

Technical solution sheet 5

Safe work practices using elevating work platforms



What are elevating work platforms?

Elevating work platforms (EWPs) are mobile mechanical plant designed to lift or lower people, tools, and equipment by a telescopic, hinged or articulated system from a base support to and from an elevated position.

An EWP is a passive fall prevention device within the hierarchy of control. This means that if it is practicable to do so an employer must consider the use of an EWP if elimination of a fall risk is not reasonably practicable.

This is part of a series developed with WorkSafe to help installers in our programs work safely in the solar industry.

Use this sheet and others in this series to plan safe systems of work while installing photovoltaic systems.

In series 1:

- 1.1 Working safely at height during solar installations
- 1.2 Edge protection – Working at height
- 1.3 Manual handling of solar panels, heavy and bulky items
- 1.4 Working safely with ladders
- 1.5 Safe work practices using elevating work platforms (this sheet)**
- 1.6 Falls through skylights, fragile roofs, voids and penetrations
- 1.7 Working near asbestos-containing material

See:
solar.vic.gov.au/safety-and-quality



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Commonly used EWP in the electrical industry are boom lifts and scissor lifts and these types of plant must be operated by a trained, competent operator. Proof of competency must be demonstrated and is best achieved through accredited industry training which should cover topics such as:

- » legal requirements
- » hazard identification and management
- » prestart and logbook inspections
- » correct use of harnesses
- » working near overhead conductors
- » emergency retrieval
- » emergency rescue plans.

For a boom type EWP with a boom length greater than 11 metres, a high-risk work license (WP class) is required to be held by the operator.

See the WorkSafe website for more information on working with EWPs: [worksafe.vic.gov.au/resources/elevating-work-platforms-industry-standard](https://www.worksafe.vic.gov.au/resources/elevating-work-platforms-industry-standard)

Solar panels are large and unwieldy and must be handled with care, not just to protect the panels, but also employees undertaking the installations.

For Photovoltaic (PV) system installations in residential or business premises, EWPs may be a suitable way of conveying solar panels onto a roof thus reducing the risks associated with hazardous manual handling tasks and reducing exposure to fall risks.

Note: The carrying of solar panels by employees up ladders is not a safe system of work and should not be conducted.

Follow this four-step risk management process to ensure hazards are identified, risks are assessed and controlled, and that employers fulfil their duty to monitor, review and revise controls when required:

Figure 1: The four-step risk management process.



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Step 1: Identify hazards – common EWP hazards

There are numerous hazards associated with EWP use that can pose a risk to the health and safety of employees and the public. Use of EWPs during installations of PV systems on residential and business premises requires effective hazard identification taking into account the unique features of each EWP type.

Common hazards related to the use of EWPs during PV system installations can include:

- » uneven or unstable ground
- » concealed voids, basements or pits
- » working at heights
- » crushing injuries
- » overhead conductors, structures and vegetation
- » traffic and pedestrians
- » wind loading and the added sail effect of solar panels on the platform
- » mechanical failure of the machine
- » transport, unloading and manoeuvring.

For more information and practical guidance for duty holders about complying with their duties under the *Occupational Health and Safety (OHS) Act 2004* see 'Plant compliance code' on the WorkSafe website: [worksafe.vic.gov.au/resources/compliance-code-plant](https://www.worksafe.vic.gov.au/resources/compliance-code-plant)

Step 2: Assess risks – plan your use of EWPs

Plan your use of EWPs and assess the risks based on identified hazards.

Take into account the likelihood, nature and severity of consequences and document your systems of work in a safe work method statement (SWMS) when required.

Additional factors to take into consideration may include:

- » no go zones
- » side force limitations
- » wind speed and prevailing weather conditions
- » weight of operators, tools and materials in relation to the rated capacity of the EWP
- » plant to be operated in accordance with manufacturers recommendations.

See the WorkSafe website for more information on when and how to complete a SWMS for construction activities: [worksafe.vic.gov.au/resources/safe-work-method-statements-swms](https://www.worksafe.vic.gov.au/resources/safe-work-method-statements-swms)

*Image captions 1-5:
A range of activities supporting solar panel handling and access with EWPs*



Step 3: Control risks – safe use of elevating work platforms

Employers must eliminate any risk associated with the use of an EWP, so far as is reasonably practicable. Where this cannot be achieved the hierarchy of control must be used to reduce risks, so far as is reasonably practicable.

Ensure the selection of the EWP is the right type for the specific task and determine if any attachments are required to complete the task. Some work practices to be avoided while using EWPs are:

- » travelling with a raised platform
- » exceeding the safe working load (SWL) of the EWP platform
- » using indoor rated EWPs outdoors
- » working over footpaths, work areas or publicly accessible areas without adequate controls
- » working above or beneath other EWPs
- » allowing excessive material, debris and equipment on the platform
- » placing outrigger footplates on a slope.

Remember that the requirement to consult with employees and independent contractors improves Occupational Health and Safety (OHS) outcomes due to their direct participation in identification of hazards and risks, and evaluation and adoption of new risk control measures and concepts.

Direct participation also gives a sense of ownership that translates to improved uptake of control measures when implemented.

Operating EWPs near overhead assets

The use of EWPs around overhead electrical assets introduces risks that require knowledge of, and compliance with the No Go Zone (NGZ) requirements.

It is critical that EWP operators understand and comply with the NGZ requirements around overhead distribution and transmission assets and understand the various requirements associated with each level of obligation.

In conjunction with the NGZ requirements, the role of electrical spotters, when they are required, and their licencing requirements should be understood. Spotters must:

- » be registered with Energy Safe Victoria
- » hold current first aid and cardiopulmonary resuscitation (CPR) qualifications
- » only spot for plant that they themselves hold competency for, note that a person with a Dogman or Rigger class spotters registration card may act as a spotter for any type of plant
- » only observe operation of one item of plant at any one time
- » not undertake any other task while observing plant operating in the Spotter Zone
- » understand and make allowance for sag and sway of overhead conductors.

