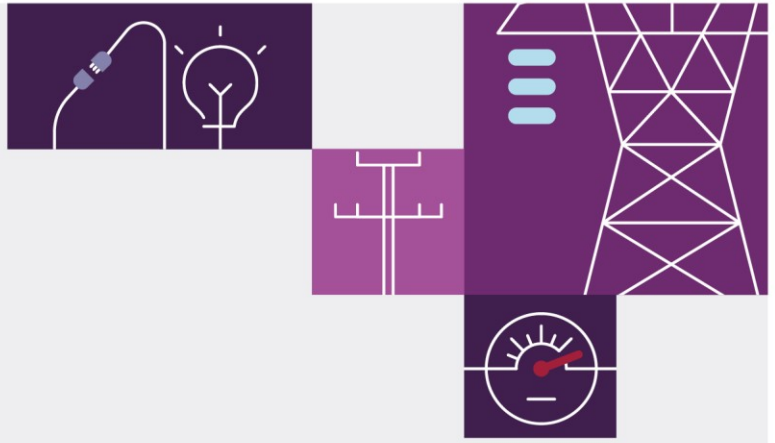


# 2024 ELI Report

## Appendix 7. Victoria

June 2024





# Important notice

## Purpose

This report has been published to implement the Energy Security Board (ESB) 'enhanced information' transmission access reforms. The report is intended to support more informed investment and decision-making processes in the National Electricity Market, by collating public metrics and indicators that represent important locational characteristics of the power system. This report includes only publicly available information from existing AEMO, industry, and stakeholder publications.

AEMO publishes this *Enhanced Locational Information (ELI) Report* pursuant to its functions in section 49(2)(c) of the National Electricity Law. This publication is generally based on information available to AEMO as at 30 April 2024, unless otherwise indicated.

## Disclaimer

AEMO has made reasonable efforts to ensure the quality of the information in this publication but cannot guarantee that information, forecasts and assumptions are accurate, complete or appropriate for your circumstances.

Modelling work performed as part of preparing this publication inherently requires assumptions about future behaviours and market interactions, which may result in forecasts that deviate from future conditions. There will usually be differences between estimated and actual results, because events and circumstances frequently do not occur as expected, and those differences may be material.

This publication does not include all of the information that an investor, participant or potential participant in the National Electricity Market might require, and does not amount to a recommendation of any investment.

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## Version control

Version	Release date	Changes
1.0	07/06/2024	Initial release.

AEMO acknowledges the Traditional Owners of country throughout Australia and recognises their continuing connection to land, waters and culture. We pay respect to Elders past and present.



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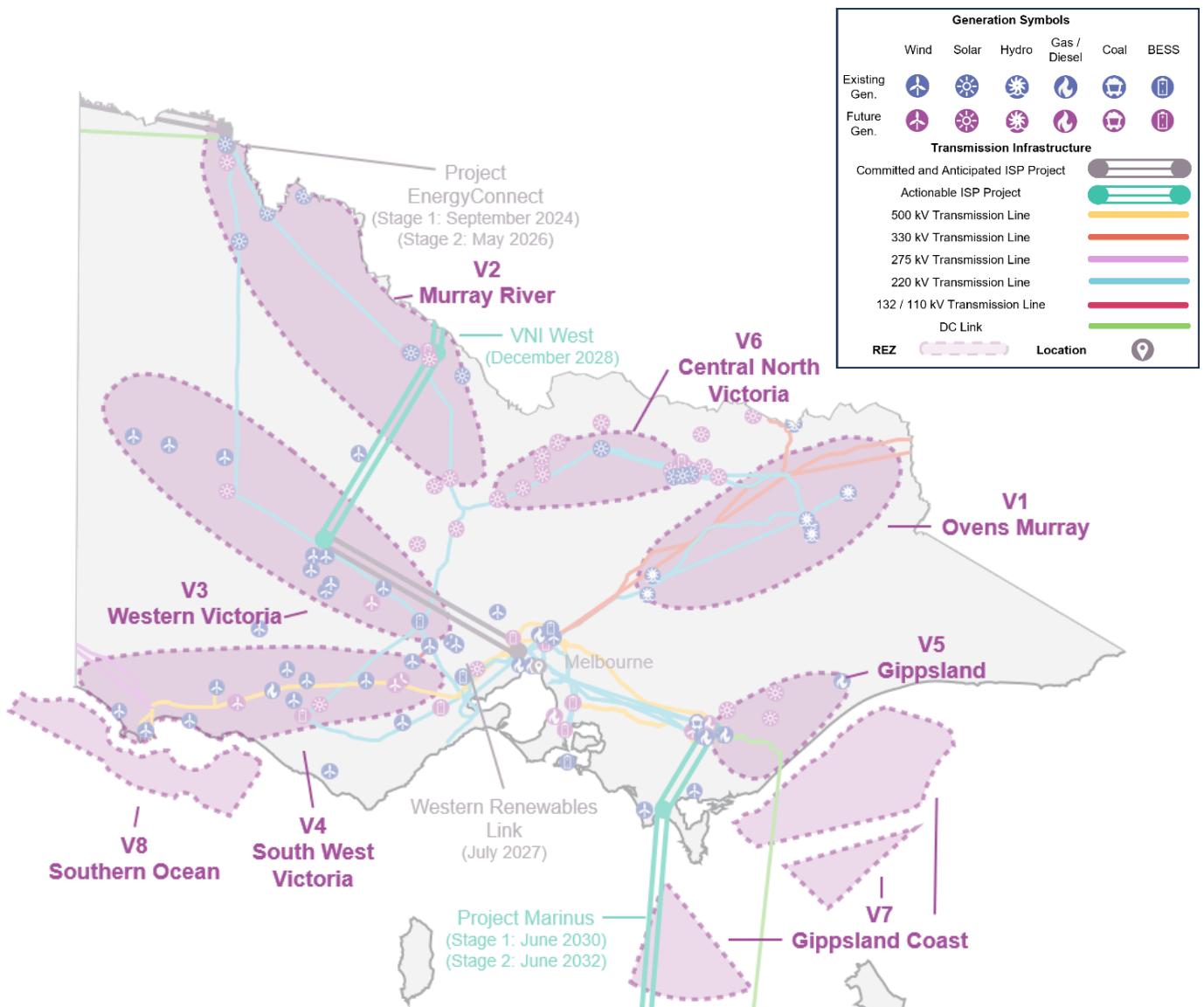
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## A7.1 Introduction

This appendix provides detailed locational indicators and metrics for each REZ within Victoria. Figure 1 provides an overview map of the Victoria region and associated REZs. Appendix A2 provides a guide to interpreting the REZ scorecards presented throughout this appendix.

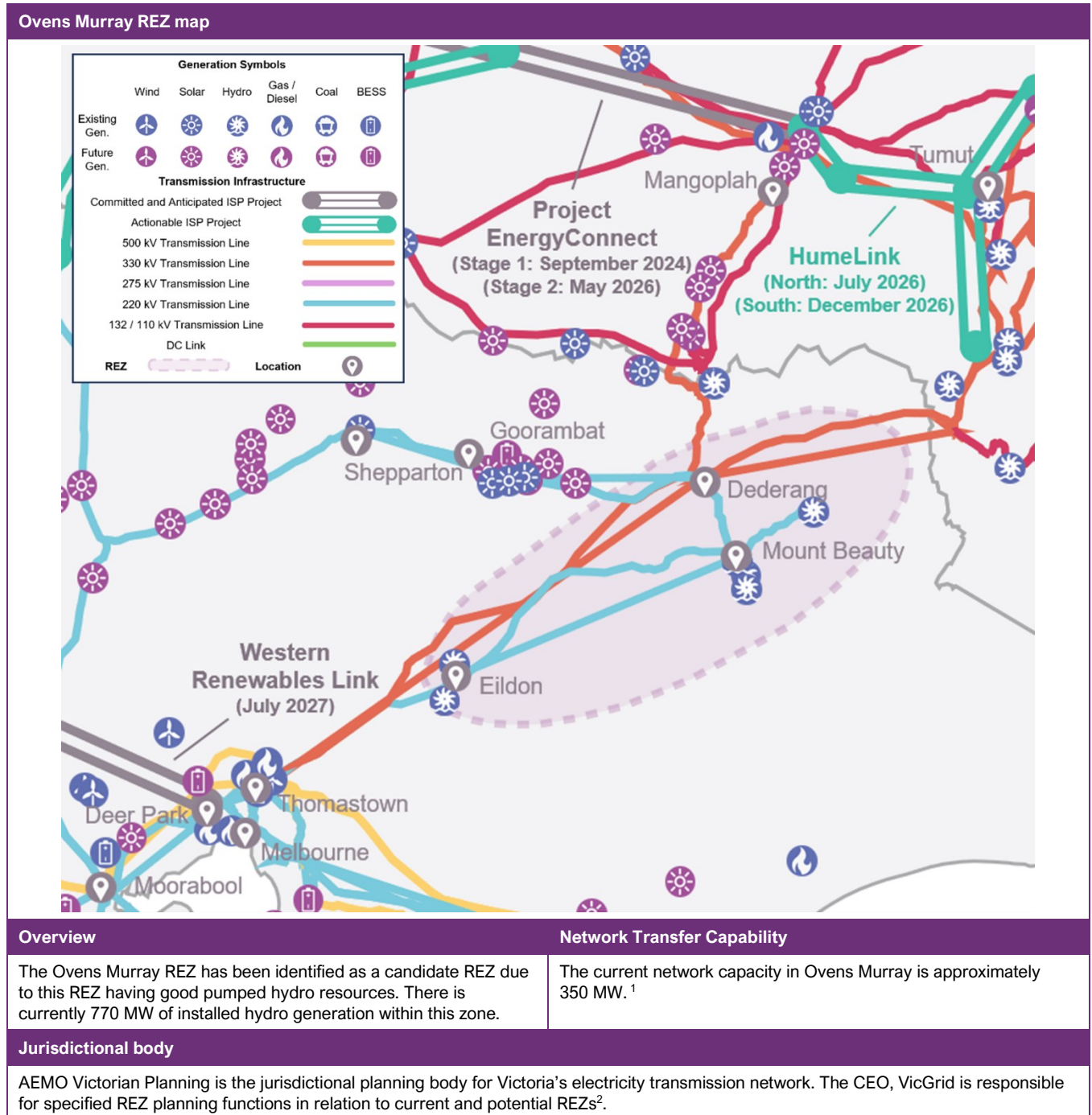
This appendix uses existing sources of publicly available information which includes the Draft 2024 ISP. Some of this information may change with the publication of the Final 2024 ISP in June 2024.

