

STATE BUILDING CODE OPINION 21-Apr02

CODE: 2018 Washington State Energy Code-Commercial

SECTION: C403.1.1, Total System Performance Ratio

QUESTION 1: Since the zone air distribution effectiveness does not appear to be a user-specified input within the TSPR tool, can systems utilizing low-velocity displacement ventilation (meeting footnote e of Table 403.3.1.1.2 of the 2018 IMC) with a zone air distribution effectiveness = 1.2 utilize exception #6 of Section C403.1.1?

ANSWER: **(Option 1) No. Exception 6 only exempts underfloor air distribution HVAC systems, not displacement ventilation systems. Credit for displacement ventilation (as with many other unique design features or control strategies) is not available through TSPR. Compliance must be achieved via TSPR without the noted strategy (or compliance can be achieved via C407).**

(Option 2) Yes. Displacement ventilation can utilize Exception 6.

QUESTION 2: Is TSPR required if the proposed system is listed in Table D601.11.1 but includes a proposed building system parameter in Table D601.11.2 that is not applicable to the proposed system type? Example: DOAS + FCU with airside economizer, which is a system type listed in Table D601.11.1 (Systems #6 & 12) so exception #3 of Section C403.1.1 does not apply. However, System #6 is not noted as being available for simulation with airside economizer per Table D601.11.2.

ANSWER: **No. TSPR applies to all systems listed in Table D601.11.1. However, if a proposed system includes a proposed building system parameter in Table D601.11.2 that is not noted as applicable for that system in the "Applicable Systems" column, then that proposed design is exempt from TSPR.**

SUPERSEDES: None

REQUESTED BY: City of Bellevue