



# Recommended Policies

## State and Local Legislation and Ordinances *for* Carbon Monoxide Life Safety Devices

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Carbon Monoxide Manufacturers Product Group

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RECOMMENDED POLICIES  
for  
STATE CARBON MONOXIDE ALARM  
LEGISLATION and ORDINANCE DRAFTING

CARBON MONOXIDE MANUFACTURERS GROUP  
of the  
NEMA SIGNALING, PROTECTION AND COMMUNICATIONS  
PRODUCT GROUP

**EXECUTIVE SUMMARY:**

Proper use of carbon monoxide (CO) detectors can enhance life safety. NEMA recommends that state and local legislatures enact laws requiring:

- All dwelling units with any fuel-burning appliance or heating system to install CO alarms or detectors;
- Newly installed CO equipment should meet the requirements of the most current Underwriters Laboratory (UL) standards, including, but not limited to, UL 2034; and be installed according to the requirements of the National Fire Protection Association (NFPA) Standard 720.

The National Electrical Manufacturers Association (NEMA) is the largest and leading U.S. trade association representing the interests of some 400 electroindustry manufacturers in approximately 70 product categories. The association is the leading representative of smoke and carbon monoxide detection, alarm and sensor manufacturers.

**WHAT IS CARBON MONOXIDE POISONING?**

Carbon monoxide is a preventable cause of death and injury for many in our nation: it is an invisible, tasteless and odorless, colorless gas that is emitted as a result of incompletely burnt carbon based fuels.

Flu-like symptoms identify carbon monoxide poisoning; however, its effects are easy to overlook. At high concentrations in the blood carbon monoxide can cause cognitive impairment, loss of consciousness, coma and death. This dangerous gas can accumulate in buildings to dangerous levels if appliances that use gas, oil, kerosene or wood are not installed, maintained, or used properly.

Detrimental health affects are related to concentration levels, and they depend on the length of exposure, blood concentration levels, and personal health condition. Breathing carbon monoxide can cause headaches, dizziness, sleepiness, nausea, confusion, and disorientation. Carbon monoxide reduces the blood's capability to carry oxygen to a

human's organs and tissues at very high levels, it can cause loss of consciousness and death.

On average, over 200 people die each year because of non-fire CO poisonings from appliances and other sources of combustion. Most deaths occur during the winter heating season. The Consumer Product Safety Commission (CPSC) has identified carbon monoxide as a strategic goal, and recommends all homes install a carbon monoxide alarm. The Commission is committed to working to reduce the rate of death from carbon monoxide poisoning by twenty percent from the 1999-2000 average by the year 2013. Some 15,000 Americans seek medical attention or lose at least a day of normal activity every year due to carbon monoxide poisoning, according to the U.S. Centers for Disease Control and Prevention (CDC).

Carbon monoxide detectors can detect CO gas and sound early warning alarm before the level of CO becomes debilitating, either from higher concentrations of CO over a short period, or lower levels over a longer period. It is important to have effective, broad detection and alarm units installed in residential and other locations.

### **WHAT ARE THE STANDARDS FOR CARBON MONOXIDE DEVICES?**

Two standards, Underwriters Laboratory (UL) 2034, and National Fire Protection Association (NFPA) 720 set the performance standards for carbon monoxide devices.

The efficacy of industry consensus standards, and subsequent code provisions, are the leading edge of verification and durability of many different products. Life safety codes and standards ensure that products meet crucial performance requirements that recognize proven technologies.

It is important to note that any additional requirements or performance standards above and beyond those required may actually endorse an unproven performance feature, or exclude proven and tested life safety technologies that meet recognized standards. This may include devices that require voice annunciation, a long-life battery, or other scenarios.

Codes and standards drafting and acceptance follow regular schedules of review that incorporate the best thinking and state of the art developments. When a state law includes an additional feature or limitation not recognized in a code or standard, it may exclude future advances that make better sense or force constant revisions. To accommodate this issue, a simple reference to the applicable standard allows timely updating without constant legislative involvement.

The U.S. Consumer Product Safety Commission and the National Fire Protection Association urge consumers to purchase and install CO detectors and alarms. NFPA has developed a standard that addresses installation of a CO detector in homes containing fuel-burning appliance or fireplace or in those having an attached garage. NFPA 720 requires installation of CO alarms in a central location outside each separate sleeping area in the immediate vicinity of the bedrooms. The CPSC recommends purchase of CO

detectors that meet the requirements of UL 2034, the *Standard for Single and Multiple Station Carbon Monoxide Alarms*. The most recent update of this standard requires:

- Marking and Instruction: CO devices and manufacturer’s instruction booklets must advise consumers what to do in case of an alarm signal.
- Alarm Standard: CO devices must sound alarm signal before most people experience adverse effects but not at long-term, low-level or short-term CO exposures that are not a health threat.
- Reset Button: CO devices must have a manually operated reset button that allows residents to silence the alarm. If elevated CO levels continue to exist, the detector will sound an alarm again. This will help confirm troublesome CO levels.

## **WHAT SHOULD BE CONSIDERED IN STATE AND LOCAL JURISDICTION DRAFTING?**

There are several key elements concerning the mandatory use of a CO sensor, detector or alarm. These concern among other things: the type of detector, and the installation and standards on the alarm:

- Required Use of Carbon Monoxide Detectors: In any legislation or ordinance, it should be required that every “dwelling unit” and for buildings with multiple occupancies, each dwelling unit to have a CO alarm or detector installed outside each separate sleeping area. This is consistent with life safety codes and standards recommendations.
- Type of Detector: Enacted laws should require a detector or alarm meet and conform to UL 2034 and be installed in accordance with NFPA 720 and manufacturer’s instructions.
- Installation: Various jurisdictions require that occupants must maintain the CO detector in good operating condition and in accordance with the manufacturer’s instructions.

## **EXISTING LAWS & PENDING LEGISLATION**

### **Enacted State Wide Carbon Monoxide Laws:**

Alaska; New Jersey; New York; Rhode Island; Utah (bldg. code provision); West Virginia; Texas (day care centers and group homes)

### **Enacted Municipality Carbon Monoxide Provisions:**

Many local jurisdictions across the country require carbon monoxide detection:

Muscle Shoals, AL

Anchorage, AK

Wilmington, DE

Illinois: Chicago, Frankfort, Gurnee, Lake Forest, Lincolnwood, IL

Linn County, IA

Commonwealth of Massachusetts  
Abington, Marshfield, and Mashpee,

Pontiac, MI  
St. Louis, MO

New York State:  
Albany, Greenburgh, Kingston, New York City and Rockland and Suffolk  
Counties, NY

Mecklenburg County, NC

Fort Lee and the Village of South Orange, NJ

State Of Ohio:  
Brooklyn, Eastlake, Lakewood, Macedonia, Maple Heights, Northfield,  
Parma, Richmond Heights, Westfield Center, and Willowick.

Bellaire, TX

Brown Deer, WI

**Pending Carbon Monoxide Legislation:**

Several states are considering legislative language.

**CONTACT & FURTHER INFORMATION:**

If you have questions about these recommendations, please contact the NEMA at [www.nema.org](http://www.nema.org) or (703) 841-3200. Information is also available on the web from Underwriters Laboratory, the Consumer Product Safety Commission and the National Fire Protection Association.