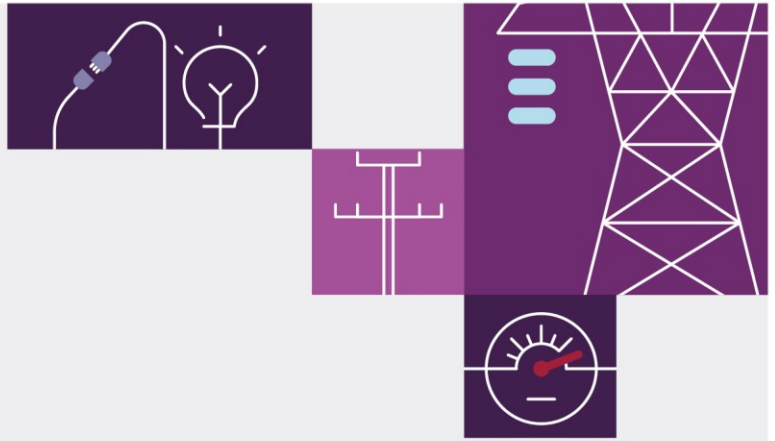


2024 ELI Report Appendix 5. South Australia

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.

Anyone proposing to use the information in this publication (which includes information and forecasts from third parties) should independently verify its accuracy, completeness and suitability for purpose, and obtain independent and specific advice from appropriate experts.

Accordingly, to the maximum extent permitted by law, AEMO and its officers, employees and consultants involved in the preparation of this publication:

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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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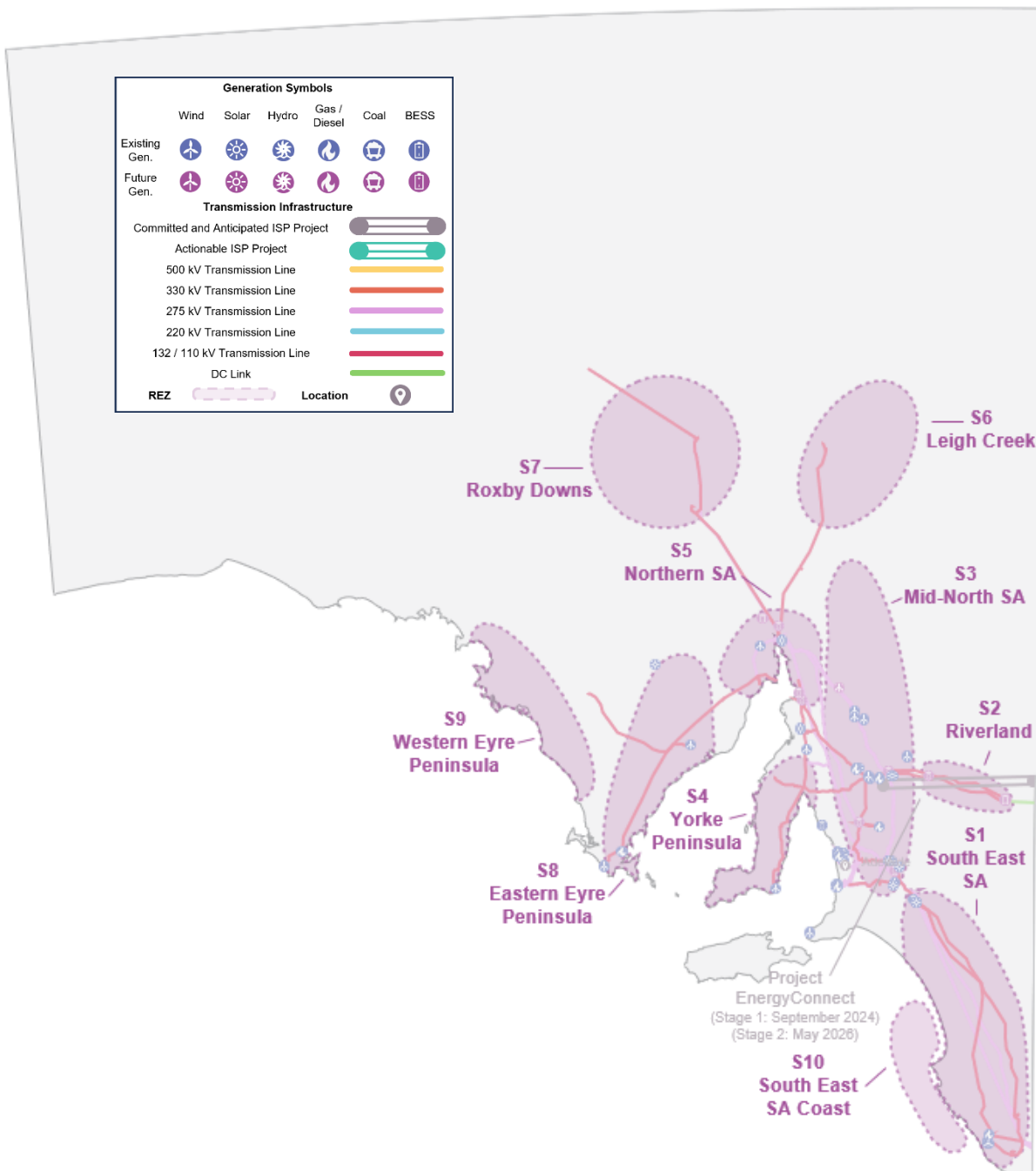
Figure 1	Overview of South Australia region and REZs	4
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A5.1 Introduction

