UNCERTAINTY FRAMEWORK

DISTRIBUTION RENEWABLE ENERGY ZONES

PAL RRP ATT 7.01– PUBLIC

2026–31 REVISED PROPOSAL

Table of contents

1. Overview

The Victorian Government has committed to achieving net-zero greenhouse gas emissions by 2050. Meeting this target requires a rapid and coordinated transformation of the Victorian electricity system, with new generation needed quickly at the lowest cost possible.

The 2025 Victorian Transmission Plan (VTP) responds to this challenge by proposing an approach centred around transmission-based Renewable Energy Zones (REZs) and associated transmission augmentation. While this investment in transmission infrastructure is necessary, the VTP's focus on transmission alone does not consider a full assessment of complementary solutions.

Investing in sub-transmission[1] network infrastructure on the distribution networks within or around a REZ can offer a complementary and valuable pathway alongside the traditional transmission-based REZ approach. It can provide targeted, cost-effective investments that improve local reliability and deliver broader benefits to regional communities hosting renewable infrastructure. Further, generation and storage hosted on the distribution network offers lower-cost lower-risk alternatives.

To supplement the transmission REZ work defined in the VTP, we have undertaken our own analysis to define several distribution renewable energy zone (DREZ) project concept options that we consider offer additional renewable capacity, while delivering additional benefits to the regional community.

Our preferred combination of DREZ projects is outlined in table 1.

We propose our DREZ projects be treated as a contingent project. This is because our projects will form part of consultation on the 2027 VTP and have the benefit of further consultation with both VicGrid and the Department of Energy, Environment and Climate Action (DEECA).

TABLE 1 SUMMARY OF PREFERRED OPTION ($M, JUNE 2026)

PROJECT	DESCRIPTION	FY27	FY28	FY29	FY30	FY31	TOTAL
Option 3	Selected sub-transmission projects		132.0	318.0	234.0	192.0	876.0

[1] Sub-transmission assets in distribution networks operate at nominal voltages between 33kV and <220kV, with a small amount of 22kV sub-transmission. While the standard sub-transmission voltage in Victoria is 66kV that is only due to lower capacity needs in regulated networks and many other national and internation jurisdictions use sub-transmission at 132kV. Transmission networks operate at nominal voltages at or above 220kV.

2. Background

New generation and storage capacity will be needed in the coming decades to manage the transition from carbon emitting generation and growing customer electrification of heating and transport. Victoria has some of the best renewable energy resources in the world, however locations with the highest potential have limited network capacity. As identified in the Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP),[2] developing renewable energy zones (REZs) to leverage these resources in a coordinated manner will be critical to facilitating new generation, at least cost to customers.

2.1 The role of distribution networks in renewable energy zones

We have continued to receive renewable generation and storage connection requests, where the generation proposed often exceeds the network capacity available. There is an opportunity to meet customer needs by matching these new loads and generation.

Today, on our distribution network, we have 3.2GW of renewable generation connected with 1.6GW of that being large scale renewables and with 982MW of enquiries and 230MW of applications from new large scale renewable projects.

In addition, in the 2026-31 regulatory period:

- the capacity of rooftop solar systems installed at our residential customers' premises is forecast to double, from 1.1GW to 2.4GW by the end of 2031
- the proportion of our customers with electric vehicles is forecast to increase to 23 per cent, up from less than 2 per cent (as of January 2025)
- electricity consumption within our network area is forecast to grow by 35 per cent due to end-use electrification and growth in connected load (e.g. data centres).

The Victorian REZs do not need to only rely upon transmission network augmentation to deliver the required capacity. We believe the energy transition should rely on a combination of transmission, sub-transmission and distribution assets to maximise utilisation of National Electricity Market (NEM) infrastructure and to deliver the greatest returns to customers and Victorian community in general.

Case study: Illawarra urban renewable energy zone

In 2023, Illawarra became the first declared REZ in Australia and is expected to eventually host up to 1GW of connected generation and enable the renewable energy generated to be consumed in the same region. To aid the decarbonisation of existing industry in the region, the Illawarra REZ will rely upon a variety of technologies including residential CER, community batteries and rooftop solar PV on commercial facilities and utility scale projects on government lands.[3]

2.2 Victorian Transmission Plan objectives

The 2025 VTP proposes the boundaries of transmission REZs and the transmission projects required to augment the declared shared network (DSN). VicGrid is responsible for the development of the VTP which outlines the REZs along with forecast generation and transmission network needs for the next 15 years. The 2025 VTP is the first iteration, with an updated VTP programmed to be released in 2027

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[2] AEMO, *2024 Integrated System Plan*, June 2024.
[3] EnergyCo, *Illawarra Renewable Energy Zone*

which will cover DSN development and generation needs for the next 25 years, with subsequent publications every four years.

