

Solar Installation SWMS Cheatsheet

All 20 hazards & controls for rooftop and ground-mount solar pv installation, dc/ac cabling and battery storage.

1. Falls from height while working on the roof during panel and racking installation

- Harness and anchor point used for work above 2 metres
- EWP or scaffold used for roof access, not ladders alone
- Edge protection installed where practical before elevated work begins
- No work on wet or unstable roof sheeting

2. Contact with energised DC electrical parts (arc flash or shock)

- Panels covered or shaded during work where practical to reduce live voltage
- DC isolators used and tested before touching cabling
- Insulated tools used for all DC work
- Work performed only by a licensed and accredited solar installer

3. Contact with energised AC electrical parts at the switchboard

- Isolate and lock out/tag out supply before work starts
- Test before touch on every circuit, every time
- Arc-rated PPE worn for switchboard work

4. Manual handling injury from lifting and positioning solar panels

- Team lift used for all panel lifting and positioning
- Mechanical aid (hoist or conveyor) used where roof pitch and access allow
- Correct manual handling technique briefed at toolbox talk

5. Falling objects and struck-by incidents below roof work

- Exclusion zone maintained below all elevated panel and racking work
- Tools tethered or lanyarded when working at height
- Toe boards fitted to scaffold and elevated platforms

7. Fire from DC arc faults caused by poor or damaged connections

- MC4 connectors correctly matched and torque-checked, not just eyeballed
- Cable runs protected from abrasion, pinch points and UV degradation
- DC isolators correctly rated for the array voltage and current
- Connections visually inspected, and thermal-checked where available, before energising

9. Electric shock from working on wet panels or a wet roof

- No work on wet panels or roof surfaces
- RCD protection confirmed before use of test equipment
- Work stopped and postponed in wet weather

6. Roof collapse or structural failure from additional panel and racking load

- Roof structure assessed for load capacity before fixing racking
- Engineer sign-off obtained for non-standard roofs or heavy battery/inverter mounting
- Panel load distributed across the roof per the racking design

8. Contact with asbestos in older roof sheeting during racking penetration

- Suspect material identified and left undisturbed until tested
- Licensed asbestos removalist engaged if asbestos is confirmed
- Work stopped and area isolated if suspect material is found

10. Struck by mobile plant or delivery vehicles during panel and battery delivery

- Exclusion zone maintained around unloading and staging areas
- Spotter used for reversing delivery vehicles
- Site traffic management plan followed

11. Heat stress and UV exposure working on exposed roofs in summer

- Hydration breaks scheduled during hot conditions
- Work rescheduled to cooler parts of the day where practical
- Sun-protective clothing, hat and sunscreen worn
- Shade provided for breaks

13. Thermal runaway, chemical burns or fire during battery storage system installation

- Battery installed to manufacturer specification and ventilation requirements
- Battery handled and connected per manufacturer procedure
- Fire extinguisher rated for lithium battery fires available on site

15. Cuts and lacerations from sharp panel edges and racking components

- Gloves worn when handling panels and racking
- Panel and racking edges checked before handling
- Offcuts and sharp fixings cleared from the work area

12. Falls through fragile roofing materials such as skylights or deteriorated sheeting

- Fragile areas identified and marked before work starts
- Crawl boards or mesh used to distribute load over fragile sections
- No stepping directly on skylights or roof lights

14. Wind loading on large panel surfaces during lifting and placement

- Work stopped in high wind conditions per manufacturer or engineer limits
- Panels secured immediately after positioning, not left loose
- Additional restraint used for panels in exposed or elevated locations

16. Noise exposure from drills and power tools during racking installation

- Hearing protection worn for all high-noise tools
- Task rotation used to limit individual exposure duration

17. Trip hazards from cables, tools and racking components on the roof

- Cables routed and secured away from walkways
- Work area kept clear of tools and offcuts throughout the day
- Site cleaned up at the end of each shift

19. Contact with overhead powerlines during EWP, scaffold or panel delivery near the roofline

- Overhead clearance checked before EWP or scaffold is erected
- Spotter used when working near powerlines
- No-go zone agreed with the energy authority for work near high-voltage lines

18. Working alone on isolated residential roof jobs

- Check-in procedure maintained with the office or supervisor
- Mobile phone carried and charged at all times
- Lone work avoided for roof access or isolation tasks

20. Damage to existing underground services during ground-mount array trenching

- Dial Before You Dig search completed before excavation
- Hand digging used within the exclusion zone of marked services
- Service locator used to confirm cable and pipe routes

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