AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Western Victorian Renewable Integration

December 2018

Project Update

A status update on the Western Victorian Renewable Integration Regulatory Investment Test for Transmission (RIT-T)

Western Victoria Renewable Integration Project Update: December 2018

Project Background

The Australian Energy Market Operator (AEMO) is the independent, not-for-profit organisation responsible for managing and maintaining energy security for all Australians.

AEMO is currently working on a project to find the best way to improve the electricity transmission network in Western Victoria as it will soon reach its limit. This work is one part of a comprehensive regulatory process that ensures consumers do not pay more than necessary for electricity.

The transmission network is the infrastructure (wires and towers) that carries high voltage electricity around the state (the most efficient way to transport energy over long distances), connecting power stations with electricity consumers. On current trends, the network in Western Victoria will soon reach its capacity (the amount of power that can be carried). Without proper planning and timely investment in the network, the costs of this inefficiency will result in higher electricity prices for consumers.

In December 2018, AEMO published a report that assessed various options and identified what we believe is the most cost-effective solution (see below for details).

AEMO has commenced stakeholder engagement on its preferred solution and is now seeking feedback from the Western Victoria community and local Councils and other interested parties.

Project benefits – local and state-wide

This project will drive market competition as it allows more electricity to be generated and transported and widens the mix of generation types. This increase in competition is good for Victorians as it puts downward pressure on electricity prices

The project will also facilitate the establishment of major renewable hubs for wind and solar energy in the region, by strengthening transmission corridors to transport large quantities of renewable energy to all Victorian consumers cost-effectively.

This will have spin-off benefits for communities in Western Victoria as it will stimulate employment, economic, training and broader regional development opportunities - leveraging their rich local natural resources.

AEMO's plan for Western Victoria's transmission network

***For detailed information, see the full Project Assessment Draft Report here and its predecessor the Project Specification Consultation Report here.*

The most cost-effective, technically feasible option ('the preferred option' see Figure 1), was found to be a combination of minor upgrades and major transmission works. These will increase the capacity of the region's transmission network thereby reducing network congestion, allowing generators to participate more fully in the energy market, expanding the energy supply mix and increasing competition to the benefit of consumers.

Our proposal is staged over several years :

Short term: Present to 2021 - Minor upgrades to 220 kilovolt (kV) transmission lines:

- Red Cliffs to Wemen to Kerang to Bendigo, and
- Moorabool to Terang to Ballarat.

Medium term: 2021 to 2025 - Major transmission works including:

- By 2024: A new 100+ kilometre (km) 220 kV double circuit transmission line from Ballarat to Bulgana Terminal Station. This will require a new easement corridor, with the exact route of the line, and the number and size of support structures to be determined at later project stages.
- By 2025: A new 70+ km 500 kV double circuit transmission line from Ballarat to Sydenham Terminal Station. This will require a new easement corridor and a new terminal station. The exact route of the line, location of the terminal station and the number and size of support structures will be determined at later project stages.