**Figure 1 Overview of Victoria region and REZs**



## A7.2 V1 – Ovens Murray

### REZ information



<sup>1</sup> See 'Build Limits' tab of the Draft 2024 Inputs and Assumptions Workbook, at <https://aemo.com.au/-/media/files/major-publications/isp/2023/2023-iasr-assumptions-workbook.xlsx?la=en>.

<sup>2</sup> The REZ planning functions are specified in section 53(1)(a) of the National Electricity (Victoria) Act, inserted by the *National Electricity (Victoria) Amendment (VicGrid) Act 2024*. See <https://www.legislation.vic.gov.au/in-force/acts/national-electricity-victoria-act-2005/035>. These functions will be performed through the preparation of a Victorian transmission plan and guidelines.

**Generation Hosting capacity or access rights**

There is no hosting capacity provided by the jurisdictional planning body which directly applies to this REZ. Following the recent introduction of the National Electricity (Victoria) Amendment (VicGrid) Act 2024 if, through a Ministerial Order, an area of Victoria has been declared as a REZ, then the intended hosting capacity within the REZ will be reported in future publications.

**Resource metrics**

Resource	Solar	Wind
Resource Quality	D	E
Renewable Potential (MW)	1,000	-

**Climate hazard**

Temperature score	Bushfire score
B	E

Marginal loss factors

**Marginal Loss Factor**

Technology	Voltage (kV)	2024-25 MLF
-	-	-

Congestion and curtailment

**Congestion information – calendar year 2023**

Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
V>>NIL_MBDD_MBDD	41.3	21,015.0	Generation contributing to flow from Mount Beauty to Dederang 220 kV on trip of the parallel Mount Beauty – Dederang 220 kV line

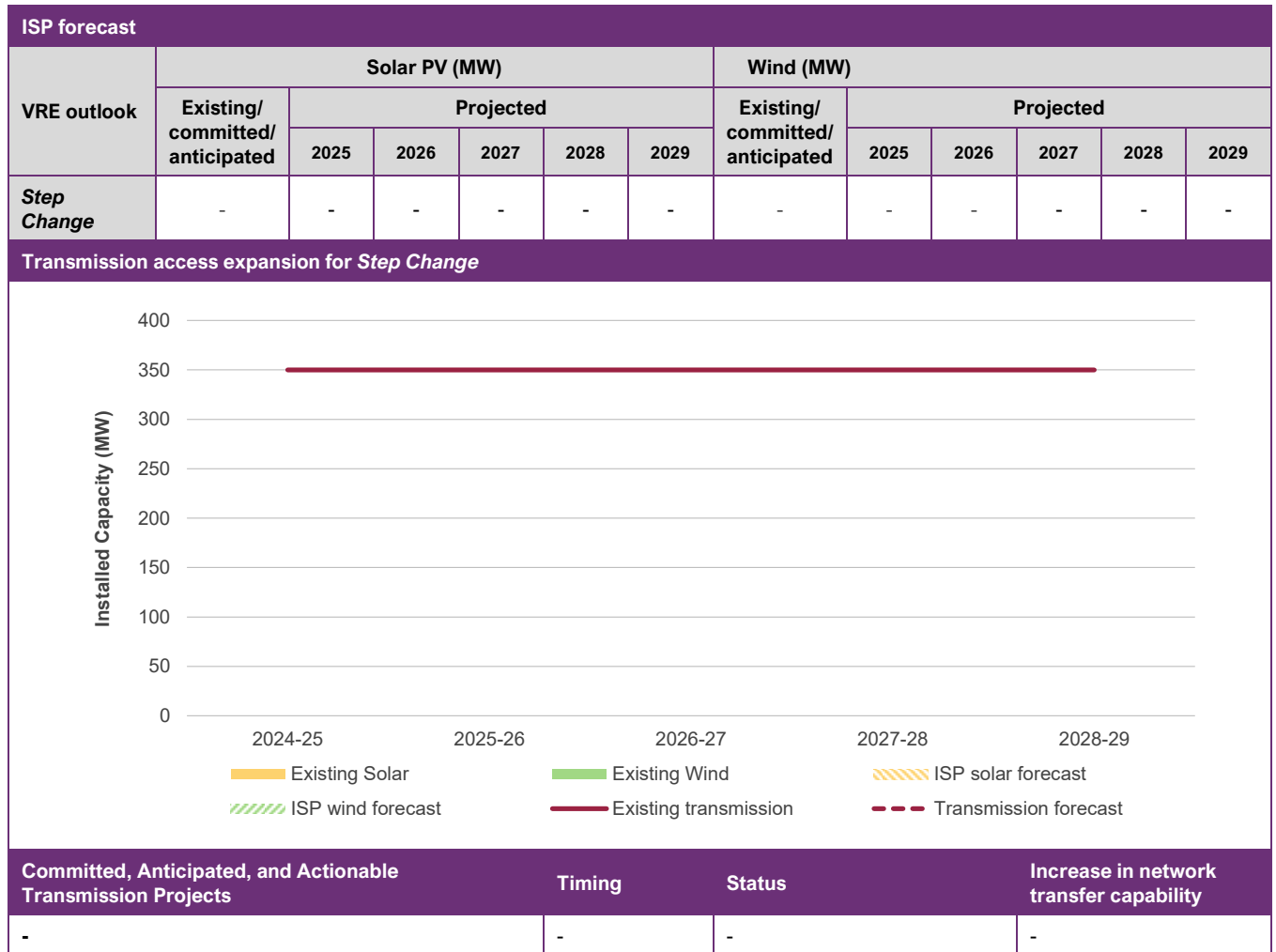
**VRE semi-scheduled curtailment – calendar year 2023**

DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
-	-	-	-	-	-

**VRE curtailment – ISP forecast**

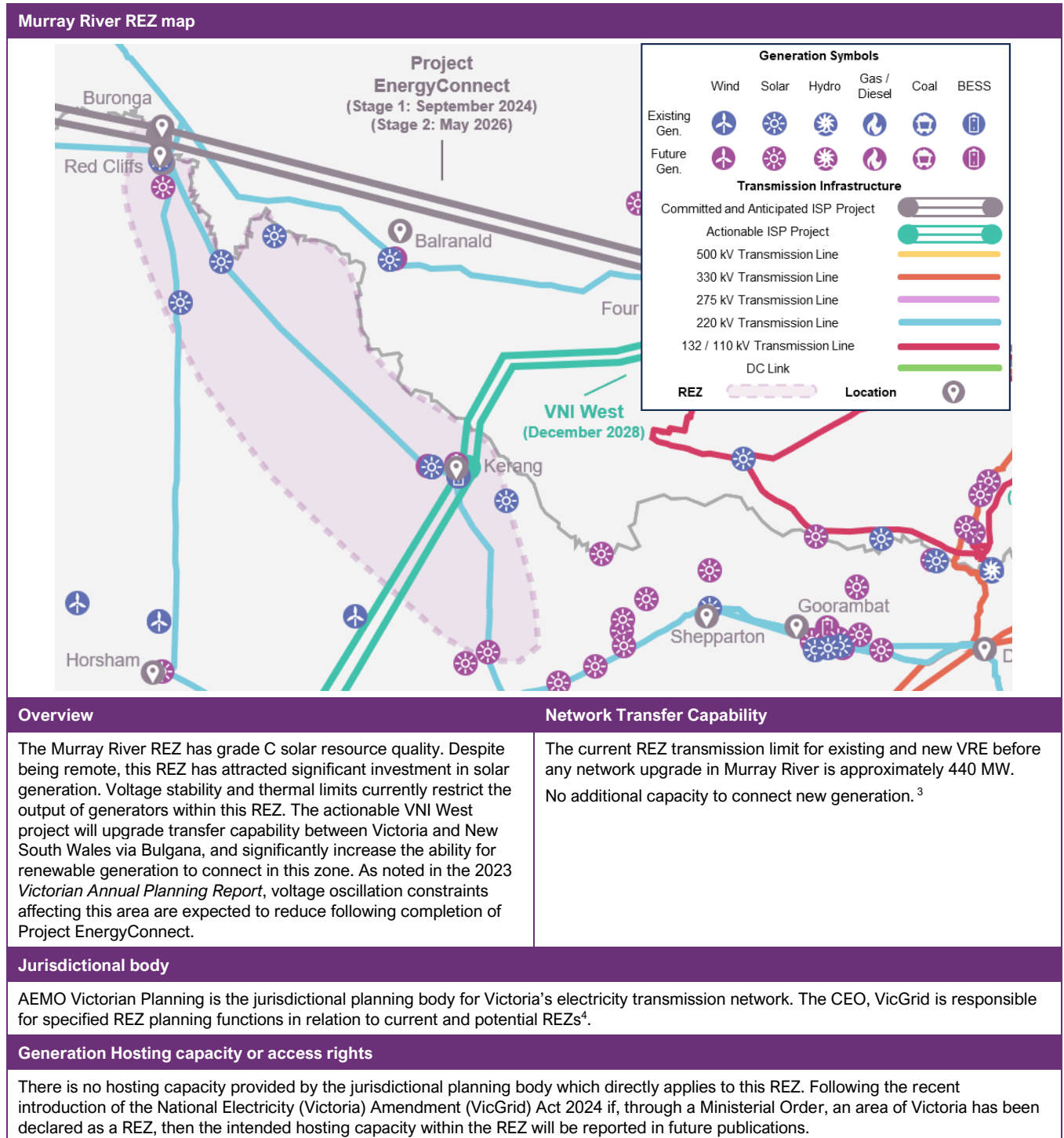
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	-	-	-	-	-

ISP forecast



## A7.3 V2 – Murray River

### REZ information



<sup>3</sup> See ‘Build Limits’ tab of the Draft 2024 Inputs and Assumptions Workbook, at <https://aemo.com.au/-/media/files/major-publications/isp/2023/2023-iasr-assumptions-workbook.xlsx?la=en>.

<sup>4</sup> The REZ planning functions are specified in section 53(1)(a) of the National Electricity (Victoria) Act, inserted by the *National Electricity (Victoria) Amendment (VicGrid) Act 2024*. See <https://www.legislation.vic.gov.au/in-force/acts/national-electricity-victoria-act-2005/035>. These functions will be performed through the preparation of a Victorian transmission plan and guidelines.



