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Bradford White Corporation 15-Day Comments

Additional submitted attachment is included below.



June 26, 2024

California Energy Commission
Building Energy Efficiency Standards - Title 24
715 P Street
Sacramento, California 95814

[Submitted electronically via: [California Energy Commission : e-comment : Submit Comment](#)]

Re: 2025 Title 24 Part 6, 15-day language

To Whom It May Concern:

On behalf of Bradford White Corporation (BWC), we would like to thank you for the opportunity to comment on California Energy Commission’s (CEC) Title 24, Part 6 15-day language.

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. We have compiled our comments and questions to the CEC’s 15-day language below.

General

BWC appreciates the CEC modifying the mandatory heat pump water heaters (HPWH) ventilation standards in section 110.3(c)7B to prioritize manufacturer prescribed methods. We however would like to restate concerns we submitted in our 45-day letter surrounding HPWH space requirements for installations and electric-ready provisions, as well as questions around the use of 120-volt HPWH product.

HPWH space requirements

The code language specifies that individual unitary HPWH’s must be installed in a minimum physical space, or that same space must be provided if a builder chose to use gas technology. The space requirement for single family homes and multifamily apartment dwellings is not consistent in the code sections, even though it affects the same equipment, residential duty unitary HPWHs. The following Table outlines the discrepancies:

Dwelling Type	Affected Code Section	Space Requirement (Length x Width x Height)
Single Family	150.0(n)	2.5ft x 2.5ft x 7ft
Multifamily	160.9(e)	39in x 39in x 96in

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Our recommendation is to make the requirements for physical space in these sections the same, using the current language in section 160.9(e), which prescribes a larger space (39" x 39" x 96"). Furthermore, section 150.0(n) has no provisions in place for ventilation. We recommend including ventilation provisions in section 150.0(n). Our proposed edits to section 150.0(n) are shown below:

Section 150.0(n)

(n) Water heating system.

Systems using gas or propane water heaters to serve individual dwelling units shall designate a space at least ~~2.5 feet by 2.5 feet wide and 7 feet tall~~ **39 inches by 39 inches and 96 inches tall** suitable for the future installation of a heat pump water heater (HPWH) by meeting either A or B below. All electrical components shall be installed in accordance with the California Electrical Code:

- A. If the designated space is within 3 feet from the water heater, then this space shall include the following:
 - i. A dedicated 125 volt, 20 amp electrical receptacle that is connected to the electric panel with a 120/240 volt 3 conductor, ~~10 AWG copper~~ branch circuit rated at 30 amps minimum, within 3 feet from the water heater and accessible to the water heater with no obstructions; and
 - ii. Both ends of the unused conductor shall be labeled with the word "spare" and be electrically isolated; and
 - iii. A reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit in A above and labeled with the words "Future 240V Use"; and
 - iv. A condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance.
 - B. If the designated space is more than 3 feet from the water heater, then this space shall include the following:
 - i. A dedicated 240 volt branch circuit shall be installed within 3 feet from the designated space. The branch circuit shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready"; and
 - ii. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future HPWH installation. The reserved space shall be permanently marked as "For Future 240V use"; and
 - iii. Either a dedicated cold water supply, or the cold water supply shall pass through the designated HPWH location just before reaching the gas or propane water heater; and
 - iv. Either a dedicated cold water supply, or the cold water supply shall pass through the designated HPWH location just before reaching the gas or propane water heater; and
 - v. The hot and cold water piping at the designated HPWH location shall be exposed and readily accessible for future installation of an HPWH; and
 - vi. A condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance.
- ~~2. Water heating recirculation loops serving multiple dwelling units shall meet the requirements of Section 110.3(e)4.~~
2. Solar water-heating systems and collectors shall be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.

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3. Instantaneous water heaters with an input rating greater than 6.8 kBTU/hr (2kW) shall meet the requirements of Section 110.3(c)6.
4. A ventilation method meeting one of the following:
 - a. The designated space for the future heat pump water heater shall have a minimum volume of 700 cubic feet; or
 - b. The designated space for the future heat pump water heater shall vent to a communicating space in the same pressure boundary via permanent openings with a minimum total NFA of 250 square inches., so that the total combined volume connected via permanent openings is 700 cubic feet or larger. The permanent openings shall be:
 - i. Fully louvered doors with fixed louvers; or
 - ii. Two permanent fixed openings located within 12 inches from the enclosure top and bottom;
 - c. The designated space for the future heat pump water heater shall include two 8 inches capped ducts, venting to the building exterior:
 - i. All ducts, connections, and building penetrations shall be sealed.
 - ii. Exhaust air ducts and all ducts which cross pressure boundaries shall be insulated to a minimum insulation level of R-6.
 - iii. Airflow from termination points shall be diverted away from each other.

240-volt and 120-volt HPWH product requirements

In our 45-day letter, BWC raised the following questions to the CEC regarding their intent on having different requirements for 240-volt and 120-volt HPWHs:

1. Was it the intent of the CEC to only allow “240 Volt” NEEA Tier 3 or better products to be used in new construction?
2. For additions and alterations, was it the intent of the CEC to allow any HPWH meeting NEEA Tier 3 (including 120-volt) to be used to comply?
3. Barring differences in HPWH voltage, is there a specific reason that 120-volt HPWHs are limited to 1 bedroom or less homes in the new construction prescriptive approach?
 - a. If a 120-volt HPWH meets the required First Hour Rating (FHR) of the California Plumbing Code, why would it not be allowed in any building?

The requirements and our questions pertain to the following code sections:

- 1) 150.1(8)
- 2) 150.2(a)1D
- 3) 150.2(b)1Hiii
- 4) 170.2(d)1 and
- 5) 180.2(b)3C

BWC would appreciate further discussion with the CEC regarding these questions and clarifying the code language where applicable.

In closing, we would like to thank the CEC for the opportunity to comment on the 15-day language. Please let me know if you have any questions or would like to schedule a meeting to discuss our comments further.

Respectfully Submitted,

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