From: William Koffel
To: CBSC@DGS
Cc: Vincent Jolissaint; Dara Yung
Subject: FW: 2025 California Plumbing Code, Part 5
Date: Monday, July 1, 2024 1:37:24 PM
Attachments: image001.jpg

The California Solar and Storage Association (CALSSA) and Cobalt Power are submitting the following Public Comment for consideration by the BSC. It should be noted that the BSC has proposed to adopt the Chapter 9 of the 2024 UPC into the 2025 CPC without amendments. This action provides general construction provisions for plumbing systems used throughout the state and ensures consistency for the code user. The following language is a proposed revision to Chapter 9 of the 2025 California Plumbing Code.

Proposed Change:

906.1.1 Roof Termination When Protected. *Where* ***solar panels or other rooftop equipment*** *are located above rooftop plumbing vent terminations, construction shall comply with all of the following conditions:*

1. *The vent termination is not less than 2" above the roof surface.*
2. *The open space between the top of the vent pipe and the underside of the solar panel or rooftop equipment is not less than 2".*
3. *The vent terminal opening is protected by an approved means such as Vent Terminal Debris Guard listed to IGC 323-2015 and installed according to the installation instructions.*
4. *The waterproofing and integrity of the vent is maintained.*
5. *The roof slope is not less than 2 inch per foot.*

Reason:

Recent changes to the Net Billing Tarrif have significantly reduced the new solar installations over the last year. The PV systems that are being installed now are competing for available sunny roof space with plumbing vents and other rooftop obstructions. Establishing clearances above plumbing vent termination and PV Solar Panels or other rooftop obstructions increases design flexibility and helps California to meet renewable energy goals.

This proposal seeks to clarify the required clearance when a rooftop obstruction occurs above a plumbing vent termination. This proposal does not modify the requirements for combustion or forced air vents.

Solar panels are large rectangles typically mounted with the bottom of the frame 4”-8” above the roof using a 2”-4” tall mounting system. This proposal increases the flexibility of the PV installation height and location, so plumbing vent terminations do not conflict with PV collector locations. Each solar panel that cannot be installed due to a conflict with the location of an existing plumbing vent, may reduce the financial benefit of the solar installation by thousands of dollars over system life.

The size, length, and location of vent terminals has been thoroughly discussed, and the requirements are well known. Most of the current code requirements originate from the recommendations of the National Bureau of Standards (NBS) in 1954 published one of the most complete papers entitled, "Frost Closure of Roof Vents in Plumbing Systems" by Nerbert Eaton and Robert Wyly.

The NBS report recommends a minimum of 2-inch penetration above the roof to prevent rainwater from entering the plumbing vent. Our proposal is restricted to steep slope roofs because low slope roofs can have a greater accumulation of water, and require the plumbing vent to be at a higher elevation. Additionally, the NBS report determined that plumbing vents that terminate at the roof surface have a lower potential for frost closure compared to vents higher off the roof surface, so lowering the vent will not increase the potential for frost closure.

The Residential Code requires the termination to be 6 inches above the roof with adjustments for jurisdictional required snow cover depth. However, plumbing vents protected by a solar panel or architectural feature are inherently sheltered from snow cover. Therefore, having a 2-inch height clearance above a plumbing vent on a steep sloped roof would be sufficient to preserve the venting function.

Numerous code-compliant flashing products and systems exist today that waterproof a roof vent termination that has 2 inches of vent pipe exposed. Plumbing vents are not required to remain readily accessible since these vents are not designed as cleanouts. Therefore installing solar panels above the vent should not cause accessibility concerns. Plumbing codes already define where a cleanout is required for service operations.

Rooftop vent terminations allow small amounts of sewer gas to escape and equipment installed on the roof must resist these corrosive effects. Since solar panels are listed to IEC 62716 and UL 61730 standards which include corrosion testing, the gasses would not have a negative impact on panel life.

When PV solar collectors or other roof coverings, and plumbing vent terminations are installed on the same roof plane, there will be no sacrifice to function or public health. This code proposal will help states, cities and homeowners meet their renewable energy generation

goals.

As noted above, the proposal is being submitted by CALSSA. Koffel Associates provides code consulting services to CALSSA. Vincent Jolissaint is the Director of CAD Services at Cobalt Power.

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