There is an opportunity for distribution assets to jointly support the objectives of the VTP and National Electricity Objective (NEO), deliver benefits to local communities hosting utility-scale generators, and provide network capacity more cost-effectively than a transmission-only approach. We recognise that the VTP and NEVA have the scope to consider the use of sub-transmission assets as part of the REZ transformation, and our proposed contingent project would be able to meet the required capital expenditure objectives.[4]

The objectives of the VTP, established by the *National Electricity (Victoria) Act 2005* (NEVA), include:

1	2	3
to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity with respect to i. price, quality, safety and reliability and security of supply of electricity and ii. the reliability, safety and security of the national electricity system	the delivery of transmission services consistent with a least-regrets development pathway	the achievement of targets set by Victorian legislation i. for reducing Victoria's greenhouse gas emissions or ii. that are likely to contribute to reducing Victoria's greenhouse gas emissions.

2.2.1 Victorian Access Regime

The Victorian Access Regime (the Regime), expected to come into effect in March 2026, establishes the requirements for new generation and storage projects that proposed connection to the DSN with a REZ. The objective of the Regime is to streamline the connections process for proponents to connect within each REZ. The development of REZ's using sub-transmission access will be subject to the requirements of the Regime.

The Regime levies additional requirements on connections outside a REZ (through grid impact assessments (GIAs)) which need to demonstrate that the proposed project will not result in excessive curtailment of generators connected to the DSN within declared REZ boundaries. Further, GIAs must identify benefits and effective engagement with Traditional Owners, landowners, and community.[5]

It is proposed that the investments included under this contingent project fall under the Regime. We are in discussions with VicGrid and the Department of Energy, Environment and Climate Action (DEECA) to progress the consideration of sub-transmission investments. The outcome of these discussions will not be known for some time however, if successful, will result in their consideration as part of the 2027 VTP.

[4] NER cl 6.5.7(a)
[5] VicGrid, *2025 Victorian Transmission Plan*, August 2025

3. Identified need

There is a need for higher capacity to support customer and community electrification and energy supply. We need to be able to optimally and efficiently meet expected future load as well as satisfy the connection obligations under the NER. This can be addressed by enabling additional renewable generation and storage in distribution networks at the sub-transmission level.

Our proposed project is dependent on a specific event, such as VicGrid including sub-transmission projects in the 2027 VTP. Hence, we propose the investment be treated as a contingent project for the forecast period.

3.1 Meeting future load efficiently

As electricity usage in Victoria is projected to rise by 45 percent, reaching 58 TWh by 2035, there is a growing requirement for additional generation to be made available, generally from parts of Victoria that have not traditionally had generation. High-capacity infrastructure across both the transmission and distribution networks will be required in these new areas to efficiently transport this energy to customers.

A sub-transmission project can deliver the required capacity at lower cost with less impact and more acceptance from local communities, while also improving local network reliability. We believe that sub-transmission lines in the Victorian REZs could enable generation in areas with high renewable resource to connect to the broader transmission network while allowing existing customers to benefit from the new generation in the region. A distribution REZ will benefit customers through lower cost and potentially higher network reliability.

3.1.1 Social licence and time to deploy

Transmission assets face significant challenges in delivery with increasing community resistance to new infrastructure. This is expected to increase given the scale of assets required to implement the Victorian REZs. The development of transmission infrastructure to service the Victorian REZs requires the establishment of new routes and easements with significant lead times (sometimes spanning more than 10 years[6]).

In comparison, the expansion of the distribution network can leverage existing roadside corridors using standard distribution poles presenting a reduced community and environmental impact when compared to transmission towers. The use of distribution poles reduces the land requirement, with lower cultural and community impacts when compared to transmission, while being delivered in a far shorter 1-to-3-year timeframe. Further, a 132kV sub-transmission line can also provide double the capacity available compared to a 66kV, at less than double the cost and with a very similar footprint and visual appearance to the existing distribution network.

Case study: Challenges transmission projects face with social licences

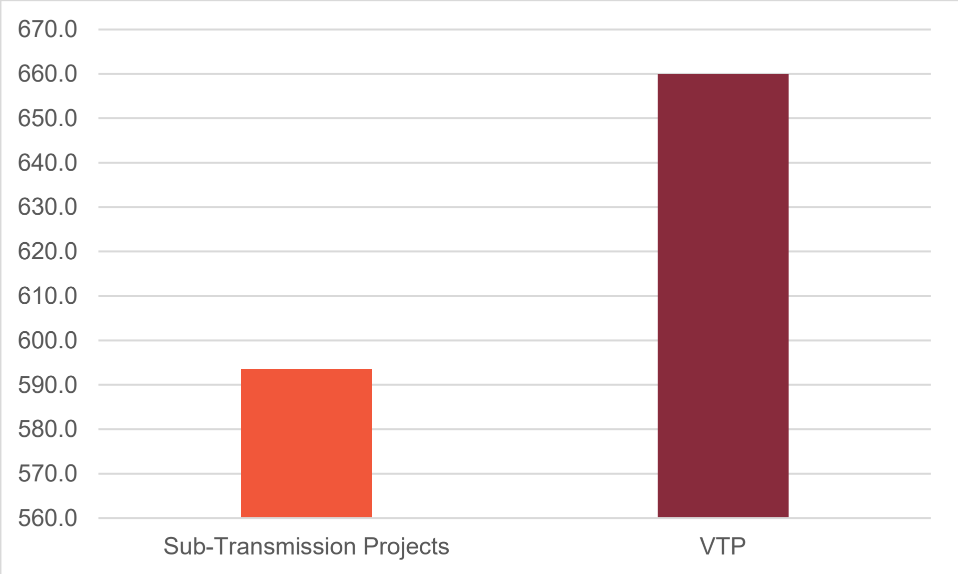
Projects like VNI West, a proposed new high capacity 500 kV double-circuit overhead transmission line, provides an example of the issues with social licence that present a significant challenge for transmission projects in Victoria today. The VNI West project has been subject to multi-year delays to allow additional time to negotiate land access rights, and costs have doubled from initial estimates to over $7B.[7]

