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DATE: **April 2019**

TO: **Chair Eric Sandoval and Members of OR Building Codes Structures Board**
DCBS - Building Codes Division

FROM: **The National Electrical Manufacturers Association (NEMA)**

RE: **Code Amendment Proposal 19 OSSC-29**

Summary

This code proposal would modify the Oregon Specialty Structures Code (OSSC) to require carbon monoxide (CO) detection equipment in ***new*** Group A, Group B and Group M occupancies that contain a CO-emitting source (including a fireplace and an attached, enclosed garage). Non-residential and non-institutional occupancies are not currently required by the OSSC to install CO detection devices. This presents a life safety risk, however, as CO is an invisible, colorless, odorless and tasteless gas that can lead to sickness and mortality, particularly among vulnerable populations such as children and the elderly.

This proposal would require a change to Section 915 of the OSSC[1]. The fiscal impact on building owners and/or managers of occupancies classified as Group A, B or M would be minimal as the requirement would apply to new structures only. NEMA estimates the full cost of installing one CO detector of the type needed for commercial environments is in the range of $325, including wiring, casing and labor, with the number of units per building typically fewer than required for smoke detection. More importantly, the "cost savings" to be achieved by this code change through prevention of debilitating sickness or death are immeasurably high.

With regard to model codes, a proposal that the 2018 edition of the International Fire Code require CO detection in Group A-1 and A-2 occupancies was disapproved in October 2016. NEMA has addressed the reasons given for this decision (see below), which do not constitute a rationale against amending the OSSC. Furthermore, the 2018 edition of NFPA 101 and NFPA 5000 require CO detection in newly constructed restaurants, motion picture theaters, concert halls, night clubs and banquet halls having a permanently installed fuel-burning appliance or attached garage. NEMA's proposal encompasses and goes beyond the NFPA requirement.

Request of the BCSB

NEMA urges the BCSB to recommend adoption of 19 OSSC-29, which would place Oregon in the forefront of states that provide protection against CO exposure in places Oregon residents routinely gather outside their homes. The cost of compliance is minimal for new structures while the benefits in terms of injuries (and potential deaths) avoided are incalculable.

[1] Note: Initial application mistakenly identified section Section 908.7 of the OSSC.

Carbon Monoxide Detection Requirements in US States

Source: www.lifefiresafety.org

Commercial Establishments

- In December of 2014 Governor Cuomo signed AB 8963 into law expanding the state's regulations to include the installation of CO detection in restaurants and other commercial buildings. New York is the first state to require CO detection in restaurants and commercial occupancies. The bill was in reaction to a CO incident that occurred in a Long Island restaurant that sent 26 to the hospital and tragically killed the restaurant manager.

- In November of 2015 New Jersey signed A 4073 into law requiring the installation of CO detection devices in all restaurants and commercial structures not currently required to have such protection. The measure applies to structures having a potential for a CO hazard.

Technology and Installation Standards

Sec. 1.1.2 in the "Scope" section of the 2015 edition of NFPA 720[2] reads as follows:

> "*This standard covers the selection, design, application, installation, location, performance, inspection, testing, and maintenance of carbon monoxide detection and warning equipment in buildings and structures.*"[3]

The "Origin Section" at the beginning of the 2015 edition of NFPA 720 contains the following statements (emphasis added):

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[2] NFPA 720 (Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment) contains requirements for carbon monoxide (CO) detection and warning equipment intended to protect lives by warning occupants of the presence of CO in sufficient time to allow occupants to escape or take other appropriate action. Note that NFPA 720 was withdrawn at the Annual 2018 revision cycle, but NFPA 720 requirements have been incorporated into NFPA 72.

[3] (See https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=720)

"The 2009 edition was a complete rewrite of the standard and addressed installations of carbon monoxide detection systems in commercial types of applications as well as the installation of carbon monoxide warning equipment in household applications."

"Some of the technical changes in the 2009 edition included the introduction of requirements for the placement of carbon monoxide detectors in commercial applications. Those requirements were based on the Fire Protection Research Foundation report Development of a Technical Basis for Carbon Monoxide Detector Siting Research Project. In addition, requirements for the siting, power supply, and interconnection of carbon monoxide alarms were updated."

Response to International Fire Code (IFC) Decision Not to Approve CO Detection in Group A Occupancies

F222-16

Committee Action: **Disapproved**

Committee Reason: The committee stated that they disagree with the method of bringing Group A-1 and A-2 occupancies into the requirement. It is incomplete and should consider more Group A occupancies. In addition, it was noted that the installation standard and technical requirements are not ready.

Assembly Action: **None**

- Proposal is "*incomplete and should consider **more** Group A occupancies.*"
  NEMA's proposal follows from this committee statement and proposes that the OSSC be amended to adopt CO detection requirements for B (business) and M (mercantile) environments in addition to Group A (assembly) occupancies.

- *"It was noted that the installation standard and technical requirements are not ready"*
  See above – 2015 NFPA code fully covers all aspects of CO detection in commercial applications

Additional Documents Attached for Reference

- April 2018 letter from Jeffrey Lee Williams Foundation
- April 2018 letter from Kris Hauschildt, Longview WA
- March 2018 letter from National Disability Rights Network
- Revised amendment language, adjusted to Sec 915
- Spreadsheet of CO poisoning incidents in US
- Hampson Neil B., "Cost of Accidental Carbon Monoxide Poisoning: A Preventable Expense," Prev. Med. Rprts., 3 (2016) 21-24

Contact

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