

STATE OF WASHINGTON STATE BUILDING CODE COUNCIL

2015 Washington State Energy Code Development Energy Code Proposal Short Form

For editorial **Coordination**, **Clarifications & Corrections** only,

only, May 2018 Log No.24-GP1-262 Rev 1

without substantive energy or cost impacts

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

Code Section # C403.7.5 Loading dock, motor vehicle repair garage, and parking garage ventilation system controls.

Brief Description: Remove language in energy code that indicates garage ventilation cans can shut off, which conflicts with language in the mechanical code. Rev1: editorial update that moves charging language from following paragraph to the beginning of the pertinent paragraph.

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

C403.7.5 Loading dock, motor vehicle repair garage, and parking garage ventilation system controls. Mechanical ventilation systems for loading docks, motor vehicle repair garages, and parking garages shall be designed to exhaust the airflow rates (maximum and minimum) determined in accordance with the *International Mechanical Code*.

Ventilation systems with total ventilation system motor nameplate horsepower exceeding 5 hp (3.7 kW) at fan system design conditions and those with heating and/or cooling shall be equipped with a control device that operates the system automatically by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. Controllers shall be configured to shut off fans or modulate fan speed to 20 percent or less of design capacity, or intermittently operate fans less than 20 percent of the occupied time or as required to maintain acceptable contaminant levels in accordance with the *International Mechanical Code* provisions.

Ventilation systems with total ventilation system motor nameplate horsepower exceeding 5-hp (3.7-kW) at fan system design conditions and those with heating and/or cooling shall have controls and devices that modulate fan speed and result in fan motor demand of the design airflow.

Gas sensor controllers used to activate the exhaust ventilation system shall stage or modulate fan speed upon detection of specified gas levels. All equipment used in sensor controlled systems shall be designed for the specific use and installed in accordance with the manufacturer's recommendations. The system shall be arranged to operate automatically by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. Parking garages, repair garages, and loading docks shall be equipped with a controller and a full array of carbon monoxide (CO) sensors set to maintain levels of carbon monoxide below 35 parts per million (ppm). Additionally, a full array of nitrogen dioxide detectors shall be connected to the controller set to maintain the nitrogen dioxide level below the OSHA standard for eight hour exposure.

Spacing and location of the sensors shall be installed in accordance with manufacturer recommendations.

Purpose of code change:

There is a conflict between the energy code and the mechanical code. The energy code indicates that the fans may be allowed to shut off under certain conditions, while the mechanical code, Section 404.1 Enclosed Parking Garages, dictates that the must always be running at least at a minimum value:

404.1 Enclosed Parking Garages

Mechanical ventilation systems for enclosed parking garages shall operate continuously or shall be automatically operated by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. Such detectors shall be listed in accordance with UL 2075 and installed in accordance with their listing and the manufacturer's instructions. Automatic operation shall cycle the ventilation system between the following two modes of operation:

- 1. Full-on at an airflow rate of not less than 0.75 cfm per square foot [0.0038 m3/(s m2)] of the floor area served.
- 2. Standby at an airflow rate of not less than 0.05 cfm per square foot [0.00025 m3/(s m2)] of the floor area served.

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