[6] Nexa Advisory, *We plan and then don't build*, May 2024
[7] See: AEMO, *2025 Electricity Network Options Report*, August 2025 and VNI West - Victorian section - Infrastructure Pipeline

3.1.2 Cost and utilisation risk

DREZ utilises sub-transmission infrastructure offering a lower cost path to increase hosting and connection capacity. Figure 1 illustrates the average unit cost for the sub-transmission projects we've identified compared to the average unit cost for the strategic forecasts provided in the 2025 VTP. The anticipated savings could translate into material differences in end-user electricity costs, as the VTP forecasts a total requirement for 11.9GW of additional connected generation by 2040.[8]

FIGURE 1: COST OF ADDITIONAL CAPACITY ($M/GW)



Source: VicGrid, Powercor analysis

Therefore, if there is available capacity on the distribution network that could accommodate renewables with at a lower cost, then the cost of transmission augmentation required for REZs may not represent the least cost solution for customers. Further, a 132kV sub-transmission line can also provide double the capacity available compared to a 66kV, at less than double the cost and with a very similar footprint and visual appearance.

Transmission assets carry a greater risk of underutilisation compared to distribution lines given the dynamic nature of the energy transition. A long-term planning horizon is required for transmission that relies on forecast demand for 15-25 years. If demand forecasts prove inaccurate there is a risk of over investment in transmission. Currently, the VTP forecasts to 2040 have a 10.8GW differential between the highest and lowest scenario of required new generation in REZs.[9] The potential impact is higher energy bills for Victorian customers as transmission capacity is built but not utilised to its full capacity. In contrast, sub-transmission assets as part of the distribution network can be deployed more responsively, as demand forecasts become more certain, and at a lower cost to consumers.

3.1.3 Reliability and equity benefits

Our current network configuration across the proposed REZs and the wider regional communities was constructed in around the 1960s. The original design provided a network to supply the initial electrification requirements providing for basic lighting and power needs. The inherent design of that network led to long sub-transmission lines and distribution feeders, resulting in regional customers being more exposed to longer durations off supply in the event of interruptions. By integrating new sub-transmission lines into the existing distribution network in strategic locations (such as identifying

[8] VicGrid, *2025 Victorian Transmission Plan*, August 2025
[9] Calculation is based upon 23.2GW required in Scenario 2 and 12.4GW required in scenario 3

locations where long feeders cover large areas), regional customers can experience the resilience benefits of a more meshed network. Further, today the communities that host renewable generation are limited in their ability to participate in and benefit from CER due to the current network configuration. By integrating new sub-transmission lines into the distribution network in the future, regional customers may be able to benefit further from CER and experience the resilience benefits of a more meshed network.

Upgrades to local distribution infrastructure improves capacity, reliability, resilience and access to renewable energy in the very areas where it is being developed. The use of distribution assets in the REZs enables regional customers to install CER, improves network resilience on lengthy feeder lines, and hosts much needed utility-scale renewable capacity. Further details of the potential benefits to the distribution network are provided in the sub-transmission project summaries in Appendix B.

3.1.4 Stakeholders have told us they support this approach

Our strong community ties mean we are well placed to understand the expectations of regional and rural customers, many of whom are part of communities that will host the renewable energy infrastructure proposed in the VTP.

A core concern raised by our customers is that transmission assets to support REZs provide no additional supply access or tangible improvements for the communities that host the infrastructure. This has led to increasing frustration about the inequity of the current approach.

