

# Firefighters on alert as improper use of alternative power sources, shortcuts increase fire breakouts

Marvin Charles and Nicole McCain

**The City of Cape Town has warned of the risks of taking shortcuts with alternative power solutions.**

- **Residents and businesses looking for alternative power sources should not take shortcuts, the City of Cape Town has warned.**
- **The City's fire and rescue service has been alerted to a number of incidents involving alternative power sources.**
- **Experts say solar panels could pose a fire risk.**

---

As residents and businesses look to alternative power sources to ease the burden of load shedding, the City of Cape Town has warned of the risks of taking shortcuts and the improper use of devices.

The City said there had been a sharp increase in the use of alternative power sources, to the extent that its fire and rescue service has had to revisit its incident management playbook. Authorities recently had to attend to a call in Parow where four people were overcome by fumes from a generator. One of the people subsequently died.

A gas explosion at a home in Hout Bay, caused by the gas source not being switched off, resulted in an occupant sustaining burn wounds, while solar panels on the roof of a factory caused the wires to arc, resulting in a fire. Firefighters had to wait for technicians to isolate the panels before they could extinguish the fire. The City's mayoral committee member for safety and security, JP Smith, said: "The handful of incidents we have on file is more than enough evidence that we all need to be incredibly cautious and vigilant about how we use and store

these energy devices. Ventilation is a key consideration because of the risk of noxious gases from the use of petrol or diesel, but there is also the very real risk of devices overheating and catching fire."

Smith said that in the event of a fire, new-age batteries required very specific firefighting methods, so households and businesses had to ensure they had the correct fire extinguishers on hand.

"Our fire and rescue service is also having to factor these developments into their incident management plans because fighting a fire caused by conventional means is one thing – a fire caused by a generator or lithium-ion batteries or a building with a solar installation is quite another," he said.

On Sunday, a fire broke out at the Vodacom Western Cape headquarters in Century City.

According to fire and rescue spokesperson Jermaine Carelse, firefighters were alerted that the solar panels on the roof of the building were alight at around 11:00.

Images and videos of the building on fire have flooded social media, with passersby and motorists posting footage showing flames rising from the building.

The Vodacom offices are near the popular Canal Walk shopping mall.

Vodacom spokesperson Byron Kennedy told News24 that the cause of the fire would be investigated.

Expert in fire safety and professor in structural and fire engineering at Stellenbosch University, Professor Richard Walls, said solar panels posed a potential fire risk.

Walls said the number of local solar-related fire incidents was relatively low, but with South Africans installing solar "at a rate of knots" to escape load shedding, this number was likely to increase.

Solar installations should be promoted, but installed properly to keep everyone safe, he said.

He said:

Solar panels are electrical producers and come with a fire risk like any other electrical installation. There could be short circuits, faults, hotspots on the panels, battery ignitions [thermal runaway], or a fire ignited by something else and spread to the panels. There will definitely be more fires caused by solar installations, but it's difficult to say how many there could be. It comes down to quality control.

Walls added that fires caused by rooftop solar panels can be difficult to extinguish, as the fire often forms between the panel and the roof.

"There's just enough fuel to keep it going, and it can spread from one side of the roof to the other very quickly. There is also the issue of access for firefighters, especially if the whole roof is covered in solar panels," said Walls.

Care should also be taken when water is applied, as the panels continue to produce power even when disconnected.

The same is true for lithium-ion batteries which can hold a charge or reignite days after being suppressed.

Incorrect installations by inexperienced installers or contractors taking shortcuts increase the risk of fire, cautioned Walls.

Poor-quality lithium-ion batteries were also dangerous and could even lead to explosions or release toxic fumes, he said.

South African Photovoltaic Industry Association (SAPVIA) spokesperson Maloba G Tshehla said they supported the use of alternative, clean energy sources, both as contributions by residents and businesses, to reducing load shedding as well as to reducing emissions as a country.

"In promoting the use of Solar PV specifically, we have always maintained the need for professional, safe and compliant installations. We, therefore, fully support the City's request that end users ensure that installers of their systems are duly qualified. To this end, we have driven the adoption of the PV Greencard programme, which aims to develop appropriately trained and qualified installers within businesses offering solar PV solutions," he said.

Tshehla said the SAPVIA encouraged all end users and installers to ensure that systems complied with individual municipal requirements.