Resource metrics			
Resource	Solar		Wind
Resource Quality	C		E
Renewable Potential (MW)	4,700		-
Climate hazard			
Temperature score	E		Bushfire score C

### Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
Solar	66	0.8506 - 0.8962
	220	0.8363

### Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
V^V_NIL_KGTS & V^V_NIL_KGTS_2	1,140.4	8,244,169.3	Generation in the area approximately bound by Broken Hill and Darlington Point in NSW and Ararat in VIC
SVML^NIL_MH-CAP_ON	520.7	593,332.7	Generation contributing to Eastward flow on the Murraylink DC interconnector
V>>NIL_ARWB_KGBE	255.3	2,349,117.2	Generation contributing to flow from Ararat to Waubra 220 kV upon trip of the Kerang-Bendigo 220 kV line
V>>NIL_WBBA_RCWEKG	122.8	598,843.3	Generation contributing to flow from Waubra to Ballarat 220 kV on trip of the Red Cliffs-Kerang 220 kV line
V>>NIL_WBBA_KGBE	120.2	1,105,218.6	Generation contributing to flow from Waubra to Ballarat 220 kV on trip of Kerang-Bendigo 220 kV line
V>>NIL_BABE_HOMRKM	112.2	232,325.8	Generation contributing to flow from Ballarat to Bendigo 220 kV on trip of Horsham-Kiamal 220 kV line
V>>NIL_ARWB_RCWEKG	100.1	316,894.8	Generation contributing to flow from Ararat to Waubra 220 kV on trip of Red Cliffs-Wemen-Kerang 220 kV line
V>NIL_WETX_NIL	79.6	469,875.2	Generation exporting from 66 kV through the 220/66 kV Wemen transformers
V^SML_NIL_3	42.9	379,996.3	Generation in North West VIC and near Broken Hill in NSW
V>>NIL_WBBA_RCBSS	27.7	200,185.0	Generation contributing to flow from Waubra to Ballarat 220 kV on trip of the Red Cliffs-Buronga 220 kV line
V>NIL_WBBA_KMRC	26.7	145,305.8	Generation contributing to flow from Waubra to Ballarat 220 kV on trip of the Kiamal-Red Cliffs 220 kV line
V>>NIL_WEKG_HOBUCW	20.1	225,906.0	Generation contributing to flow from Wemen to Kerang 220 kV on trip of the Horsham-Bulgana-Crowlands 220 kV line
V^SML_NSWRB_2	17.3	54,310.2	Generation in North West Victoria

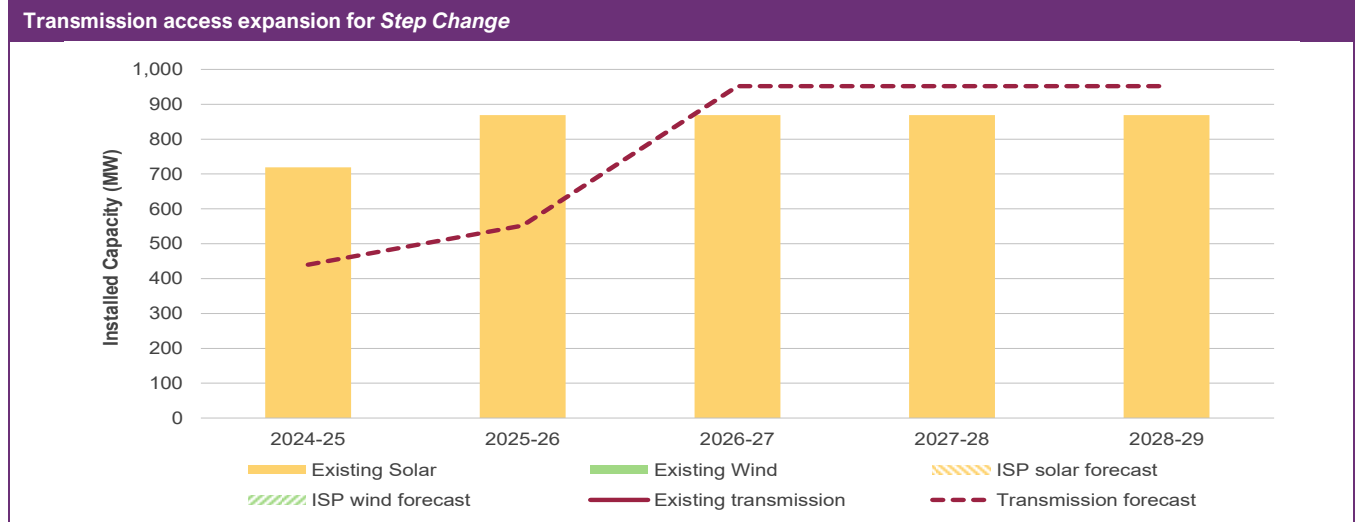
VRE semi-scheduled curtailment – calendar year 2023						
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)	
BANN1	Bannerton Solar Park	88	29.6	6.7	59,061	
COHUNSF1	Cohuna Solar Farm	27	0.0	0.0	5	
GANNSF1	Gannawarra Solar Farm	50	2.3	0.3	2,485	
KARSF1	Karadoc Solar Farm	90	10.5	2.6	22,511	
KIAMSF1	Kiamal Solar Farm	200	7.3	3.2	28,406	
WEMENSF1	Wemen Solar Farm	88	26.2	5.7	50,203	
YATSF1	Yatpool Solar Farm	81	18.5	4.1	35,884	

VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
<b>Step Change</b>	10%	19%	4%	18%	-	9%

ISP forecast

ISP forecast												
VRE outlook	Solar PV (MW)						Wind (MW)					
	Existing/committed/anticipated	Projected					Existing/committed/anticipated	Projected				
		2025	2026	2027	2028	2029		2025	2026	2027	2028	2029
<b>Step Change</b>	869	-	-	-	-	-	-	-	-	-	-	-



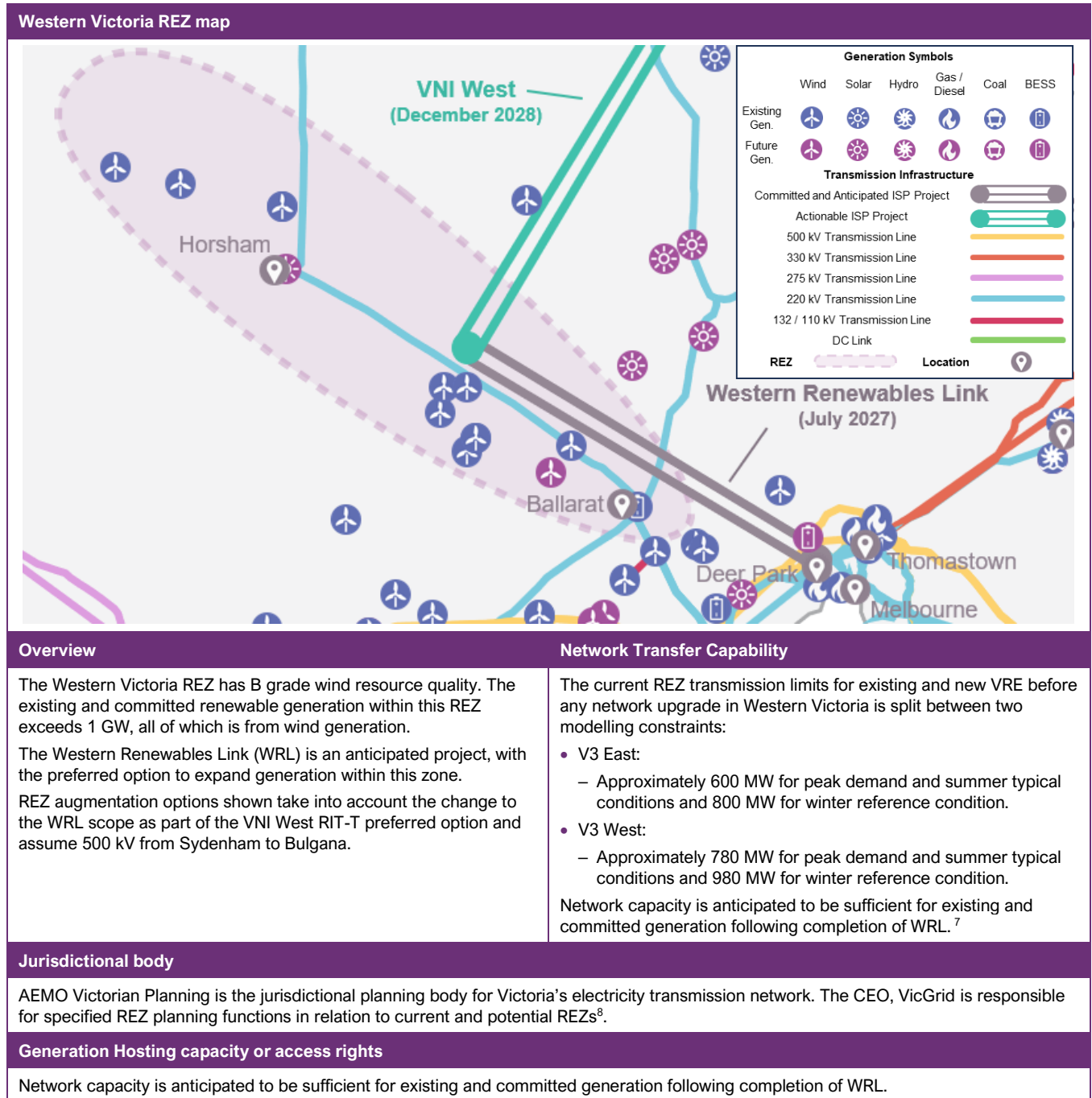
Committed, Anticipated, and Actionable Transmission Projects	Timing	Status	Increase in network transfer capability
Murray River REZ and Western Victoria REZ minor augmentations	October 2025	Committed	112 MW
Project EnergyConnect – Stage 2	May 2026 <sup>5</sup>	Committed	400 MW
VNI West	December 2028 <sup>6</sup>	Actionable ISP	1,580 MW

<sup>5</sup> Under the Draft 2024 ISP Step Change scenario, the project is modelled with a timing of July 2026.

<sup>6</sup> Under the Draft 2024 ISP Step Change scenario, the project is modelled with a timing of July 2029.

## A7.4 V3 – Western Victoria

### REZ information



<sup>7</sup> See ‘Build Limits’ tab of the Draft 2024 Inputs and Assumptions Workbook, at <https://aemo.com.au/-/media/files/major-publications/isp/2023/2023-iasr-assumptions-workbook.xlsx?la=en>.

<sup>8</sup> The REZ planning functions are specified in section 53(1)(a) of the National Electricity (Victoria) Act, inserted by the *National Electricity (Victoria) Amendment (VicGrid) Act 2024*. See <https://www.legislation.vic.gov.au/in-force/acts/national-electricity-victoria-act-2005/035>. These functions will be performed through the preparation of a Victorian transmission plan and guidelines.