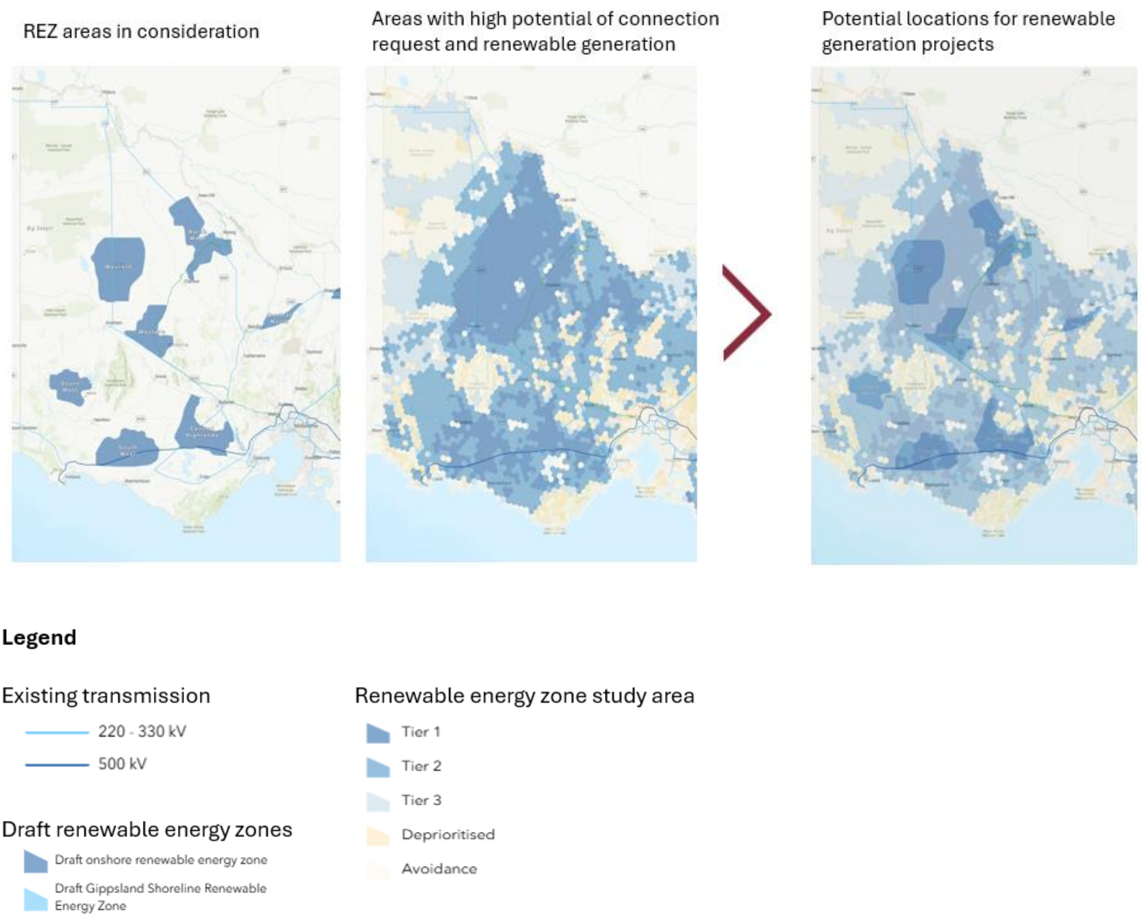
Similar views were expressed by our Customer Advocacy Panel (CAP), where members expressed concerns with the cost of transmission. The CAP strongly endorsed our proposed sub-transmission DREZ plan as an alternative to transmission investment.

3.2 REZ and renewable resource potential

To identify the zones as part of developing the 2025 VTP, VicGrid has run a process of consultation and technical work to identify locations of renewable energy resource in Victoria, categorised by tier levels. Tiers were based on the results of a strategic land use assessment and different levels of opportunities and constraint of each zone. This work, along with the locations where viable renewable generation projects could be installed formed the basis of the renewable energy zones identified in the VTP.

This showed locations near REZs with high potential of connection request and renewable generation which can be optimally addressed by our network. This is important as the areas with high potential for renewable generation are not constrained to defined REZs and can be harnessed if solutions wider than transmission are considered. This as an opportunity to establish sub-transmission assets as well optimise sub-transmission and transmission assets to enable greater access of renewable energy resources which may otherwise not be the case.

FIGURE 2: POTENTIAL LOCATIONS FOR RENEWABLE GENERATION PROJECTS



3.2.1 Developing conceptual projects

As part of a review process to conceptually define how our distribution networks could support Victoria’s renewable energy targets, we reviewed where new distribution network could be developed with transmission connection from existing transmission connection points to support further renewable generation connections.

The capacity of the new distribution network was conceptually set based on the thermal capability of standard conductors and distribution network designs. Further desktop analysis was undertaken to identify where the available capacity would potentially be fully utilised along with the suitability of the surrounding areas for renewable generation. Urban areas were categorised as least desirable, while areas with potential high yields in renewable generation further from communities were categorised as most desirable. Further studies will be required to validate other electrical constraints that may limit capacity in the future.

3.2.2 Distribution network improvements

To deliver complementary benefits to the distribution network, concurrent consideration was given to how investment in sub-transmission assets could improve the reliability and resilience of the existing network or create future lower cost opportunities for that improvement.

To achieve this, we focused on examining distribution feeder performance and finding points at which multiple long feeders converge. We identified several benefits including providing future capacity for improvements in reliability and resilience through the proposed generation connection points or other augmentation, as well as providing future options for community's growth.

This is a significant opportunity that does not exist under alternate transmission base solutions. Further, it provides real value for customers located in and around REZs, providing valuable social licence for investments in and around REZs. Works to provide the reliability and resilience, whilst not included in this contingent project proposal, are relatively minor (generally construction of a single transformer rural zone substation) and could be funded through the community benefits fund that supports REZ investments under the Regime.

