

Portable Extinguishers Reduce the Carbon Footprint of Building Fires



In a major new study, it was found that portable fire extinguishers can dramatically reduce the carbon footprint of building fires. The study comes as sustainability has become an increasingly important topic to businesses and governments. From water scarcity, the need for greater climate resiliency along the coasts, to the adoption of strict energy codes in cities and states across the country, there has been a significantly greater focus on the carbon footprint of energy generation, vehicles, and – increasingly – buildings.

This year, the FEMA Government Relations Committee commissioned the respected fire protection engineering firm Jensen Hughes, to study the role of portable extinguishers in reducing the carbon footprint of a fire in a sprinklered building. The groundbreaking Jensen Hughes study, titled *A Review of the Impact of Fire Extinguishers in Reducing the Carbon Footprint of Building Fires*, found that portable fire extinguishers can further reduce fire related carbon emissions of a building, beyond the effectiveness of sprinklers on their own, by 93.6%. When used together, sprinklers and portable extinguishers, this results in a total reduction of fire related carbon emissions by 99%.

The study also found that "there is an increase in carbon emissions each time there is a delay in applying water or other extinguishing agents onto an active fire. Therefore, using portable fire extinguishers early has the potential of providing the highest reduction of carbon emissions [emphasis added] of any emergency fire response." Further, there is a "reduction in carbon emissions during reconstruction activities, since there is less property damage."

As governments adopt policies to reduce the carbon footprint of buildings by requiring the electrification of heating and cooling or the use of low carbon construction techniques, it is important to remember the role fire safety can play in keeping occupants safe, while also reducing the building's carbon footprint over its entire life cycle. New building materials are leading to faster and faster burn times with the average home now burning up to eight times faster than older homes. Every building fire has the potential to release massive amounts of carbon as the fire spreads and the building is consumed. It is important that passive AND active fire protection, such as portable fire extinguishers, remain fully integrated throughout these new buildings to prevent such fires.



Studies have shown that individuals who have used a portable fire extinguisher intuitively know that portable fire extinguishers can play a vital role in limiting or stopping a fire in its incipient stage, which ultimately also reduces the release of carbon. The sooner you extinguish a fire, stop it from burning fuel and threatening property and lives, the less carbon will be emitted. Till now, there has not been a scientific study demonstrating this.

The FEMA GRC will be educating policy makers at the state and federal levels on yet another reason why fire codes should embrace portable fire extinguishers throughout buildings. Portable fire extinguishers are a safe and effective means to quickly respond to an incipient fire and should continue to be part of the conversation regarding fire safety best practices.

This study, and more resources, can be found at fireextinguisherssavelives.org.



Fire Equipment Manufacturers' Association 101

The Fire Equipment Manufacturers' Association is the premier trade association representing leading brands, and spanning dozens of product categories related to fire protection. The Fire Equipment Manufacturers' Association is comprised of four divisions represented by product categories: portable fire extinguishers, interior equipment, fire hose and pre-engineered suppression systems. These divisions work together in an effort to promote Layered Fire Protection, Life Safety and initial response when disaster strikes. Members of the Fire Equipment Manufacturers' Association have formed a subgroup, the Government Relations Committee (GRC), to address legislative and regulatory issues relating to portable fire extinguishers and pre-engineered systems. The GRC's main goals focus on helping to educate officials by advancing a layered fire safety philosophy that reflects the need for both sprinklers and portable extinguishers. This newsletter is published periodically to communicate to key members of the fire services and code officials on the importance of layered fire safety and the role that special application fire suppression systems and portable extinguishers play.