Resource metrics			
Resource	Solar		Wind
Resource Quality	E		B
Renewable Potential (MW)	400		2,600
Climate hazard			
Temperature score	D		Bushfire score D

### Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
Wind	66	0.8733 - 0.9718
	220	0.8619 - 0.9475

### Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
V^^V_NIL_KGTS & V^^V_NIL_KGTS_2	1,140.4	8,244,169.3	Generation in the area approximately bound by Broken Hill and Darlington Point in New South Wales and Ararat in Victoria
V>>NIL_ARWB_KGBE	255.3	2,349,117.2	Generation contributing to flow from Ararat to Waubra 220 kV upon trip of the Kerang-Bendigo 220 kV line
V>>NIL_ELML_BAML2	219.1	138,556.2	Generation contributing to flow from Elaine to Moorabool 220 kV on trip of the Ballarat-Moorabool 220 kV No. 2 line
V>>NIL_WBBA_RCWEKG	122.8	598,843.3	Generation contributing to flow from Waubra to Ballarat 220 kV on trip of the Red Cliffs-Kerang 220 kV line
V>>NIL_WBBA_KGBE	120.2	1,105,218.6	Generation contributing to flow from Waubra to Ballarat 220 kV on trip of Kerang-Bendigo 220 kV line
V>>NIL_BABE_HOMRKM	112.2	232,325.8	Generation contributing to flow from Ballarat to Bendigo 220 kV on trip of Horsham-Kiamal 220 kV line
V>>NIL_ARWB_RCWEKG	100.1	316,894.8	Generation contributing to flow from Ararat to Waubra 220 kV on trip of Red Cliffs-Wemen-Kerang 220 kV line
V>>NIL_WBBA_RCBSS	27.7	200,185.0	Generation contributing to flow from Waubra to Ballarat 220 kV on trip of the Red Cliffs-Buronga 220 kV line
V>NIL_WBBA_KMRC	26.7	145,305.8	Generation contributing to flow from Waubra to Ballarat 220 kV on trip of the Kiamal-Red Cliffs 220 kV line
V>>NIL_WEKG_HOBUW	20.1	225,906.0	Generation contributing to flow from Wemen to Kerang 220 kV on trip of the Horsham-Bulgana-Crowlands 220 kV line
V>>SML_NIL_7B	3.7	60,702.5	Generation contributing flow from Buangor to Ararat 66 kV on trip of the Ararat-Crowlands 220 kV line

VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
ARWF1	Ararat Wind Farm	241	8.6	5.1	44,490
BULGANA1	Bulgana Green Power Hub	204	1.1	0.6	5,573

CROWLWF1	Crowlands Wind Farm	79	5.6	1.6	14,177
ELAINWF1	Elaine Wind Farm	82	0.4	0.1	1,077
KIATAWF1	Kiata Wind Farm	31	2.2	0.3	2,758
MERCER01	Mt Mercer Wind Farm	131	2.8	1.1	9,778
MOORAWF1	Moorabool Wind Farm	305	0.3	0.3	2,876
MUWAWF1	Murra Warra Wind Farm	226	5.2	4.0	34,727
MUWAWF2	Murra Warra Wind Farm Stage 2	203	5.0	3.7	32,157
YENDWF1	Yendon Wind Farm	142	0.2	0.1	653

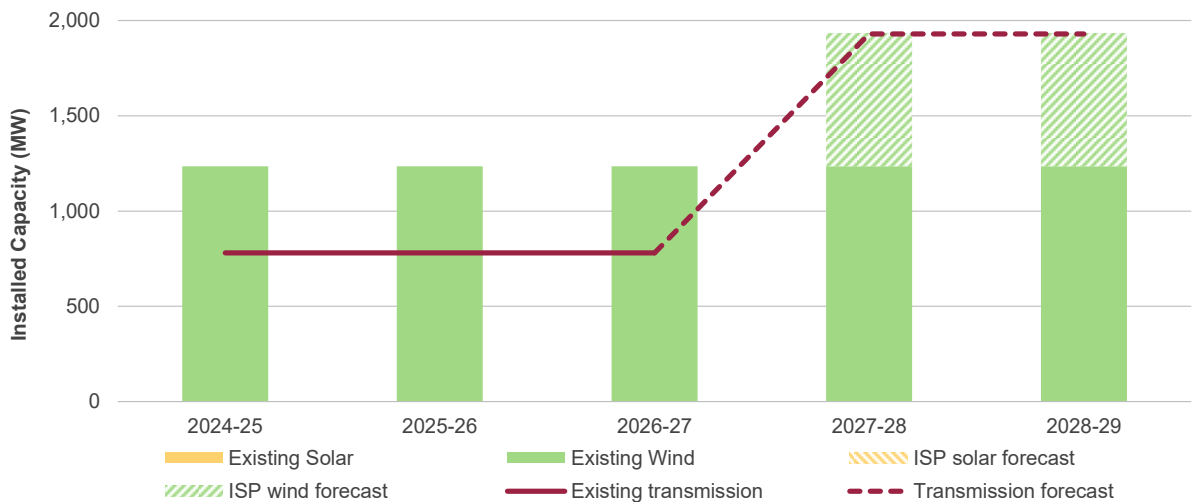
**VRE curtailment – ISP forecast**

Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
<b>Step Change</b>	1%	1%	1%	3%	1%	6%

ISP forecast

ISP forecast												
VRE outlook	Solar PV (MW)						Wind (MW)					
	Existing/ committed/ anticipated	Projected					Existing/ committed/ anticipated	Projected				
		2025	2026	2027	2028	2029		2025	2026	2027	2028	2029
<b>Step Change</b>	119	-	-	-	-	-	1,935	-	-	-	700	700

**Transmission access expansion for Step Change**



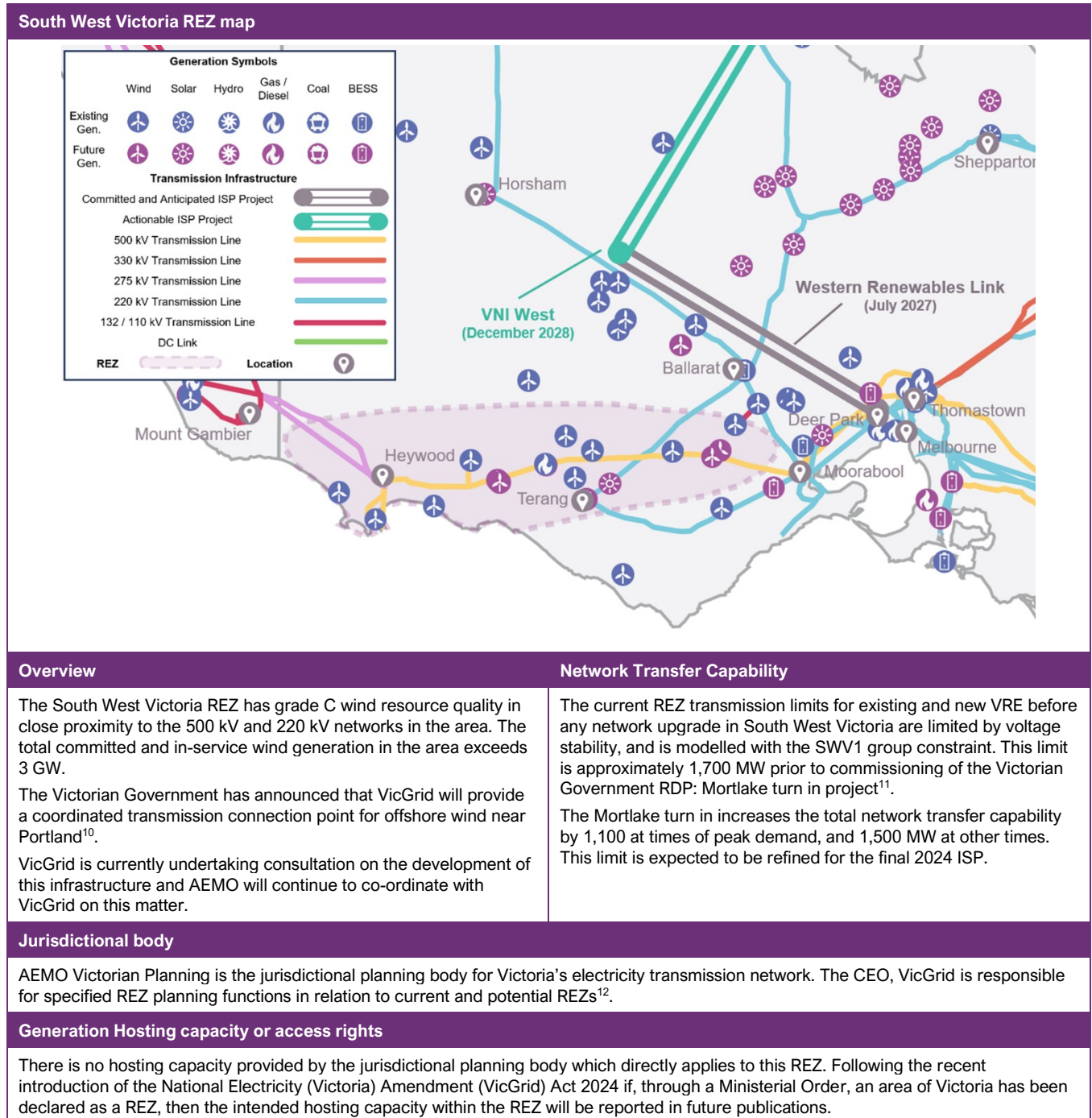
Note: The transmission access expansion forecasts show the results for V3 West group constraint augmentation, which includes VRE projections for V3 West (no VRE is built in V3 East).

Committed, Anticipated, and Actionable Transmission Projects	Timing	Status	Increase in network transfer capability
Western Renewables Link	July 2027	Anticipated	1,460 MW
VNI West	December 2028 <sup>9</sup>	Actionable ISP	200 MW

<sup>9</sup> Under the Draft 2024 ISP Step Change scenario, the project is modelled with a timing of July 2029.

## A7.5 V4 – South West Victoria

### REZ information



#### Overview

The South West Victoria REZ has grade C wind resource quality in close proximity to the 500 kV and 220 kV networks in the area. The total committed and in-service wind generation in the area exceeds 3 GW.

The Victorian Government has announced that VicGrid will provide a coordinated transmission connection point for offshore wind near Portland<sup>10</sup>.