4. Options analysis

In our network area, there are plans for four REZs which will support the connection of approximately 3.1GW of new wind and solar projects by 2040.[10] This is in addition to 1.9GW of committed connections outside the REZs.[11] Enabling timely connection of these assets will be crucial to supporting the Victorian electricity grid as fossil fuel generators retire.

We have identified potential sub-transmission projects across our distribution area. It is expected that a subset of these will be progressed, as determined by the trigger event. A suite of potential sub-transmission projects and their capital cost efficiency is detailed in table 2 below. An overview of each example sub-transmission project can be found in Appendix B.

TABLE 2 SUMMARY OF POTENTIAL SUB-TRANSMISSION PROJECTS ($M, JUNE 2026)

PROJECT	COST ($M)	CAPACITY (GW)	EFFICIENCY ($/GW)
Maintain status quo (2025 VTP)	7,854	11.9	660.0
Haunted Gully - Skipton - Rokewood – Cressy	132	0.45	293.3
Tarrone - Byaduk - Castertone - Charam – Horsham	318	0.34	942.2
Mortlake - Wilaura - Penshurst - Byaduk - Tarrone	234	0.34	693.3
Mortlake - Panmure - Winslow - Tarrone	192	0.45	426.7
Koorangie - Wyncheproof - Beulah - Murra Wurra	252	0.45	560.0
Bulgana - St Arnaud - Wynchproof - Murra Wurra	398	0.45	885.3
Elaine - Daylesford - Clunes - Avoca - Ararat	210	0.45	466.7
All (excl. status quo)	**1,736**	**2.93**	**593.6**

Source: Powercor

[10] [Scenario 1, VTP p66]
[11] [Table B-1, VTP Appendix B, p15]

4.1 Option one: maintain status quo

The status-quo option involves investment in transmission infrastructure. There are no investments that will directly support electrification or network resilience in the networks that serve customers or communities in and around the REZs. At an estimated capital cost of $660M per GW, the option does not represent the greatest cost efficiency, nor does it address the social licence, delivery and utilisation risks.

4.2 Option two: invest in all proposed sub-transmission projects

This option comprises the example sub-transmission projects, providing up to 2.93GW of additional capacity for renewable generation at a total cost of $1,736M. Beyond capacity for renewable generation, this option delivers the opportunity for future material complementary benefits to the reliability and resilience of the local distribution network across 41 feeder lines.

TABLE 34 OPTION TWO: BENEFITS ASSESSMENT SUMMARY ($M, JUNE 2026)

PROJECTS	COSTS ($M)
Haunted Gully - Skipton - Rokewood - Cressy	132
Tarrone - Byaduk - Castertone - Charam - Horsham	318
Mortlake - Wilaura - Penshurst - Byaduk - Tarrone	234
Mortlake - Panmure - Winslow - Tarrone	192
Koorangie - Wyncheproof - Beulah - Murra Wurra	252
Bulgana - St Arnaud - Wynchproof - Murra Wurra	398
Elaine - Daylesford - Clunes - Avoca - Ararat	210
Total	**1,736**

Source: Powercor

4.3 Option three: invest in selected sub-transmission projects

This option only includes example sub-transmission projects that connect to the 500kV network. The 500kV network does not suffer from the capacity constraints that are more common on the 220kV network which limit export capacity.

Delivery of these four projects would enable up to 1.58GW of additional capacity for a total cost of $876M. In addition, it can deliver material complementary benefits for the reliability and resilience of the local distribution network across 26 feeder lines with relatively minor further augmentation.

The costs below are subject to further refinement however demonstrate clearly the contingent project exceeds the materiality threshold established under the relevant provisions of the Rules.

TABLE 5 OPTION THREE: BENEFITS ASSESSMENT SUMMARY ($M, 2026)

PROJECTS	COSTS ($M)
Haunted Gully - Skipton - Rokewood - Cressy	132
Tarrone - Byaduk - Castertone - Charam - Horsham	318
Mortlake - Wilaura - Penshurst - Byaduk - Tarrone	234
Mortlake - Panmure - Winslow - Tarrone	192
Total	**876**

Source: Powercor

4.4 Considerations for all options

All costs are preliminary and will be further refined as network planning and customer and stakeholder engagement progress. However, these costs demonstrate that our projects meet the trigger requirements for a contingent project.

As part of the assessment of the example sub-transmission projects, some highly variable costs such as land costs or those associated with expanded transmission connection assets have not been scoped or costed. We have also assumed a power factor of 0.9 for capacity and capital efficiency calculations. As part of the future refinement, assessment and potential inclusion in the VTP, the full project scope will be developed, costed and assessed against all other viable alternatives.

Work is also currently underway to identify the market benefits arising from the proposed investment under option 3, initially focused on wholesale market benefits alone. The wholesale market benefits identification work is scheduled for completion prior to the end of 2025 but was unable to be integrated into this addendum given its timing. The benefits of our proposed projects extend well beyond wholesale market benefits and include emissions reduction, reliability improvements, enhanced resilience, greater social licence, reduced need for engagement, speed of development and lower costs. An indicative analysis in the New South Wales Distribution System Planning Report[12] estimated the value of unlocking capacity on the sub-transmission network conservatively between $1.6B and $3.4B depending on the scenario and assumptions selected. We would expect similar opportunities in Victoria.

