

## STATE BUILDING CODE OPINION 24-Nov02a

**CODE:** 2021 Washington State Energy Code-Commercial

**SECTION:** C503.4 Building Mechanical Alterations

**QUESTION 1:** For a mechanical alteration in an existing building, is a “...*mechanical heating appliance added...*” per Section C503.4.6 a new heating appliance incorporated into an existing system for the purpose of increasing total heating capacity to serve an existing thermal zone?

**ANSWER 1:** **Yes. This includes duct heaters, air terminals with electric heating coils and stand-alone heating appliances such as unit heaters, that are added to increase total heating capacity serving an existing thermal zone.**

**QUESTION 2:** For a mechanical alteration in an existing building, is “...*new mechanical systems and equipment...*” per Section C503.4.1 a new system that is independent of existing-to-remain mechanical systems, and serves a new or reconfigured existing thermal zone?

**ANSWER 2:** **Yes. A new mechanical system includes heating and/or cooling appliance(s), distribution system components and zone-level controls. This includes new stand-alone heating appliances that do not require distribution system components. Connection to an existing whole building DDC system and/or energy metering system does not change this definition.**

**QUESTION 3:** For a mechanical alteration where an existing heating appliance type is being replaced with a different heating appliance type that is not listed in Table C503.4.6, are Sections C401.3 and C403.1.4 the only allowed compliance paths?

**ANSWER 3:** **Yes. Compliance options defined in Table C503.4.6 are only available for the listed equipment types.**

EXAMPLE: For an existing gas-fired hot water boiler being replaced with an electric boiler, the only available compliance paths are the fossil fuel compliance path per Section C401.3 or eligibility for an exception to the heat pump requirements per Section C403.1.4.

Per Table C503.4.6, a gas-fired boiler can be replaced with a like-for-like boiler provided the equipment efficiency of the new boiler is 5% better than code minimum. The replacement of existing oil-fired boilers and gas-fired or oil-fired steam boilers (serving existing terminals) are exempt from Section C503.4.6 per Exceptions 4 and 5.

**QUESTION 4:** For a mechanical alteration, can the replacement of heating equipment comply via Table C503.4.6 if the equipment is the same type (like-for-like) and the rated capacity of the new equipment is larger than the rated capacity of the existing equipment?

**ANSWER 4:** **No. Footnote a of Table C403.4.6 states that the compliance options are only available for like-for-like replacement where the new equipment capacity is the same or lower than the existing equipment being replaced, or replacement of one equipment type with a different equipment type (capacity irrelevant).**

**QUESTION 5:** In Section C403.4.6 Exception 7, is “as where” intended to be “and where?”

**ANSWER 5:** **Yes. There is a typo in the SBCC Insert Pages. The correct text can be found in WAC 51-11C-50300.**

**SUPERSEDES:** None

**REQUESTED BY:** King County

## STATE BUILDING CODE OPINION 24-Nov02b

**CODE:** 2021 Washington State Energy Code-Commercial  
**SECTION:** C503.1 / C503.4.1 Building Mechanical Alterations

**QUESTION:** For a mechanical alteration, are new mechanical systems and equipment installed in an existing building that are required to comply with C403 per Section C503.4.1 allowed to demonstrate compliance using the fossil fuel compliance path per Section C401.3, total building performance path per Section C401.2 Item 2, or Appendix F Outcome Based Energy Budget per Section C401.2 Item 3

**ANSWER:** **Yes. Per the charging statement in Section C503.1, “Alterations to any building or structure shall comply with the requirements of Section C503 and the code for new construction.” This includes all compliance paths defined in Section C401.2.**

**SUPERSEDES:** None  
**REQUESTED BY:** King County

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## STATE BUILDING CODE OPINION 24-Nov02c

**CODE:** 2021 Washington State Energy Code-Commercial  
**SECTION:** C401.3 / C503.1. Building Mechanical Alterations

**QUESTION :** For a mechanical alteration complying under the C401.3 fossil fuel compliance path, is the total required number of additional energy credits limited to the number required by Table C401.3.3?

**ANSWER :** **Yes. Per Section C503.1, the additional energy efficiency requirements in Section C406.1 do not apply to mechanical alterations.**

**SUPERSEDES:** None  
**REQUESTED BY:** King County