VicGrid is currently undertaking consultation on the development of this infrastructure and AEMO will continue to co-ordinate with VicGrid on this matter.

#### Network Transfer Capability

The current REZ transmission limits for existing and new VRE before any network upgrade in South West Victoria are limited by voltage stability, and is modelled with the SWV1 group constraint. This limit is approximately 1,700 MW prior to commissioning of the Victorian Government RDP: Mortlake turn in project<sup>11</sup>.

The Mortlake turn in increases the total network transfer capability by 1,100 at times of peak demand, and 1,500 MW at other times. This limit is expected to be refined for the final 2024 ISP.

#### Jurisdictional body

AEMO Victorian Planning is the jurisdictional planning body for Victoria’s electricity transmission network. The CEO, VicGrid is responsible for specified REZ planning functions in relation to current and potential REZs<sup>12</sup>.

#### Generation Hosting capacity or access rights

There is no hosting capacity provided by the jurisdictional planning body which directly applies to this REZ. Following the recent introduction of the National Electricity (Victoria) Amendment (VicGrid) Act 2024 if, through a Ministerial Order, an area of Victoria has been declared as a REZ, then the intended hosting capacity within the REZ will be reported in future publications.

<sup>10</sup> See <https://engage.vic.gov.au/project/offshore-wind-transmission-in-gippsland-and-portland/page/development-and-engagement-roadmap>.  
<sup>11</sup> RDP 1 – Stage 1: Mortlake turn in alleviates existing voltage constraint between Moorabool and Mortlake 500 kV Terminal Stations enabling 1,500 MW of additional generation output (<http://www.gazette.vic.gov.au/gazette/Gazettes2022/GG2022S547.pdf>). See [https://aemo.com.au/-/media/files/electricity/nem/planning\\_and\\_forecasting/vapr/2022/2022-victorian-annual-planning-report.pdf?la=en](https://aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/vapr/2022/2022-victorian-annual-planning-report.pdf?la=en).  
<sup>12</sup> The REZ planning functions are specified in section 53(1)(a) of the National Electricity (Victoria) Act, inserted by the National Electricity (Victoria) Amendment (VicGrid) Act 2024. See <https://www.legislation.vic.gov.au/in-force/acts/national-electricity-victoria-act-2005/035>. These functions will be performed through the preparation of a Victorian transmission plan and guidelines.

Resource metrics			
Resource	Solar		Wind
Resource Quality	F		C
Renewable Potential (MW)	-		3,442
Climate hazard			
Temperature score	C		Bushfire score
			D

Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
Wind	66	0.9388 - 0.9993
	220	0.9315 - 0.9430
	500	0.9781 - 0.9812

Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
V>>NIL_ELML_BAML2	219.1	138,556.2	Generation contributing to flow from Elaine to Moorabool 220 kV on trip of the Ballarat-Moorabool 220 kV No. 2 line
V^^V_NIL_SWVIC	192.5	93,906.2	Generation connected to Moorabool to Heywood 500 kV flow path
V:S_600_HY_TEST	172.1	177,314.0	Generation contributing to flow from Heywood to South East 275 kV
V:S_600_HY_TEST_DYN	161.5	414,784.4	Generation contributing to flow from Heywood to South East 275 kV
V::S_NIL_MAXG_xxx	34.8	92,210.6	Generation connecting to 132 kV network between South East and Taillem Bend

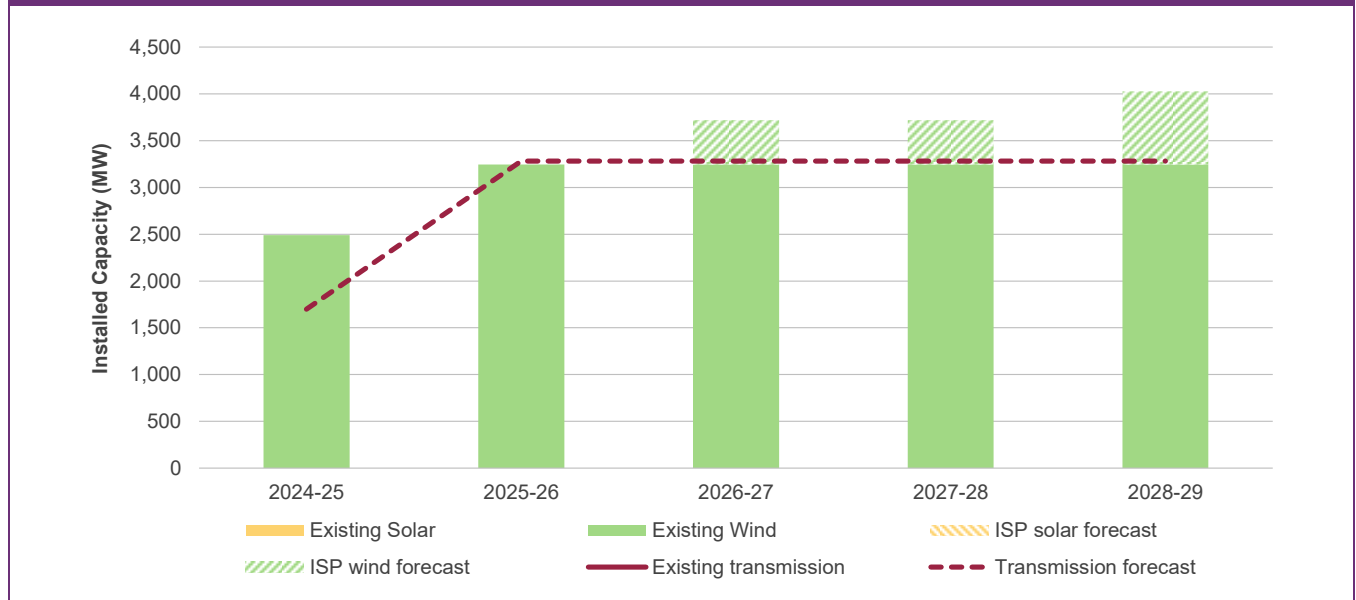
VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
BRYB1WF1	Berrybank Wind Farm	176	0.8	0.5	4,438
BRYB2WF2	Berrybank 2 Wind Farm	105	3.1	0.9	7,882
DUNDWF1	Dundonnell Wind Farm	168	0.0	0.0	76
DUNDWF2	Dundonnell Wind Farm	46	0.1	0.0	125
DUNDWF3	Dundonnell Wind Farm	122	0.1	0.0	321
MACARTH1	Macarthur Wind Farm	420	0.5	0.5	4,486
MRTLWF1	Mortlake South Wind Farm	153	0.3	0.1	788
MTGELWF1	Mt Gellibrand Wind Farm	66	0.2	0.1	503
OAKLAND1	Oaklands Hill Wind Farm	63	0.1	0.0	129
SALTCRK1	Salt Creek Wind Farm	54	0.2	0.0	300
STOCKYD1	Stockyard Hill Wind Farm	511	0.7	1.4	12,691

VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
<b>Step Change</b>	- <sup>13</sup>	6%	-	3%	-	4%

ISP forecast

ISP forecast												
VRE outlook	Solar PV (MW)						Wind (MW)					
	Existing/ committed/ anticipated	Projected					Existing/ committed/ anticipated	Projected				
		2025	2026	2027	2028	2029		2025	2026	2027	2028	2029
<b>Step Change</b>	-	-	-	-	-	-	3,246	-	-	450	450	800

Transmission access expansion for Step Change



Note: The transmission access expansion forecasts show the results for SWV1 group constraint augmentation, which includes VRE projections for V4 and V8.

Committed, Anticipated, and Actionable Transmission Projects	Timing	Status	Increase in network transfer capability <sup>14</sup>
Mortlake Turn-In	October 2025	Committed	1,500 MW
South West VIC REZ minor augmentations	December 2024 <sup>15</sup>	Committed	81 MW

<sup>13</sup> V4 and V8 are both modelled behind the SWV1 group constraint which is forecast to have curtailment of 4% in 2025, 0% in 2026, and 0% in 2027.

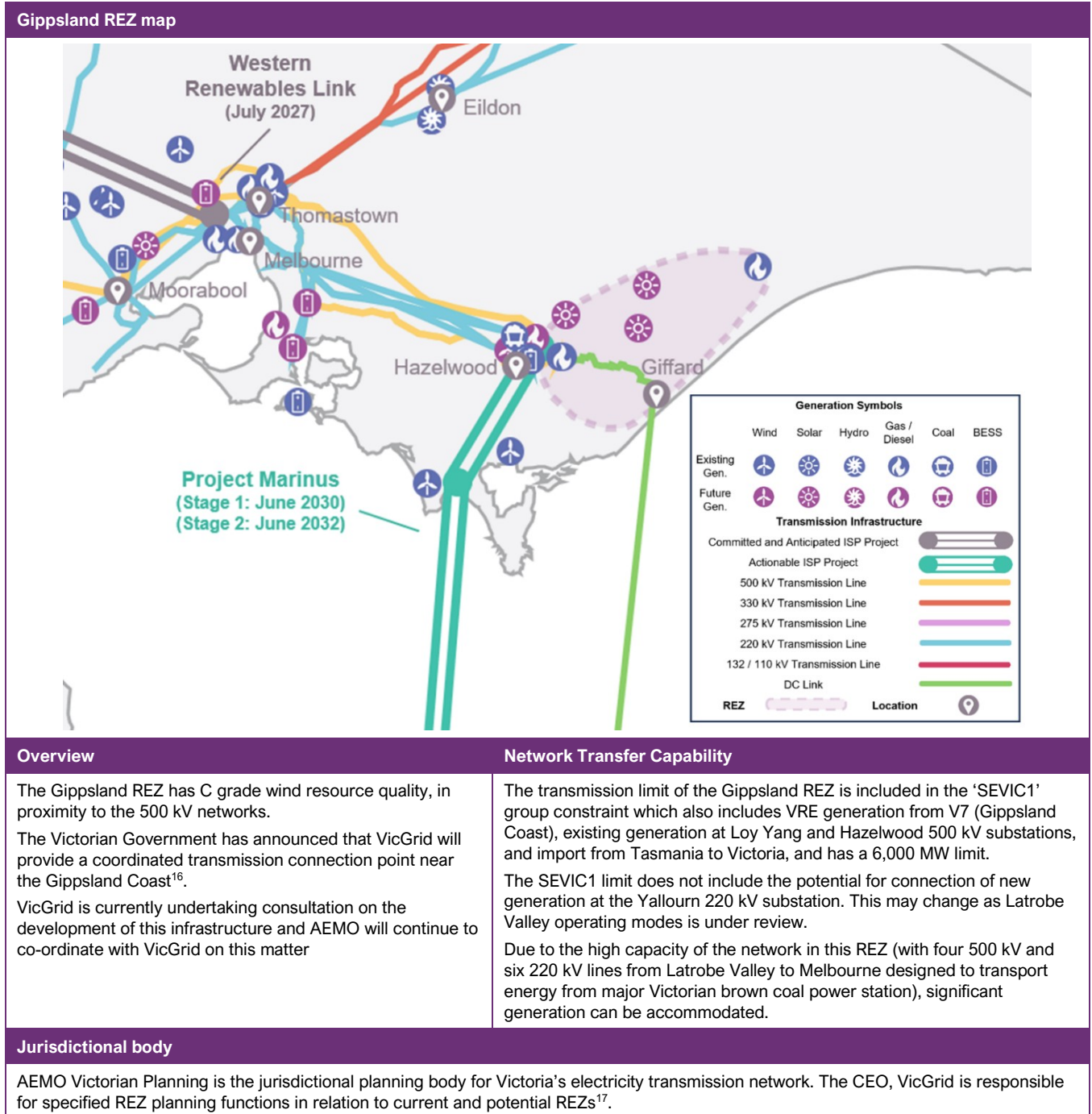
<sup>14</sup> Total REZ network limit increase in V4 and V8 combined.