[12] Ausgrid, Endeavour Energy, Essential Energy, Distribution System Planning Report, November 2025

5. Recommended option

The preferred option is option three. This is because it addresses the identified need and provides the greatest value for customers.

Investing in sub-transmission infrastructure on the distribution networks within or around a REZ can provide targeted, cost-effective investments that improve local reliability and deliver broader benefits to regional communities hosting renewable infrastructure. This option also offers a faster and more cost-effective solution during the long lead times associated with major transmission developments.

5.1 Recommended option trigger event

The trigger for our contingent project proposal is that our proposed sub-transmission assets are identified by VicGrid in a future VTP in the optimal set of projects related to facilitate connection of REZs to the Victorian DSN; or the Minister for Energy and Resources declares our proposed sub-transmission assets to be 'major electricity transmission infrastructure'[13] pursuant to section 54 of the NEVA.

Should any combination of the preferred sub-transmission projects be subject to the above treatments by the VTP or NEVA, we would consider the investment to be reasonably necessary. To that end, the final scope of the contingent project would be dependent on the sub-transmission assets identified by either component of the trigger.

[13] 'Major electricity transmission infrastructure' has the meaning given to that term by section 51 of the NEVA.

A

APPENDIX

MEETING THE NER REQUIREMENTS FOR CONTINGENT PROJECTS

A Meeting the NER requirements for contingent projects

A.1 Contingent project criteria

The following table summarises how our proposal meets the contingent project criteria set out in the NER.

CLAUSE	DESCRIPTION	HOW WE MEET THE CLAUSE
6.6A.1(a)	The proposed expenditure may only be for capital expenditure which Powercor considers is reasonably required for the purpose of undertaking the proposed contingent project	The proposed capital expenditure is estimated based on recently completed projects of similar scope and scale. The capital expenditure forecast will be firmed up as the specific projects are confirmed.
6.6A.1(1a)	Proposed contingent project expenditure cannot include expenditure for a restricted asset.	The proposed contingent capital expenditure does not include any expenditure for restricted assets.
6.6A.1(b)(1)	The proposed expenditure is reasonably required to achieve any of the capital expenditure objectives.	The proposed contingent project is required to meet the capacity demand for renewable generation connections. It will also deliver improved reliability and resilience for distribution customers.
6.6A.1(b)(2)(i)	The proposed contingent project expenditure is not otherwise provided for in the forecast capital expenditure.	We confirm expenditure for this contingent project is not included elsewhere in the revised proposal
6.6A.1(b)(2)(ii)	The proposed contingent project expenditure reasonably reflects the capital expenditure criteria, taking into account the capital expenditure factors.	The proposed project will be considered to meet the capital expenditure criteria if it is independently identified by VicGrid as the most efficient and prudent option in its 2027 VTP.
6.6A.1(b)(2)(iii)	The proposed contingent project capital expenditure exceeds either $30m or 5% of annual revenue for the first year of the relevant regulatory control period, whichever is the larger amount.	The proposed preferred contingent project capital expenditure is $876M (nominal), which is higher than $44.3M (this being 5% of the proposed revenue for 2026/27)
6.6A.1(b)(4) &	The proposed trigger event is appropriate, having regard to the	The proposed trigger event is specific and verifiable; however, the need for the sub-

6.6A.1(c)	need for the trigger event to be (amongst other things) reasonably specific, capable of objective verification and probable, but not certain.	transmission assets is still uncertain currently.

B APPENDIX

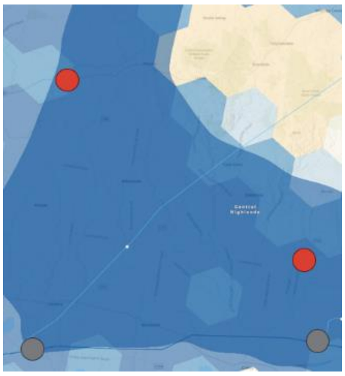
PROJECT SUMMARIES

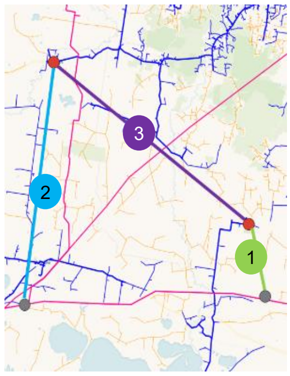
B Project summaries

The following sections detail the specific projects identified that support the development of REZs in Victoria.

B.1 Project 1: Haunted Gully - Skipton - Rokewood – Cressy

Comprises three stages of 132kV line over approximately 110km distance enabled by two new transformers at Cressy and Haunted Gully.[14] The new infrastructure would enable a potential 500MVA of additional capacity, however there is a risk with the presence of multiple established farms in the region. Delivering the project would allow the future opportunity to improve the performance of 11 feeders by locating connections at points where feeders converge.



