



## Smoke/Fire Detection—Proactive Approach to Life Safety

Protecting individuals from the health and safety hazards posed by fires and smoke is of critical importance. According to the National Fire Protection Association, since the 1970s when smoke alarms became widely available to U.S. households, the home fire death rate has been reduced by half. States and localities now require the installation of smoke alarms/detectors in nearly all residential construction. Many of these same states are now focused on implementing similar requirements for fire suppression systems, namely automatic fire sprinklers. Implementing a proactive approach to fire system design—one that incorporates both smoke/fire detection systems and fire sprinkler/suppression systems—is necessary to provide the best possible protection.

### Position:

NEMA supports life safety measures that advance a proactive approach to fire safety, including both smoke/fire detection and suppression systems. Automatic fire detection and alarm systems, when combined with suppression systems and other elements of a proactive fire protection plan, significantly reduce property damage, personal injuries, and loss of life from fire.

### Importance:

In recent years, there has been increased focus on mandating the installation of fire sprinklers in homes and other residential occupancies. The 2009, 2012 and 2015 editions of the International Residential Code require the installation of automatic fire sprinkler systems in one- and two-family dwellings and townhouses. Many states have adopted or are considering adopting these requirements into their respective residential or building codes.

However, while fire sprinklers control the development and spread of fire and decrease property loss, they are only one side of the fire safety equation. Fire/smoke detection remains paramount to protecting and preserving human life. The U.S. Fire Administration and U.S. Consumer Product Safety Commission stress the importance of properly installed and maintained fire or smoke detection/alarm systems. These affordable, lifesaving devices can provide critical early warning for evacuation, automatically alert/summon fire department personnel, and reduce exposure to smoke inhalation, among other benefits.

The federal government, states, and municipalities must persist in their support for a proactive fire approach that continues to require and emphasize smoke and fire detection, even when suppression systems are installed. This conclusion is supported by a study conducted by James A. Milke, PhD, PE, et al., for the University of Maryland. The study—*Performance of Smoke Detectors and Sprinklers in Residential and Health-Care Occupancies*—is available under the Research section of [www.lifesafetysolutionsonline.com](http://www.lifesafetysolutionsonline.com).

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*NEMA is the association of electrical equipment and medical imaging manufacturers, founded in 1926 and headquartered in Rosslyn, Virginia. Nearly 400 members strong, its companies manufacture a diverse set of products including power transmission and distribution equipment, lighting systems, factory automation and control systems, and medical imaging and radiation therapy systems. Total U.S. shipments for electroindustry products exceed \$100 billion annually.*

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- NEMA publishes over 600 standards, application guides, white papers, and technical papers.
- NEMA responds to codes and standards proposals of other organizations in the U.S. and around the world, facilitating the development of international and North American harmonized standards.
- NEMA was named in the Energy Independence and Security Act of 2007 to work with federal agencies on efforts to enhance the efficiency, sustainability, and security of the electricity grid. As part of this, NEMA has been instrumental in the Smart Grid Interoperability Panel (SGIP) and the National Institute of Standards and Technology (NIST) Smart Grid Federal Advisory Committee.