<sup>15</sup> Under the Draft 2024 ISP Step Change scenario, the project is modelled in 2025-26.



## A7.6 V5 – Gippsland

### REZ information



#### Overview

The Gippsland REZ has C grade wind resource quality, in proximity to the 500 kV networks.

The Victorian Government has announced that VicGrid will provide a coordinated transmission connection point near the Gippsland Coast<sup>16</sup>.

VicGrid is currently undertaking consultation on the development of this infrastructure and AEMO will continue to co-ordinate with VicGrid on this matter

#### Network Transfer Capability

The transmission limit of the Gippsland REZ is included in the ‘SEVIC1’ group constraint which also includes VRE generation from V7 (Gippsland Coast), existing generation at Loy Yang and Hazelwood 500 kV substations, and import from Tasmania to Victoria, and has a 6,000 MW limit.

The SEVIC1 limit does not include the potential for connection of new generation at the Yallourn 220 kV substation. This may change as Latrobe Valley operating modes is under review.

Due to the high capacity of the network in this REZ (with four 500 kV and six 220 kV lines from Latrobe Valley to Melbourne designed to transport energy from major Victorian brown coal power station), significant generation can be accommodated.

#### Jurisdictional body

AEMO Victorian Planning is the jurisdictional planning body for Victoria’s electricity transmission network. The CEO, VicGrid is responsible for specified REZ planning functions in relation to current and potential REZs<sup>17</sup>.

<sup>16</sup> See [Offshore Wind Transmission Development and Engagement Roadmap | Offshore Wind Transmission in Victoria | Engage Victoria](#) .

<sup>17</sup> The REZ planning functions are specified in section 53(1)(a) of the National Electricity (Victoria) Act, inserted by the *National Electricity (Victoria) Amendment (VicGrid) Act 2024*. See <https://www.legislation.vic.gov.au/in-force/acts/national-electricity-victoria-act-2005/035>. These functions will be performed through the preparation of a Victorian transmission plan and guidelines.

**Generation Hosting capacity or access rights**

There is no hosting capacity provided by the jurisdictional planning body which directly applies to this REZ. Following the recent introduction of the National Electricity (Victoria) Amendment (VicGrid) Act 2024 if, through a Ministerial Order, an area of Victoria has been declared as a REZ, then the intended hosting capacity within the REZ will be reported in future publications.

**Resource metrics**

Resource	Solar	Wind
Resource Quality	E	C
Renewable Potential (MW)	500	2,000

**Climate hazard**

Temperature score	C	Bushfire score	D
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Marginal loss factors

**Marginal Loss Factor**

Technology	Voltage (kV)	2024-25 MLF
-	-	-

Congestion and curtailment

**Congestion information – calendar year 2023**

Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
T^V_NIL_9	24.6	10,562.5	Generation contributing to northward flow on Basslink

**VRE semi-scheduled curtailment – calendar year 2023**

DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
-	-	-	-	-	-

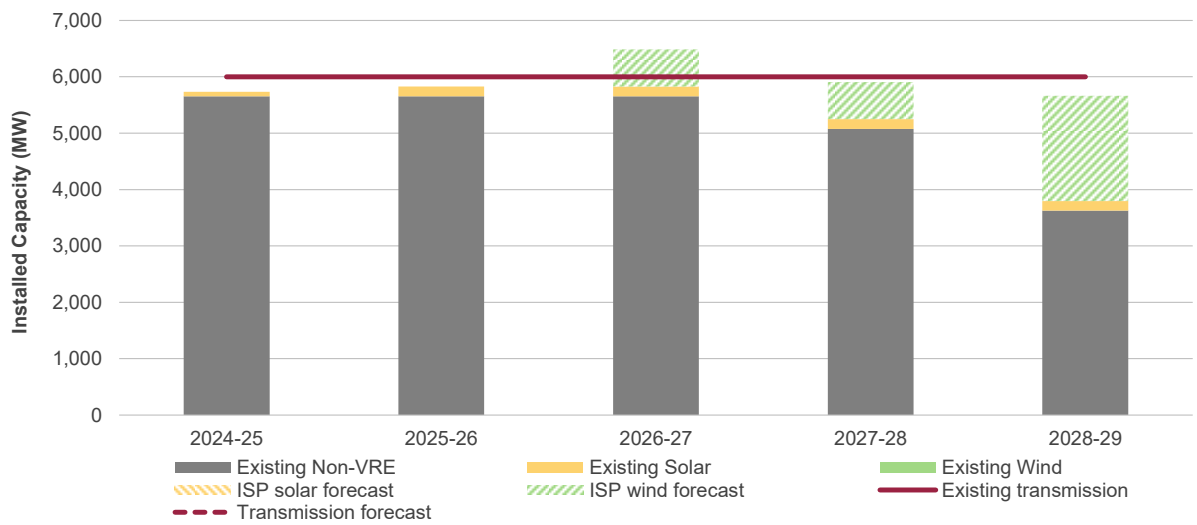
**VRE curtailment – ISP forecast**

Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	8%	-	10%	-	7%

ISP forecast

ISP forecast												
VRE outlook	Solar PV (MW)					Wind (MW)						
	Existing/ committed/ anticipated	Projected					Existing/ committed/ anticipated	Projected				
		2025	2026	2027	2028	2029		2025	2026	2027	2028	2029
<b>Step Change</b>	174	-	-	-	-	-	-	-	-	650	650	1,850

Transmission access expansion for Step Change

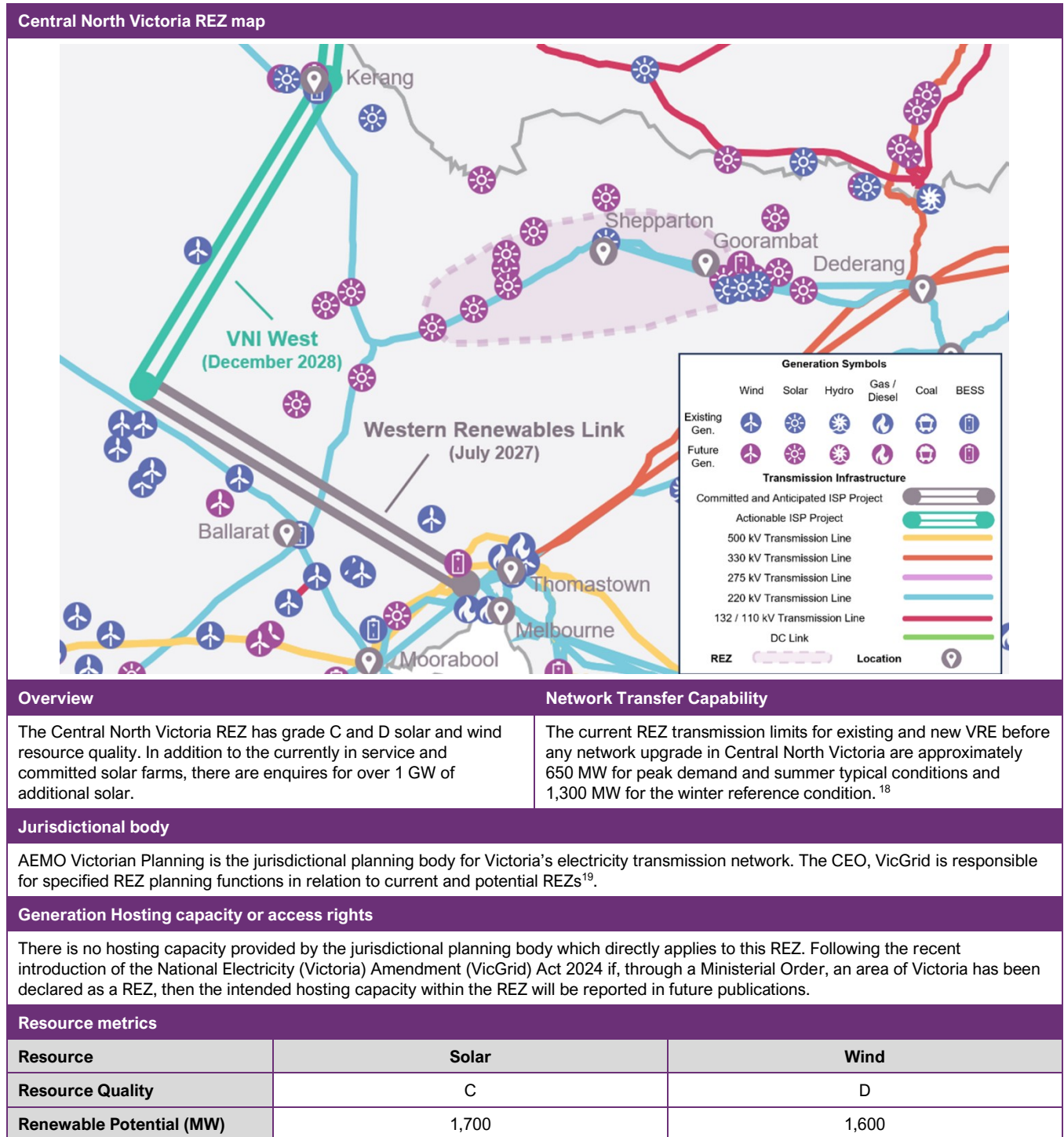


Note: The transmission access expansion forecasts show the results for SEVIC1 group constraint augmentation, which includes VRE projections for V5 and V7 as well as the effect of Basslink and Project Link flows between Tasmania and Victoria.

