

21
June
2023

WSH ALERT

FATAL ACCIDENT

Worker electrocuted during solar panel installation

On 12 June 2023, a group of workers was deployed to install solar panels on the rooftop of a building. During the installation, one of the workers noticed an exposed cable arcing and emitting smoke. He got electrocuted after coming into contact with the exposed cable.

He was sent to the hospital and died on the same day.

Preliminary investigations revealed that the cable was lying on the roof, which was wet due to rain before the incident.



Incident solar panel

Figure 1: Scene of the accident.

What companies should do

Electrocution is a major concern during the installation of solar panels. Solar panels generate live current when exposed to sunlight, even when they are not plugged in. The following measures should be taken to protect workers:

- **Connect solar panels as per design:** Ensure that the wiring of solar panels are connected in accordance to a design by a Licensed Electrical Worker.
- **Insulate exposed electrical parts:** Exposed cables or connectors that are not connected should have an insulated cap covering wire ends/terminals. Do not touch the terminals and use only insulated tools.
- **Isolate and report damaged equipment:** Identify and isolate any damaged wiring, connectors, or faulty equipment in the work area where possible, and report to the supervisor promptly.
- **Environmental conditions:** Stop electrical work during unfavourable weather, e.g. when there is heavy rain or when the work area is wet.
- **Trained workers:** Ensure that only trained and competent workers are allowed to carry out solar panel installation works. They should be familiar with safe work procedures and risk control measures to protect them and their co-workers from risks such as electrocution.
- **Personal protective equipment (PPE):** Equip workers with electrically resistant PPE such as arc-rated protective gloves and rubber-soled shoes.

Falls from height are also a risk when installing solar panels. While this case did not involve any falls, solar installers and contractors are reminded to establish and implement a site-specific fall prevention plan to eliminate or mitigate the risk of falling from height.

For more information, refer to the WSH Council's article on [Addressing WSH Risks for Safe Installation of Solar Photovoltaic \(PV\) Systems](#) and Energy Market Authority's [Guide to Solar PV](#).

Under the WSH Act, first-time corporate offenders may be sentenced to the maximum fine of \$500,000 whilst individuals can either be sentenced to the maximum fine of \$200,000 and/or an imprisonment not exceeding 2 years. Read more on the [WSH Act penalties](#).

Information on the accident is based on preliminary investigations by the Ministry of Manpower as at 19 June 2023. This may be subject to change as investigations are still on-going. Please also note that the recommendations provided here are not exhaustive and they are meant to enhance workplace safety and health so that a recurrence may be prevented. The information and recommendations provided are not to be construed as implying liability on any party nor should it be taken to encapsulate all the responsibilities and obligations under the law.

Share this WSH Bulletin



Connect with Us


Resources
to improve your
WSH Practices

Events
on Workplace
Safety and Health


We regret that we are unable to reply to emails at this email address. For enquiries or feedback, please email us at contact@wshc.sg. Visit the WSH Council's [website](#) now for updates on WSH-related matters, information and events.

**REPORTING
SAVES LIVES.**
taketimetotakecare.sg


This WSH Bulletin is available free of charge, may be printed or downloaded onto electronic, optical or similar storage media provided that such activities are for private research, study, or in-house use only. If such material is to be copied or reproduced, users are asked to ensure that the material is reproduced accurately and not in a misleading context, that the status of the material is identified and to acknowledge Workplace Safety & Healthy Council, Singapore as the source of the material.