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How SFPE is developing opportunities for the fire protection engineering profession to influence & elevate sustainability in the built environment

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Sustainability is entering into many aspects of our lives and the fire protection engineering profession. Since facilitating a sustainable and fire-resilient built environment for future societies has become an essential objective for fire protection engineering, fire protection engineers must understand how sustainability is an important aspect of engineering a fire-safe world. As such, SFPE published Position Statement: 2023-01 Engineering a Sustainable and Fire Resilient Built Environment.

Sustainability and fire resilience are important objectives for the built environment. Therefore, more sustainable technologies should be embraced, but they should not create unintended and intolerable fire risks. SFPE as an organization recognizes this and one of our main goals moving forward is to create an understanding of the complex interplay between fire safety and sustainability.

Economic, Social, and Environmental issues tend to be dealt with separately when they actually are different dimensions of sustainability. To find sustainable solutions that reduce the risk of fire, society needs to consider all three aspects together. There is an ongoing effort to increase environmental, social and financial sustainability of the built environment through better thermal insulation of buildings, use of local alternative energy sources, material with lower embodied carbon, and more. However, some sustainable building materials, technologies, and features have created unintended fire hazards and risks.

Fire risk mitigation should include the mitigation of environmental and social impacts of fire. Designs for the built environment should be developed and implemented to be resilient to the effects of climate change on both the natural and built environment and reduce fire risks to society. Fire protection engineers play a role in helping to ensure that such potential impacts are considered in the future development of fire protection materials, technologies, and analysis.

It is important for fire protection engineers, architects, policymakers, researchers, code officials, fire service representatives, and sustainability professionals to engage in a meaningful dialogue with the aim of promoting sustainable and fire-resilient built environments. This requires understanding the diversity of sustainability and fire resilience design objectives for

the built environment. It also includes balancing the diverse and sometimes competing objectives of current and emerging technologies for building sustainability and fire safety.

Building designers will need to go beyond the prescriptive codes to design sustainable and fire resilient buildings. This will require that fire protection engineers (and others) to implement alternative fire safety solutions that balance social, environmental, and economic impacts of fire.

There is a need for a change within our industry, a necessary step to truly understand how sustainability impacts fire risks. This starts with thinking about how sustainability impacts the industry as a whole (design, research, legislation, etc.). If the fire protection engineering profession can understand this impact and consider it in our daily work, it will have taken the first important step.

SFPE is therefore taking first step, by means of different initiatives and activities, towards understanding the complex interplay between fire safety and sustainability. For example, in addition to the new position statement, the SFPE Board of Directors has made developing opportunities for the fire protection engineering profession to influence & elevate sustainability in the built environment a major goal in its 2024 strategic plan.