Committed, Anticipated, and Actionable Transmission Projects	Timing	Status	Increase in network transfer capability
-	-	-	-

## A7.7 V6 – Central North Victoria

### REZ information



<sup>18</sup> See ‘Build Limits’ tab of the Draft 2024 Inputs and Assumptions Workbook, at <https://aemo.com.au/-/media/files/major-publications/isp/2023/2023-iasr-assumptions-workbook.xlsx?la=en>.

<sup>19</sup> The REZ planning functions are specified in section 53(1)(a) of the National Electricity (Victoria) Act, inserted by the *National Electricity (Victoria) Amendment (VicGrid) Act 2024*. See <https://www.legislation.vic.gov.au/in-force/acts/national-electricity-victoria-act-2005/035>. These functions will be performed through the preparation of a Victorian transmission plan and guidelines.

Climate hazard			
Temperature score	D	Bushfire score	D

Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
Solar	66	0.9455 - 0.9477
	220	0.9626

Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
N^N_NIL_X5_xxx	1,041.3	7,527,221.4	Generation contributing to flow from Balranald to Darlington Point 220 kV on trip of the Bendigo-Shepparton 220 kV line

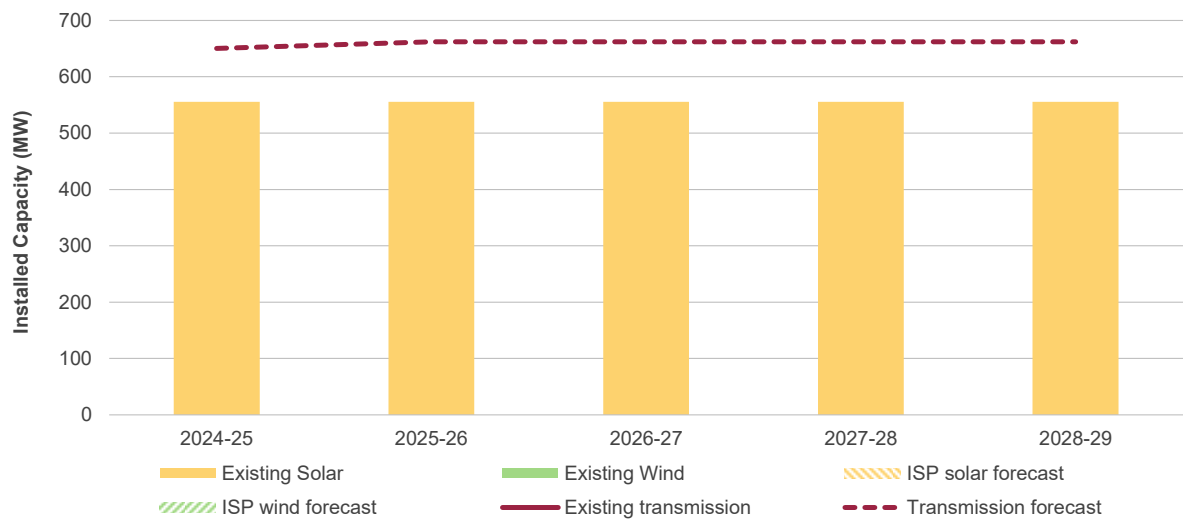
VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
GLENSF1	Glenrowan Solar Farm	102	0.3	0.0	13
GLRWNSF1	Glenrowan West Solar Farm	110	0.1	0.0	133
NUMURSF1	Numurkah Solar Farm	100	0.2	0.0	356
WINTSF1	Winton Solar Farm	85	0.0	0.0	79

VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	2%	-	5%	-	11%

ISP forecast

ISP forecast												
VRE outlook	Solar PV (MW)					Wind (MW)						
	Existing/ committed/ anticipated	Projected					Existing/ committed/ anticipated	Projected				
		2025	2026	2027	2028	2029		2025	2026	2027	2028	2029
<b>Step Change</b>	555	-	-	-	-	-	-	-	-	-	-	-

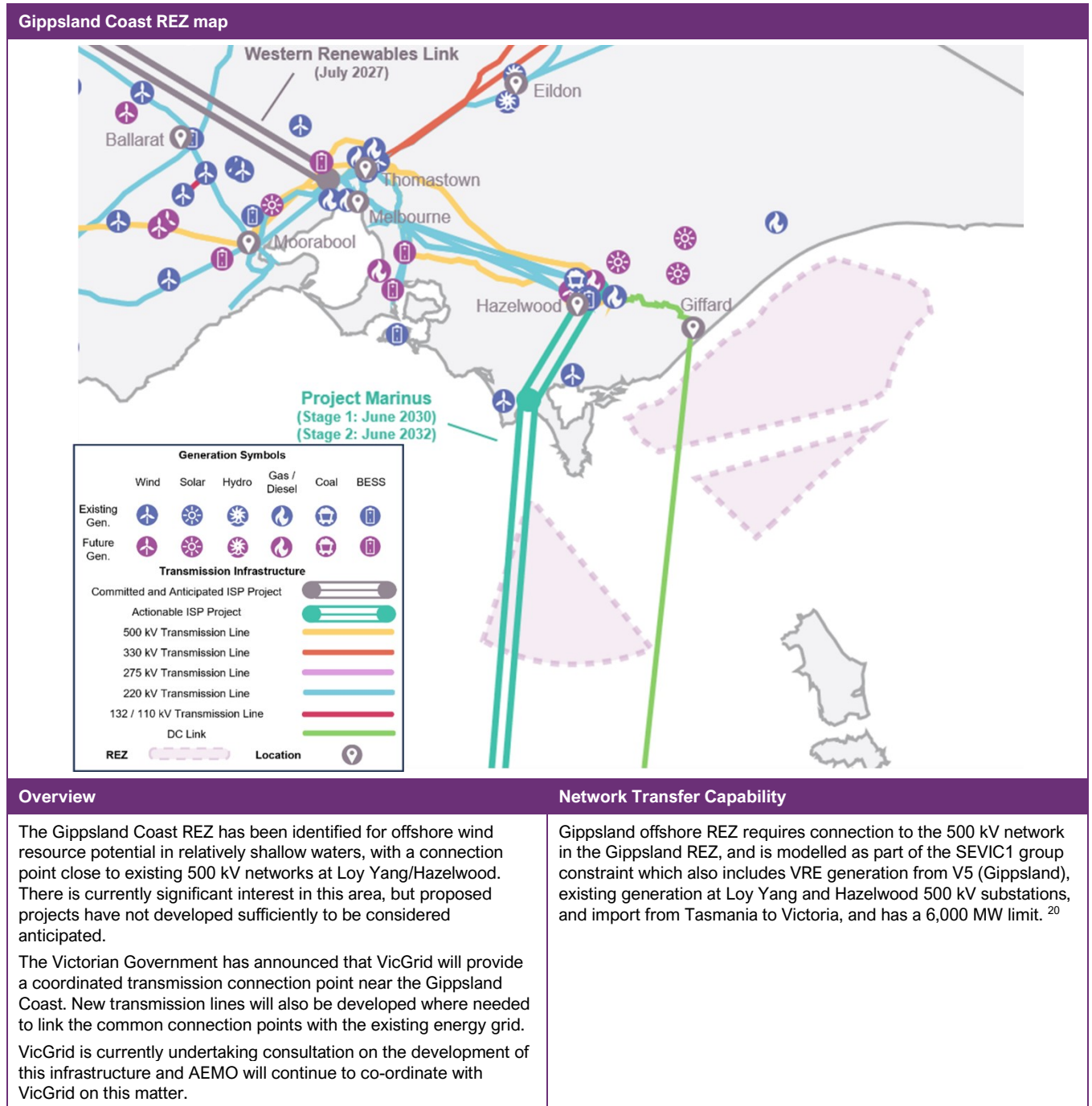
Transmission access expansion for Step Change



Committed, Anticipated, and Actionable Transmission Projects	Timing	Status	Increase in network transfer capability
Victoria Central North REZ minor augmentations	October 2025	Committed	12 MW

## A7.8 V7 – Gippsland Coast

### REZ information



<sup>20</sup> See 'Build Limits' tab of the Draft 2024 Inputs and Assumptions Workbook, at <https://aemo.com.au/-/media/files/major-publications/isp/2023/2023-iasr-assumptions-workbook.xlsx?la=en>.

Jurisdictional body	Reference	Function	
AEMO Victorian Planning is the jurisdictional planning body for Victoria’s electricity transmission network. The CEO, VicGrid is responsible for specified REZ planning functions in relation to current and potential REZs <sup>21</sup> .			
Offshore Wind Energy Victoria (OWEV) <sup>22</sup>	-	Part of the Department of Energy, Environment and Climate Action, OWEV is responsible in is coordinating the work streams to support the industry’s development.	
Generation Hosting capacity or access rights			
There is no hosting capacity provided by the jurisdictional planning body which directly applies to this REZ. Following the recent introduction of the National Electricity (Victoria) Amendment (VicGrid) Act 2024 if, through a Ministerial Order, an area of Victoria has been declared as a REZ, then the intended hosting capacity within the REZ will be reported in future publications.			
Resource metrics			
Resource	Offshore Wind (fixed)	Offshore Wind (floating)	
Resource Quality	A	A	
Renewable Potential (MW)	54,996	5,000	
Climate hazard			
Temperature score	C	Bushfire score	D

Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
-	-	-

Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
-	-	-	-

VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
-	-	-	-	-	-

VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	-	-	-	-	-

<sup>21</sup> The REZ planning functions are specified in section 53(1)(a) of the National Electricity (Victoria) Act, inserted by the *National Electricity (Victoria) Amendment (VicGrid) Act 2024*. See <https://www.legislation.vic.gov.au/in-force/acts/national-electricity-victoria-act-2005/035>. These functions will be performed through the preparation of a Victorian transmission plan and guidelines.