There are inherent dangers of overhead conductor contact associated with tracking plant around a site. Maintain awareness at all times to avoid plant strike and understand your obligations to seek permitting with the relevant Distribution Network Service Provider (DNSP) if plant or equipment could encroach into the NGZ.

For more information on No Go Zones see the Energy Safe Victoria website: esv.vic.gov.au/industry-guidance/electrical/electrical-network-infrastructure/working-around-powerlines

To find out more about electrical spotters see the Energy Safe website: esv.vic.gov.au/licensing/electrical-licences/licence-types/spotters-registration

For more information on working with powered mobile plant near overhead assets see the WorkSafe website: worksafe.vic.gov.au/resources/using-powered-mobile-plant-near-overhead-assets-guidebook

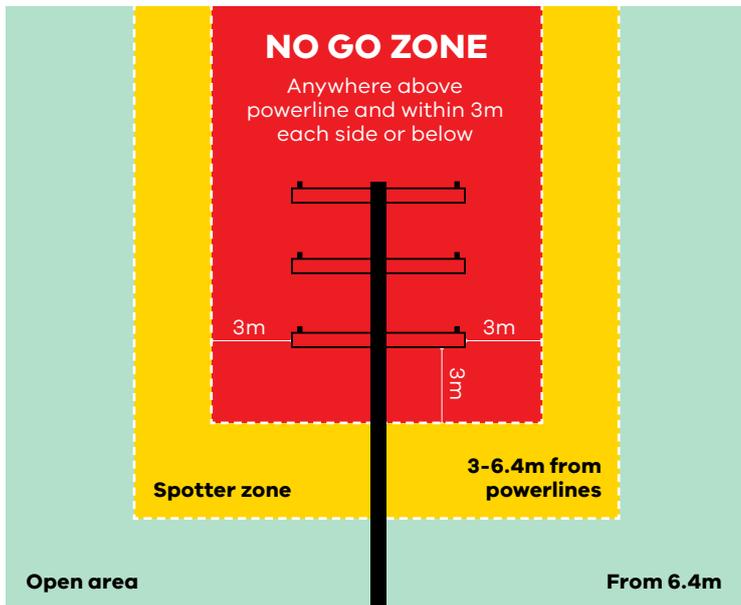


Figure 2: NGZ around distribution poles

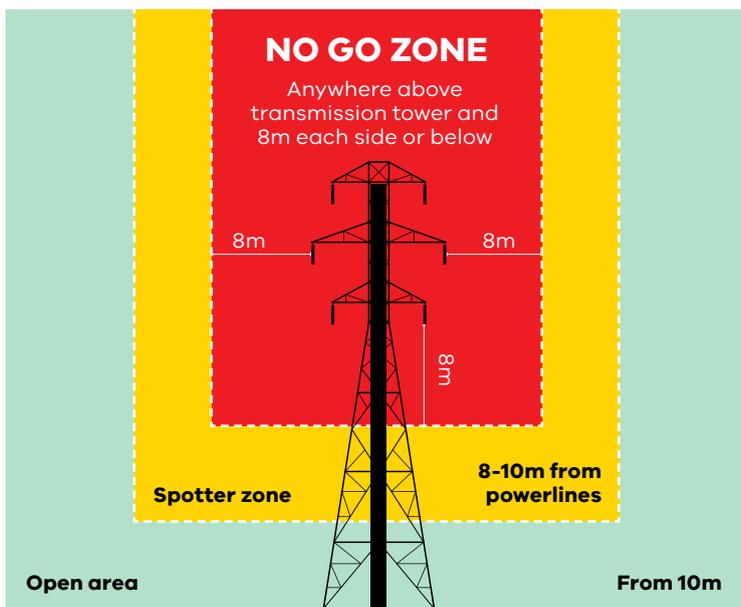


Figure 3: NGZ around transmission towers

Step 4: Review and revise controls

Managing the risk of working with EWP is an ongoing process. Under regulation 121 of the Occupational Health and Safety Regulations 2017 (OHS Regulations) employers have a duty to monitor, review and, if necessary, revise control measures or any associated systems of work:

- » before the plant is deployed at a workplace
- » prior to making any alteration to the plant or its associated systems of work, including a change in location
- » if new or additional information about hazards or risks relating to the plant or its associated systems of work become available
- » after any notifiable incident
- » if, for any reason, the risk control measures do not adequately control the risks
- » at the request of a Health and Safety Representative (HSR).

Your actions shouldn't stop at Step 4. You should repeat this process often to make sure your management of risk is working.

Important resources

- » See the WorkSafe website for the industry standard on working with EWPs: worksafe.vic.gov.au/resources/elevating-work-platforms-industry-standard
- » Elevating Work Platform Association (EWPA) website: ewpa.com.au (accreditation and associated training and resources)
- » Working safely when installing photovoltaic systems on the Energy Safe Victoria website: esv.vic.gov.au/media-centre/news/working-safely-when-installing-photovoltaic-pv-systems
- » Occupational Health and Safety Regulations 2017: legislation.vic.gov.au/in-force/statutory-rules/occupational-health-and-safety-regulations-2017

Australian Standards:

- » AS 2550.10:2006 *Cranes, hoists and winches – Safe use, Part 10: Mobile elevating work platforms*

Any questions?

Call WorkSafe on 1800 136 089 or email info@worksafe.vic.gov.au

worksafe.vic.gov.au

For more information about Solar Victoria's commitment to safety and quality, including training and workforce development, see: solar.vic.gov.au/industry

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