

STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

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November 2012 Motions for Rule Making Actions

Main Motion: Adopt 2012 Energy Code as proposed in WAC 51-11R and 51-11C; repeal WAC 51-11

Amendment to the main motion:

Modify Section C403.2.5.3 for enclosed loading dock and parking garage exhaust ventilation system controls:

C403.2.5.3 Enclosed loading dock and parking garage exhaust ventilation system control. Mechanical ventilation systems for enclosed loading docks and parking garages shall be designed to exhaust the airflow rates (maximum and minimum) determined in accordance with the *International Mechanical Code*.

Ventilation systems shall be equipped with a control device that operates the system automatically upon detection of vehicle operation or the presence of occupants by approved automatic detection devices. Each of the following types of controllers shall be capable of shutting off fans or modulating fan speed. Control devices shall not reduce airflow rates below the minimum requirement in accordance with the *International Mechanical Code* during scheduled periods of occupied operation.

- 1. 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. 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.
- 2. Automatic time clocks used to activate the system shall activate the system during occupied periods. The time clock shall be capable of scheduling multiple start and stop times for each day of the week, varying the daily schedule, and retaining programming for a 10 hour period during loss of power.
- 3.2. Occupant detection sensors used to activate the system shall detect entry into the parking garage along both the vehicle and pedestrian pathways.

C403.2.5.3.1 System activation devices for enclosed loading docks. Ventilation systems for enclosed loading docks shall be activated by one of the following:

- 1. Gas sensors installed in accordance with International Mechanical Code; or
- 2. Time clock and a manual over ride switch located in the dock area that is accessible to persons in the loading dock area Occupant detection sensors used to activate the system that detect entry into the loading dock along both the vehicle and pedestrian pathways.

C403.2.5.3.2 System activation devices for enclosed parking garages. Ventilation systems for enclosed parking garages shall be activated by gas sensors.

Exception: A parking garage ventilation system having a total design capacity under 8,000 cfm may use a time clock or occupant sensors.

Rationale: IMC requires that the parking garage ventilation continue to run at a very low level all the time when the spaces are occupied. Modifications it clear that the airflow rate must be maintained above the minimum requirements of the IMC, that gas sensors shall be installed per IMC requirements, and outline requirements for detection of parking garage occupancy for minimum ventilation.