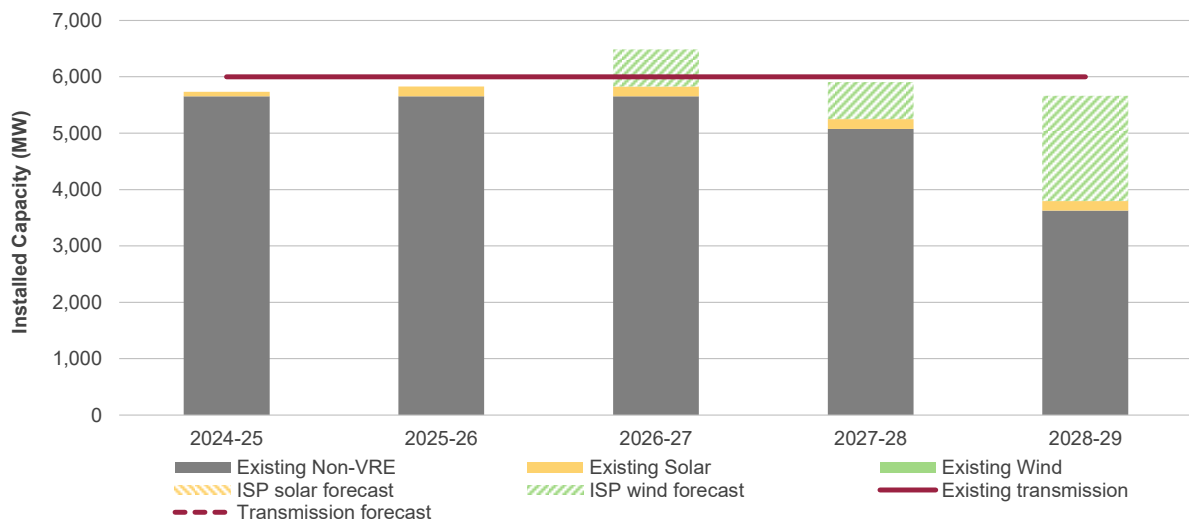
<sup>22</sup> See <https://www.energy.vic.gov.au/renewable-energy/offshore-wind-energy>.



ISP forecast

ISP forecast												
VRE outlook	Solar PV (MW)						Wind (MW)					
	Existing/ committed/ anticipated	Projected					Existing/ committed/ anticipated	Projected				
		2025	2026	2027	2028	2029		2025	2026	2027	2028	2029
<b>Step Change</b>	-	-	-	-	-	-	-	-	-	-	-	-

Transmission access expansion for Step Change

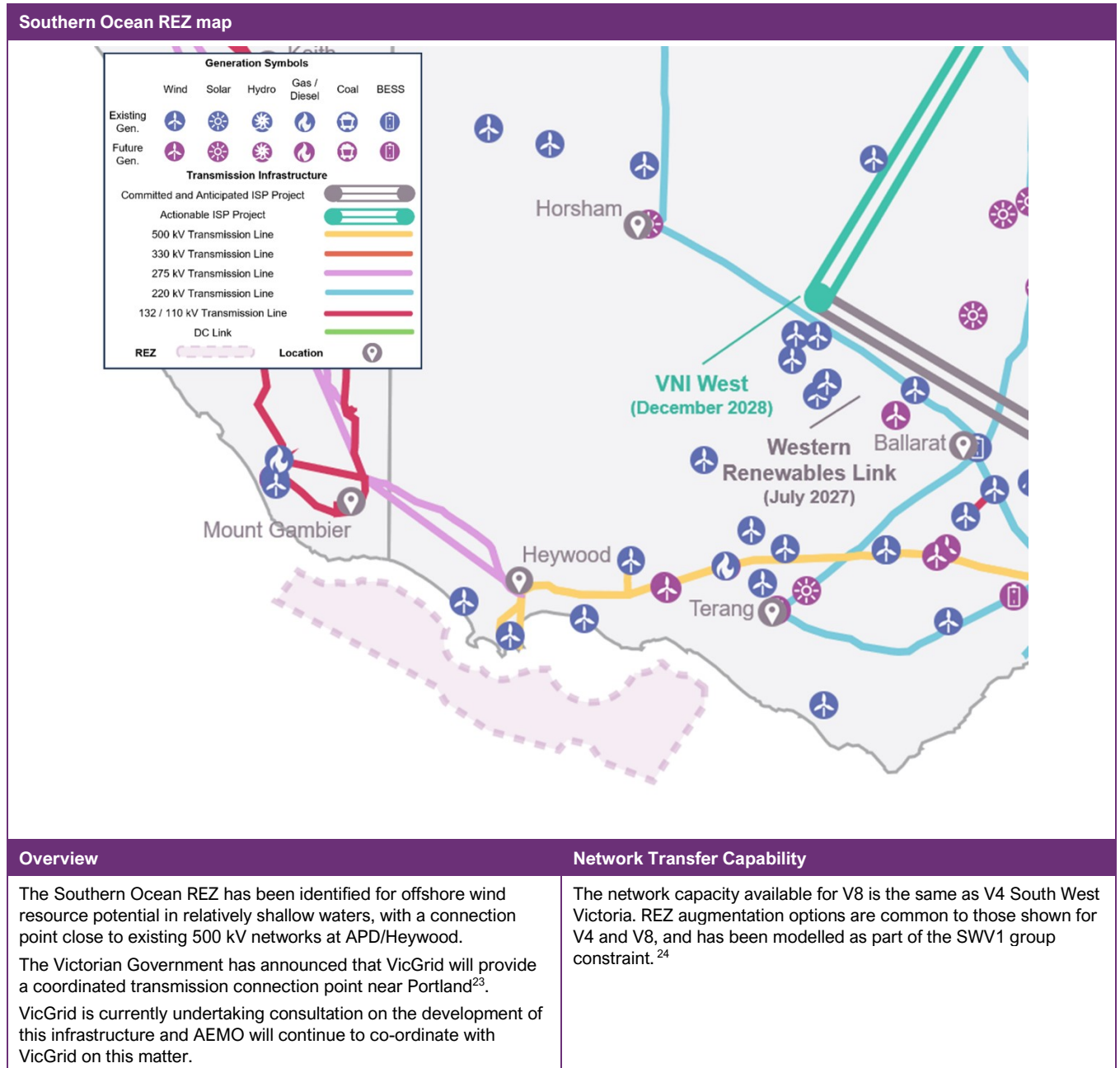


Note: The transmission access expansion forecasts show the results for SEVIC1 group constraint augmentation, which includes VRE projections for V5 and V7 as well as the effect of Basslink and Project Link flows between Tasmania and Victoria.

Committed, Anticipated, and Actionable Transmission Projects	Timing	Status	Increase in network transfer capability
-	-	-	-

## A7.9 V8 – Southern Ocean

### REZ information



**Overview**

The Southern Ocean REZ has been identified for offshore wind resource potential in relatively shallow waters, with a connection point close to existing 500 kV networks at APD/Heywood.

The Victorian Government has announced that VicGrid will provide a coordinated transmission connection point near Portland<sup>23</sup>.

VicGrid is currently undertaking consultation on the development of this infrastructure and AEMO will continue to co-ordinate with VicGrid on this matter.

**Network Transfer Capability**

The network capacity available for V8 is the same as V4 South West Victoria. REZ augmentation options are common to those shown for V4 and V8, and has been modelled as part of the SWV1 group constraint.<sup>24</sup>

<sup>23</sup> See [https://www.energy.vic.gov.au/\\_data/assets/pdf\\_file/0030/603399/The-Victorian-Offshore-Wind-Implementation-Statement-1.pdf](https://www.energy.vic.gov.au/_data/assets/pdf_file/0030/603399/The-Victorian-Offshore-Wind-Implementation-Statement-1.pdf).

<sup>24</sup> See 'Build Limits' tab of the Draft 2024 Inputs and Assumptions Workbook, at <https://aemo.com.au/-/media/files/major-publications/isp/2023/2023-iasr-assumptions-workbook.xlsx?la=en>.

Jurisdictional body	Reference	Function	
AEMO Victorian Planning is the jurisdictional planning body for Victoria’s electricity transmission network. The CEO, VicGrid is responsible for specified REZ planning functions in relation to current and potential REZs <sup>25</sup> .			
Offshore Wind Energy Victoria (OWEV) <sup>26</sup>		Part of the Department of Energy, Environment and Climate Action, OWEV is responsible in is coordinating the work streams to support the industry’s development.	
Generation Hosting capacity or access rights			
There is no hosting capacity provided by the jurisdictional planning body which directly applies to this REZ. Following the recent introduction of the National Electricity (Victoria) Amendment (VicGrid) Act 2024 if, through a Ministerial Order, an area of Victoria has been declared as a REZ, then the intended hosting capacity within the REZ will be reported in future publications.			
Resource metrics			
Resource	Offshore Wind (fixed)	Offshore Wind (floating)	
Resource Quality	A	A	
Renewable Potential (MW)	3,948	16,596	
Climate hazard			
Temperature score	C	Bushfire score	D

Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
-	-	-

Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
-	-	-	-

VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
-	-	-	-	-	-

VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-.27	-	-	-	-	-

<sup>25</sup> The REZ planning functions are specified in section 53(1)(a) of the National Electricity (Victoria) Act, inserted by the *National Electricity (Victoria) Amendment (VicGrid) Act 2024*. See <https://www.legislation.vic.gov.au/in-force/acts/national-electricity-victoria-act-2005/035>. These functions will be performed through the preparation of a Victorian transmission plan and guidelines.

<sup>26</sup> See <https://www.energy.vic.gov.au/renewable-energy/offshore-wind-energy>.

<sup>27</sup> V4 and V8 are both modelled behind the SWV1 group constraint which is forecast to have curtailment of 4% in 2025, 0% in 2026, and 0% in 2027.

ISP forecast

ISP forecast												
VRE outlook	Solar PV (MW)						Wind (MW)					
	Existing/ committed/ anticipated	Projected					Existing/ committed/ anticipated	Projected				
		2025	2026	2027	2028	2029		2025	2026	2027	2028	2029
<b>Step Change</b>	-	-	-	-	-	-	-	-	-	-	-	-

Transmission access expansion for Step Change



Note: The transmission access expansion forecasts show the results for SWV1 group constraint augmentation, which includes VRE projections for V4 and V8.

Committed, Anticipated, and Actionable Transmission Projects	Timing	Status	Increase in network transfer capability <sup>28</sup>
Mortlake Turn-In	October 2025	Committed	1,500 MW
South West VIC REZ minor augmentations	December 2024 <sup>29</sup>	Committed	81 MW

<sup>28</sup> Total REZ network limit increase in V4 and V8 combined.

<sup>29</sup> Under the Draft 2024 ISP Step Change scenario, the project is modelled in 2025-26.

## A7.10 Non-REZ

### Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
V^^N_NIL_1	585.0	435,325.3	Generation in South-West New South Wales, North-West Victoria and North-East Victoria
V::N_NIL_xxx	321.4	148,210.4	Victorian generation, via limitation of Victorian export

VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
BALDHW1	Bald Hills Wind Farm	106	0.0	0.0	15
CHYTWF1	Cherry Tree Wind Farm	57	0.0	0.0	0