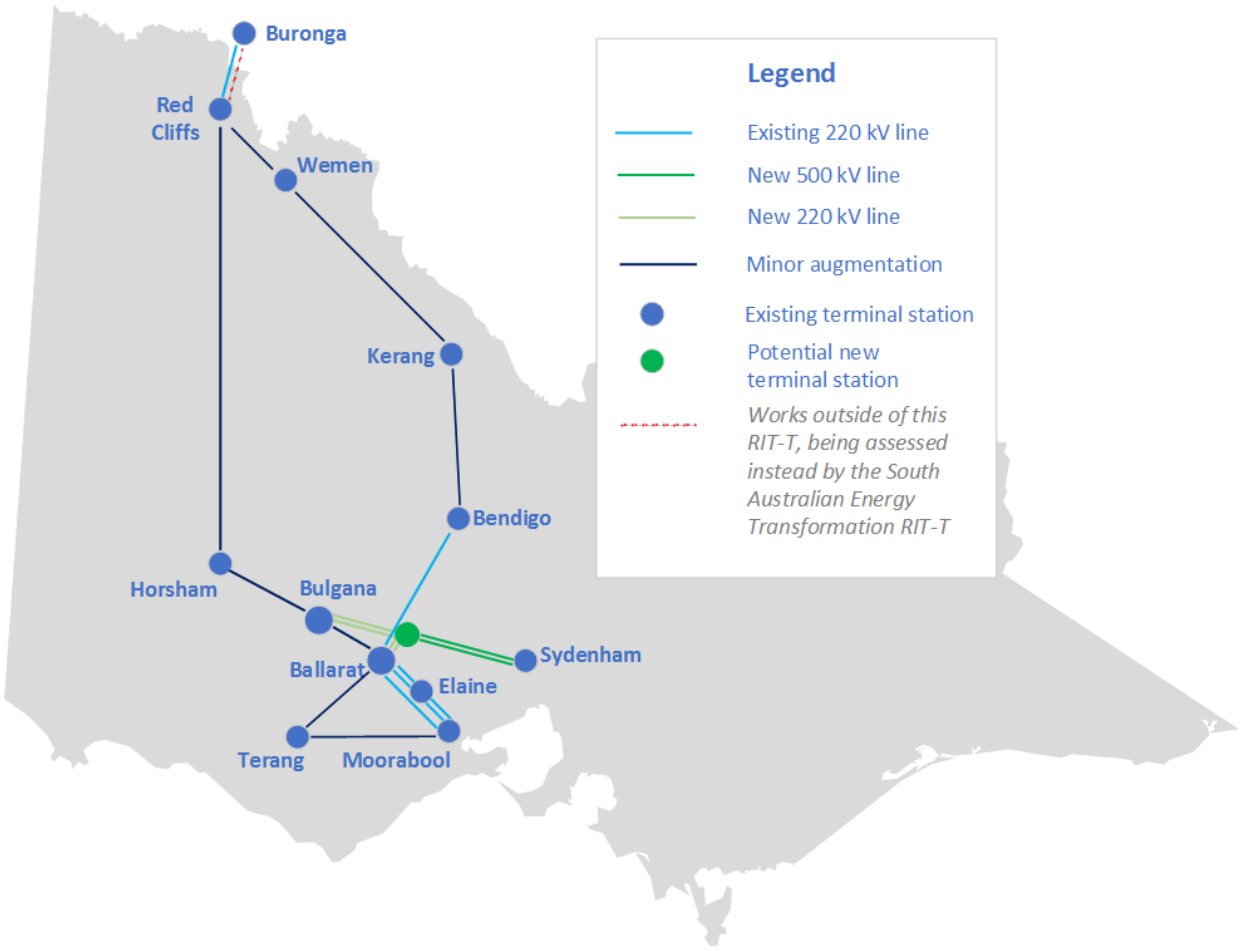

Figure 1: **The preferred option**: please note that the new transmission lines and terminal station locations are illustrative only and subject to change.

About transmission lines and towers

The most efficient way to transport electricity over long distances is via high voltage overhead transmission lines. In Victoria, most transmission lines carry voltages of 220 or 500 kV and are supported by steel lattice towers.

About terminal stations

Electricity is delivered to terminal stations to either change the voltage level of the power or to provide a switching point for several transmission lines. Terminal stations act as hubs to deliver electricity to local distribution networks, and eventually, customers.

About easements

Easements allow for the construction, operation, maintenance, modification and inspection of transmission infrastructure. Where easements are required, landowners will be compensated.

About AEMO

AEMO is the independent power system and market operator, with primary responsibility for managing energy system security for all Australians.

We are responsible for operating Australia's largest gas and electricity markets and power systems, including the National Electricity Market and interconnected power system in Australia's eastern and south-eastern seaboard.

AEMO is also responsible for planning and directing improvements on the shared Victorian electricity transmission network to ensure that the network continues to meet power system security needs and delivers safe and reliable electricity to consumers, at the least cost.

AEMO is a not-for-profit entity owned by governments (60 per cent) and industry members (40 per cent). AEMO operates on a cost recovery basis and fully recovers its operating costs through fees paid by participants.

While AEMO is responsible for planning the transmission network in Victoria, we do not own energy transmission infrastructure. Should the transmission works outlined in this document be justified through the regulatory process, AEMO will conduct a tender process to find the right industry partners to be responsible for the planning, design, construction, ownership and operation of any new transmission infrastructure.

Next steps – we welcome your feedback

For more detailed information on the project and AEMO's preferred option to improve transmission capacity in Western Victoria, view or download the Project Assessment Draft Report (PADR) here.

We welcome feedback on the preferred option detailed in our PADR and submissions are open until 28 February 2019 via WestVicRITT@aemo.com.au.

After consideration of this feedback, AEMO will publish a final recommended option for implementation, which is expected to be available from mid-2019.

Whilst this formal regulatory process is currently in train with specific timings, AEMO seeks to engage with the communities involved and encourages feedback throughout this entire project. We encourage you to participate in the planned engagement activities and to contact us at any stage.

For more information on the regulatory process to improve the electricity transmission network in Western Victoria, including community consultation activities, head to our webpage.
http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Victorian-transmission-network-service-provider-role/RITT .

For more information, head to http://aemo.com.au/ or follow us here -