordingly, we refer CEC to existing language in the Energy Code, Section 110.3(c)(4)(E) Mandatory requirements for service water-heating systems and equipment, which states, ‘Storage water heaters and boilers shall be plumbed in accordance with the manufacturer’s specifications.’ We recommend central HPWHs shall be plumbed in accordance with the manufacturer’s specification.

### **Joint Appendix JA13 – Qualification Requirements for Heat Pump Water Heater Demand Management Systems**

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Demand management functionality can include the advanced load up function. The system stores extra thermal energy, where some or all the tank may exceed the user's local setpoint temperature.

- Has CEC considered that a water heater listed to ASSE 1084 shall be set to deliver a maximum water temperature of 120°F or less, and is intended for point-of-use applications?
- Has CEC considered that a water heater listed to ASSE 1082 controls outlet temperature to specific limits and does not regulate the outlet temperature down to a safe temperature like a mixing valve?
- Has CEC considered that UL 60730-1, General Requirements for Automatic Electrical Controls, is a safety standard for electrical controls, and not a thermostatic mixing valve or a water heater? UL 60730-1 is a safety standard that water heaters listed to ASSE 1082 and ASSE 1084 shall comply; however, an appliance with a control complying with UL 60730-1 isn't necessarily a water heater that is compliant with ASSE 1082 or ASSE 1084.

### **Joint Appendix JA14 – Qualification Requirements for Central Heat Pump Water Heater Systems**

The Energy Policy and Conservation Act (EPCA) amended Public Law 94-163 (42 U.S.C. 6291-6317, as codified), among other things, which authorizes the Department of Energy (DOE) to regulate the test procedures of a number of consumer products, commercial, and industrial equipment. EPCA states:

- Section 327 (a) Preemption of Testing and Labeling Requirements (1) Effective on the date of enactment of the National Appliance Energy Conservation Act of 1987, this part supersedes any State regulation insofar as such State regulation provides at any time for the disclosure of information with respect to any measure of energy consumption or water use of any covered product if—
  - (A) such State regulation requires testing or the use of any measure of energy consumption, water use, or energy descriptor in any manner other than that provided under section 323; or
  - (B) such State regulation requires disclosure of information with respect to the energy use, energy efficiency, or water use of any covered product other than information required under section 324

BWC alerts CEC to the aforementioned legislation as manufacturers of federally regulated products, including HPWHs, are prohibited from providing or publishing testing results to other test points other than those established by DOE. Section 327 of EPCA (a) Preemption of Testing and Labeling Requirements supersedes any State regulation. The requirements of JA14.3.1 Determination of Performance Data, JA14.3.2 Performance Data Reporting, and JA14.3.3 Basic Model Test Condition impose requirements on manufacturers such that they would be conflicting with federal requirements. Therefore, we recommend removing requirements that are federally preempted.

Given these concerns, BWC recommends the CEC to revise the proposed changes to the code, prior to adoption of the 2022 15-day Express Terms Energy Code Update Rulemaking. We recognize California's efforts to increase building energy efficiency and the state's Greenhouse Gas reduction goals, but we

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respectfully request that improvements in energy efficiency are done without conflicting with the requirements currently in place by the Department of Energy, including the prescribed test methods required and energy efficiency minimums.

Thank you for continuing to include BWC and other stakeholders in the 2022 California Energy Code discussions. Bradford White Corporation thanks you for the opportunity to comment on Docket 21-BSTD-01. Please let me know if you have any questions, and we stand ready to work with the Commission moving forward.

Respectfully Submitted,

Bradford White Corporation

Eric Truskoski  
Senior Director of Government and Regulatory Affairs

Cc: B. Wolfer; B. Ahee; M. Corbett; T. Gervais

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