



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

2015 Washington State Energy Code Development Energy Code Proposal Short Form

For editorial **Coordination, Clarifications & Corrections** only,
without substantive energy or cost impacts

May 2018

Code being amended: [Commercial](#) Provisions [Residential](#) Provisions
(A MS Word version of the code is linked to the name)

Code Section # C403.5 Exceptions 1 and 5

Brief Description:

Clarify intent of Section C403.5 regarding cooling systems installed in a mechanical room. The airside economizer exceptions 1 and 5 are not intended to apply to cooling fan coils in residential units that are installed in closets or that are enclosed in sheet rock like vertical stacking watersource heat pumps.

Clarify that the condensing unit portion of a split system can be installed outdoors as long as the supply fan coil portion of the unit is installed indoors and not in a mechanical room.

Proposed code change text: (Copy the existing text from the Integrated Draft, linked above, and then use underline for new text and ~~strikeout~~ for text to be deleted.)

Add Definition:

MECHANICAL ROOM. A room or space in which mechanical equipment and appliances are located that has sufficient room for access and maintenance of the equipment or appliances with room entry doors closed.

C403.5 Economizers. Air economizers shall be provided on all new cooling systems including those serving computer server rooms, electronic equipment, radio equipment, and telephone switchgear. Economizers shall comply with Sections C403.5.1 through C403.5.5.

Exception: Economizers are not required for the systems listed below:

1. For other than Group R-2 occupancies, cooling system where the supply fans is not installed outdoors nor in a **mechanical room** adjacent to outdoors and installed in conjunction with DOAS complying with Section C403.3.5 and serving only spaces with year-round cooling loads from lights and equipment of less than 5 watts per square foot.
2. Unitary or packaged systems serving one zone with dehumidification that affect other systems so as to increase the overall building energy consumption. New humidification equipment shall comply with Section C403.3.2.5.
3. Unitary or packaged systems serving one zone where the cooling efficiency meets or exceeds the efficiency requirements in Table C403.5.
4. Equipment serving chilled beams and chilled ceiling space cooling systems only which are provided with a water economizer meeting the requirements of Section C403.5.4.
5. For Group R occupancies, cooling unit where the supply fans is installed outdoors or in a **mechanical room** adjacent to outdoors with a total cooling capacity less than 20,000 Btu/h and other cooling units with a total cooling capacity less than 54,000 Btu/h provided that these are high-efficiency cooling equipment with IEER, CEER, SEER, and EER values more than 15

percent higher than minimum efficiencies listed in Tables C403.3.2(1) through (3), in the appropriate size category, using the same test procedures. Equipment shall be listed in the appropriate certification program to qualify for this exception. For split systems, compliance is based on the cooling capacity of individual fan coil units.

6. Equipment used to cool *Controlled Plant Growth Environments* provided these are high-efficiency cooling equipment with SEER, EER and IEER values a minimum of 20 percent greater than the values listed in Tables C403.3.2(1), (3) and (7).
7. Equipment serving a space with year-round cooling loads from lights and equipment of 5 watts per square foot or greater complying with the following criteria:
 - 7.1. Equipment serving the space utilizes chilled water as the cooling source; and
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 - 7.2. The chilled water plant includes a condenser heat recovery system that meets the requirements of Section C403.9.2.1 or the building and water-cooled system meets the following requirements:
 - 7.2.1. A minimum of 90 percent (capacity-weighted) of the building space heat is provided by hydronic heating water.
 - 7.2.2. Chilled water plant includes a heat recovery chiller or water-to-water heat pump capable of rejecting heat from the chilled water system to the hydronic heating equipment capacity.
 - 7.2.3. Heat recovery chillers shall have a minimum COP of 7.0 when providing heating and cooling water simultaneously.
8. Water-cooled equipment served by systems meeting the requirements of Section C403.9.2.4, Condenser heat recovery.
9. Dedicated outdoor air systems that include energy recovery as required by Section C403.7.6 but that do not include mechanical cooling.
10. Dedicated outdoor air systems not required by Section C403.7.6 to include energy recovery that modulate the supply airflow to provide only the minimum outdoor air required by Section C403.2.2.1 for ventilation, exhaust air make-up, or other process air delivery.
11. Equipment used to cool any dedicated server room, electronic equipment room or telecom switch room provided the system complies with Option a, b or c in the table below. The total cooling capacity of all fan systems without economizers shall not exceed 240,000 Btu/h per building or 10 percent of its air economizer capacity, whichever is greater. This exception shall not be used for Total Building Performance.

Purpose of code change:

Clarify intent of code to make code more enforceable.

Your name	Eric Vander Mey	Email address	ericv@rushingco.com
Your organization	Rushing	Phone number	206-285-7114
Other contact name			

Instructions: For use with Coordination, Clarifications & Corrections ONLY. Send this form as an email attachment, along with any other documentation available, to: sbcc@ga.wa.gov. For further information, call the State Building Code Council at 360-407-9277.