

Terminal Stations

This document provides information for landholders and communities about the proposed terminal station works for the Western Renewables Link, including a new terminal station near the existing Bulgana Terminal Station and a connection to the Sydenham Terminal Station.

What is a terminal station?

Terminal stations play an important role in delivering a secure and reliable electricity supply. There are more than 60 terminal stations across Victoria, which control the flow and voltage of electricity between generation, transmission and distribution to homes and businesses.

What does a terminal station look like?

Terminal stations vary in size depending on the equipment they are hosting. The highest structures within a terminal station are the gantries (landing structures for transmission lines), which are typically 30m high for 500kV infrastructure. Other infrastructure within a terminal station is typically 8 to 10m high.

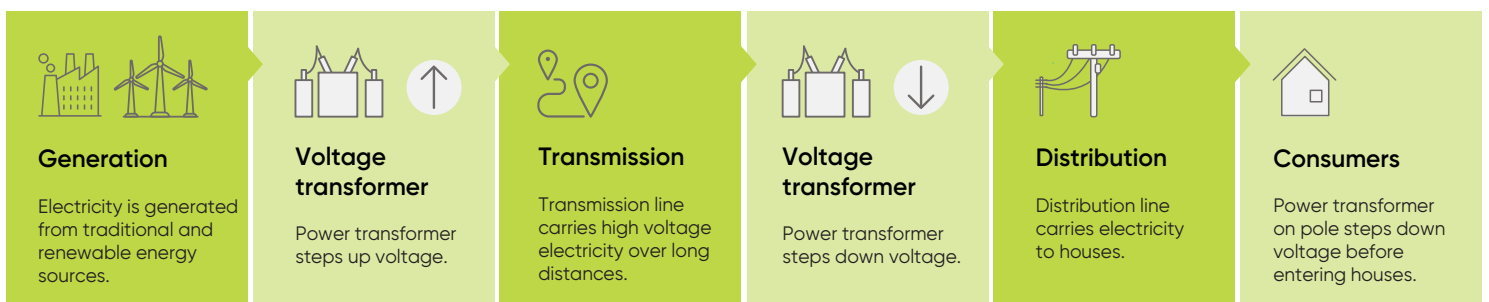
Typically, a terminal station is surrounded by a chain wire mesh fence, with a locked access gate, thermal cameras and remote-controlled floodlights for security. Landscaping may also be added around the perimeter.



There are more than 60 terminal stations across Victoria.



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Transformers play an important role at terminal stations.

Health and safety

Terminal stations contain high voltage electrical equipment and live electricity, which is why they are secured within a locked fence and are monitored by security devices to keep people safe and ensure this critical infrastructure is protected from damage.

While terminal stations can be sources of electric and magnetic fields and electromagnetic interference, they are designed to ensure electric and magnetic field levels are below the international standard reference levels when operating.

Terminal stations typically use air-insulated switchgear (AIS), some of which will contain SF₆ gas (sulfur hexafluoride, a heat-resistant gas contained inside the switchgear as an insulator), and some mineral oil-filled equipment such as high voltage power transformers and reactors, along with a diesel generator for back-up support. The terminal stations will have built-in control measures to manage and contain any oil leak or spill that may occur in the unlikely event of equipment failure. Regular inspections are conducted to check the overall condition of terminal station assets and systems.

Noise

Power transformers and reactors are the main sources of noise at a terminal station. Other equipment, such as air conditioners for the buildings, generate some noise. Terminal stations are designed to operate at or below the regulated noise limits.

Light

During operation, lighting at night will operate at low levels for security purposes. Lighting is carefully designed to minimise impacts on surrounding landholders and communities. Terminal stations will only be fully illuminated if emergency maintenance is required at night, or if there is a security concern.

Proposed new terminal station near Bulgana

A new 500kV terminal station is proposed to the north-east of the existing Bulgana Terminal Station. The terminal stations will be connected by a 220kV double circuit transmission line. The proposed 500kV transmission line will start from the new terminal station and run to the Sydenham Terminal Station.

The new terminal station site will be approximately 500 x 700 metres, however there may be changes depending on the layout and orientation of the final terminal station design.

The name for the new terminal station has not yet been confirmed.

Sydenham Terminal Station Rebuild

The Sydenham Terminal Station Rebuild will be managed as a separate project to the Western Renewables Link. The Western Renewables Link will connect into the rebuilt Sydenham Terminal Station and these connection works will be included in the Western Renewables Link Environment Effects Statement.

Other upgrade works

Minor upgrade works will also be completed as required at other terminal stations as part of the Western Renewables Link project.



[The Electricity Network – transmission and distribution fact sheet](#)

[Transmission Towers and Conductors Fact Sheet](#)

[Transmission line construction](#)

More information

Visit the project website westernrenewableslink.com.au for the latest project information.

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