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To: Braaksma, Krista (DES) <krista.braaksma@des.wa.gov>; DES SBCC <sbcc@des.wa.gov>

Subject: Public Comment - 2018 WSEC - C404.2.2- Added Clarification to Exception

Krista:

Below is public comment on C404.2.2.

Recommend adding a similar defrost and backup heat allowance for the R-1 and R-2 section that Robby Oylear is recommending for C404.2.1.

C404.2.2 High input-rated service water heating system for Group R-1 and R-2 occupancies. In new construction with over 1,000,000 Btu/h installed service water heating capacity serving Group R-1 and R-2 occupancies, at least 25 percent of annual water heating energy shall be provided from any combination of the following water heating sources:

1. Renewable energy generated on site that is not being used to satisfy other requirements of this code, or
2. Heat recovered on site from the building's wastewater, air-source heat pumps, or from air that would otherwise be exhausted to the outdoors without heat recovery, that is not being used to satisfy other requirements of this code.

Exception: Compliance with this section is not required if the combined input-capacity-weighted average equipment rating for each service water heating fuel source type is not less than the following:

1. ~~A heat pump water heater or a~~An electric water heater water with a rating of 125% of the rated efficiency of Table C404.2.
2. A rated COP of not less than 2.0. For air-source heat pump equipment the COP rating will be reported at the design leaving heat pump water temperature with an entering air temperature of 60°F (15.6°C) or ~~less~~lower. Supplemental water heaters not meeting the above criteria that function as auxiliary heating only when the outdoor temperature is below 32°F (0°C) or when a defrost cycle is required. Such systems shall be sized and configured to lock out electric resistance or fossil fuel heating from operation when the outdoor temperature is above 32 °F (0°C) unless the system is in defrost operation.
3. A rated E_i or E_F of not less than 90 percent as determined by the applicable test procedures in Table C404.2.

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