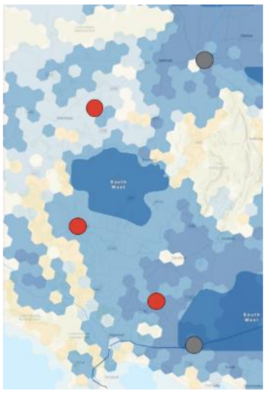


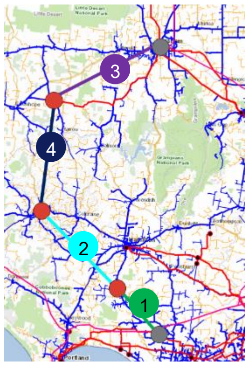
STAGE	ASSET(S)	COST	CAPACITY BENEFIT	POTENTIAL FEEDER IMPROVEMENTS
1: Cressy – Rokewood	25km of 132kV line	$30.0m	Enables up to 250MVA	CLC003, CLC006, CDN006, ART033, CDN004, TRG022, BAS011, BAS032, BAS033, GHP011, GHP021
2: Skipton – Haunted Gully	45km of 132kV line	$54.0m	Enables up to 250MVA	
3: Rokewood – Skipton	40km of 132kV line	$48.0m		

[14] Transformers not included in proposed contingent project as these would be owned and operated by the TNSP.

B.2 Project 2: Tarrone – Byaduk – Casterton – Charam – Horsham

Project 2 comprises four stages of 132kV line, spanning an approximate distance of 285km around the South-West REZ. The delivery of the project could enable connection of up to 500MVA of new capacity as well as performance improvements of 7 local feeder lines. The stage 1 segment of Project 2 is also common to Project 3.[15]

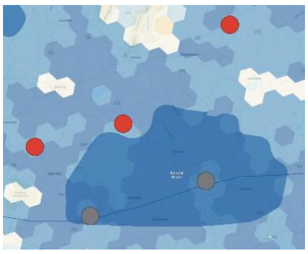


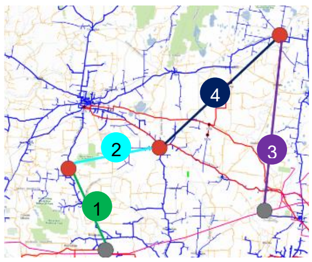


STAGE	ASSET(S)	COST	CAPACITY BENEFIT	POTENTIAL FEEDER IMPROVEMENTS
1: Tarrone – Byaduk	40km of 132kV line	$48.0m	Enables up to 250MVA	HTN011, HTN034, HTN013, CHM011, HSM002, HSM004, HYT011
2: Byaduk – Casterton	80km of 132kV line	$96.0m	Remaining unutilised capacity from stage 1 line	
3: Horsham – Charam	75km of 132kV line	$90.0m	Enables up to 250MVA	
4: Charam – Casterton	90km of 132kV line	$108.0m		

B.3 Project 3: Tarrone – Byaduk – Penshurst – Wilaura – Mortlake

Project 3 relies upon 215km of 132kV line, across four stages surrounding the southern portion of the South-West REZ. The project could deliver up to 500MVA and allow the opportunity to improve connected capacity and enable feeder improvements to 8 lines.[16]



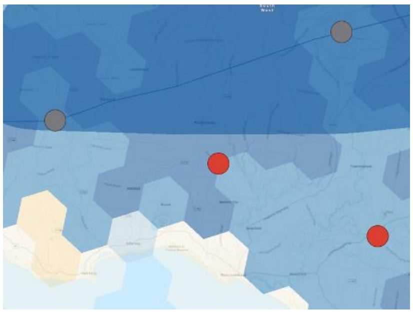


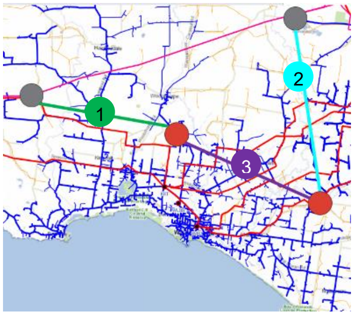
STAGE	ASSET(S)	COST	CAPACITY BENEFIT	POTENTIAL FEEDER IMPROVEMENTS
1: Tarrone – Byaduk	40km of 132kV line	$48.0m	Enables up to 250MVA	

[15] 40km of line between Tarrone and Byaduk is common with Project 3
[16] 40km of line between Tarrone and Byaduk is common with Project 2

2: Byaduk – Penshurst	35km of 132kV line	$42.0m		ART033, TRG022, HTN011, KRT013, HTN032, HTN034, HYT011, HTN012
3: Wilaura – Mortlake	70km of 132kV line	$84.0m	Enables up to 250MVA	
4: Penshurst – Wilaura	70km of 132kV line	$84.0m		

B.4 Project 4: Mortlake – Panmure – Winslow – Tarrone



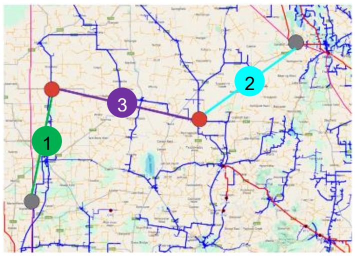


Project 4 is an investment in three stages, constructing 160km of 132kV line around the southern-most border of the South-West REZ. There is potential for the Panmure connected segments to redirect to Allansford instead, where Powercor has an existing landholding, to minimise community disruption.[17] Further, given the transmission connection overlap with Projects 2 and 3, the same transformer could be utilised across the projects.[18] The project would enable 500MVA of capacity and provide the opportunity to improve the feeder performance of 5 lines.

