**NEWS ARTICLE**

Beware of the fire risk posed by lithium-ion batteries

**15 April 2024:** As renewable energy systems, including solar panels and battery energy storage systems (BESS), gain increasing popularity, experts caution about the potential fire risks posed by lithium-ion batteries. Commonly used in energy storage systems, lithium-ion batteries pose unique fire hazards due to their flammable electrolytes, highlights [ASP Fire](http://www.aspfire.co.za) CEO **Michael van Niekerk**.

Unlike traditional lead-acid batteries, lithium-ion batteries can undergo thermal runaway, leading to intense fires that are difficult to extinguish. The risk is compounded by the emission of flammable gases during thermal runaway that can result in explosions if ignited.

Van Niekerk stresses the importance of adequate safety measures, recommending the construction of two-hour fire-rated rooms to house lithium-ion batteries. Proper ventilation and gas detection systems are essential to manage the off-gassing phenomenon associated with these batteries. In addition, fire dampers are recommended to contain potential fires within designated areas, minimising the risk of it spreading to larger structures.

While large-scale energy storage systems, such as those installed by electricity utilities, may adopt different risk management strategies, van Niekerk underscores the importance of considering safety precautions in all installations. “The risks associated with improperly installed solar panels and batteries are significant in residential settings where DIY installations are common,” he cautions.

In light of these concerns, ASP Fire stresses the need to consult a professional for the design, installation and certification of renewable energy systems. Proper integration and monitoring of components, along with adherence to safety standards, significantly reduce the risk of fire incidents.

The growing interest in renewable energy solutions has prompted ASP Fire to collaborate with solar panel engineering firms, offering its expertise in fire safety design. “At a recent project in Sea Point, Cape Town, improper installation of batteries in a block of flats raised serious safety concerns. Our intervention as a fire safety professional helped rectify the situation, stressing the importance of seeking expert advice,” concludes van Niekerk.

***Ends***

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**Notes to the Editor**  
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**About ASP Fire**  
ASP Fire operates across the entire African continent from its Gauteng base, providing professional, accredited fire risk management and support to its clients. ASP Fire designs, installs, and maintains a full range of fire detection and suppression equipment suited to clients’ needs. ASP Fire provides a holistic, proactive, and preventative fire solution based on integrated fire risk assessment, training, and consulting, with the installation and maintenance of fire detection and suppression systems that meet SABS, NFPA, FPASA, and SAQCC standards.

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