STAGE	ASSET(S)	COST	CAPACITY BENEFIT	POTENTIAL FEEDER IMPROVEMENTS
1: Tarrone – Winslow	30km of 132kV line	$36.0m	Enables up to 250MVA	TRG024, KRT013, KRT012, WBL002, WBL005
2: Mortlake – Panmure	60km of 132kV line	$72.0m	Enables up to 250MVA	
3: Panmure – Winslow	70km of 132kV line	$84.0m		

[17] Replacement of stage 2 with Mortlake to Allansford and stage 3 with Allansford to Winslow would result in an incremental increase in line distance by 30km total.
[18] Transformers not included in proposed contingent project as these would be owned and operated by the TNSP.

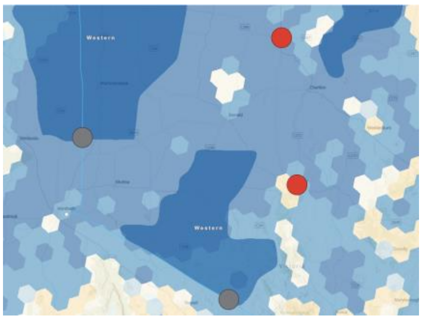
B.5 Project 5: Koorangie – Wycheproof – Beulah – Murra Warra

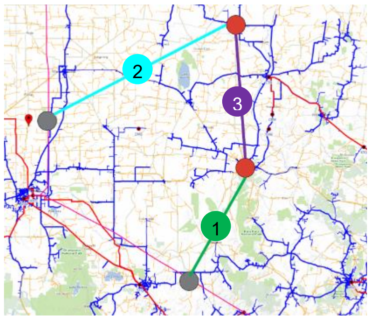


This project involves the construction of 3 stages of 132kV line spanning 210km, that would enable connection of 500MVA. The project would connect across a region of high-renewable resource potential between existing 220kV transmission lines, situated within the North-West and Western REZ's. The project could provide the opportunity to improve three feeder lines in the region.

STAGE	ASSET(S)	COST	CAPACITY BENEFIT	POTENTIAL FEEDER IMPROVEMENTS
1: Koorangie – Wycheproof	40km of 132kV line	$48.0m	Enables up to 250MVA	CTN001, CTN006 and HSM003
2: Murra Warra – Beulah	90km of 132kV line	$108.0m	Enables up to 250MVA	
3: Beulah – Wycheproof	80km of 132kV line	$96.0m		

B.6 Project 6: Bulgana – St Arnaud – Wycheproof – Murra Warra



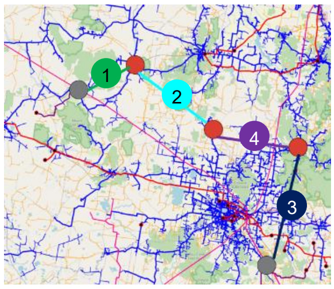


The project between Bulgana and Murra Warra would require 332km of 132kV line in order to enable connection of 500MVA. The project would enable connection for projects situated in the Western REZ, as well as concurrent improvements to 10 feeders.

STAGE	ASSET(S)	COST	CAPACITY BENEFIT	POTENTIAL FEEDER IMPROVEMENTS
1: Bulgana – St Arnaud	120km of 132kV line	$144.0m	Enables up to 250MVA	CTN001, CTN006, CTN003, MRO005, CTN004, STL007, OYN005, NHL015, STL006, HSM003
2: Murra Warra – Wycheproof	140km of 132kV line	$168.0m	Enables up to 250MVA	
3: St Arnaud – Wycheproof	72km of 132kV line	$86.4m		

Project 7: Elaine – Daylesford – Clunes – Avoca – Ararat

This project would require 175km of 132kV line across four stages, to enable potential connections up to 500MVA. The lines would enable connections around the Central Highlands REZ, as well as deliver improvements to performance of 8 feeders.



STAGE	ASSET(S)	COST	CAPACITY BENEFIT	POTENTIAL FEEDER IMPROVEMENTS
1: Ararat – Avoca	40km of 132kV line	$48.0m	Enables up to 250MVA	BAN003, BAN008, BAN009, CMN004, BAN006, MRO005, MRO008, STL007
2: Avoca – Clunes	45km of 132kV line	$54.0m		
3: Clunes – Daylesford	55km of 132kV line	$66.0m	Enables up to 250MVA	
4: Daylesford – Elaine	35km of 132kV line	$42.0m		

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