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

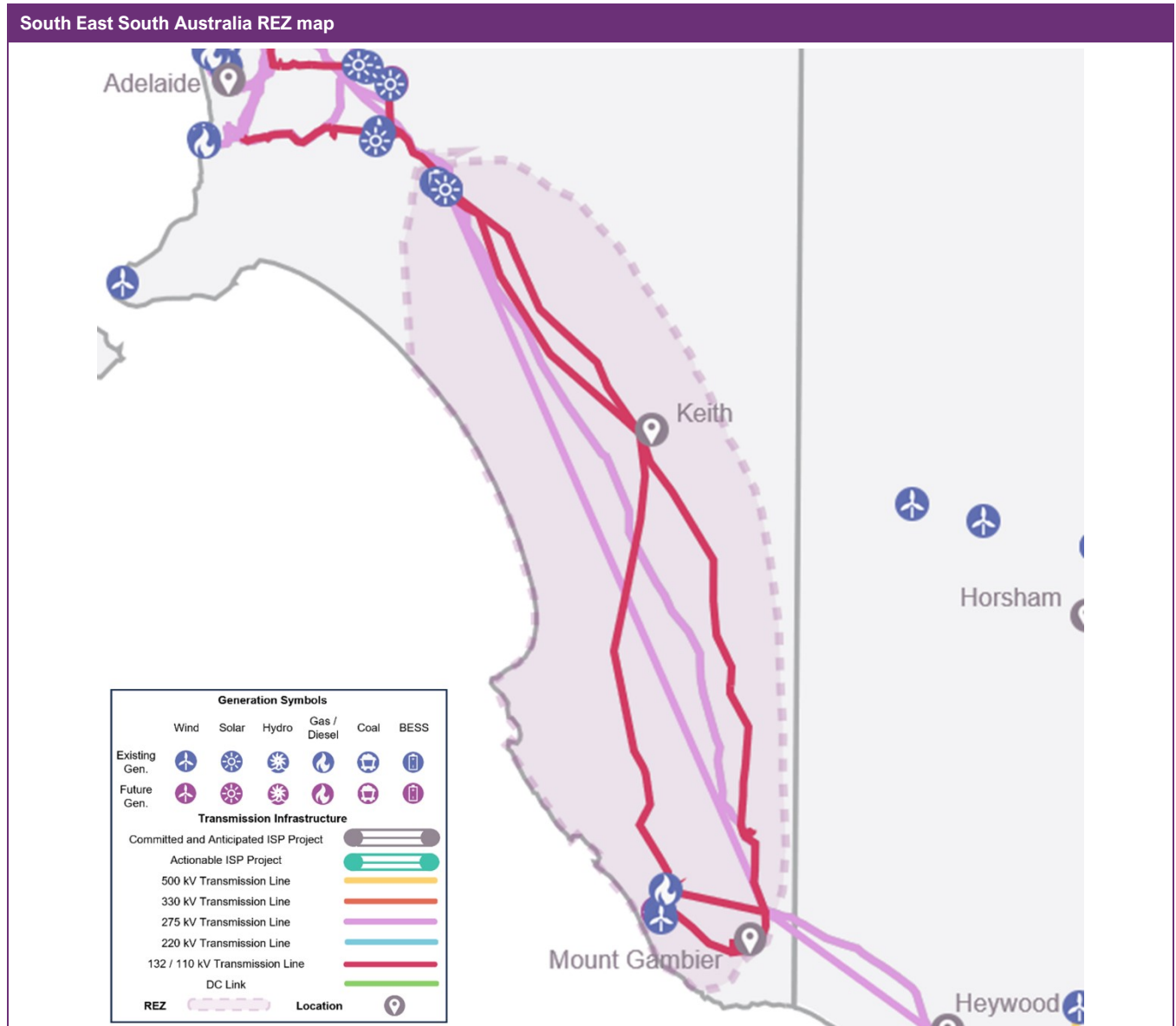
This appendix uses existing sources of publicly available information which includes the Draft 2024 ISP. Some of this information may change with the publication of the Final 2024 ISP in June 2024.

Figure 1 Overview of South Australia region and REZs



A5.2 S1 – South East South Australia

REZ information



Overview

The South East South Australia REZ lies on the major 275 kV route of the South Australia – Victoria Heywood interconnector. It has C grade wind resource quality.

Network Transfer Capability

The existing network capacity of this REZ is modelled as part of South East South Australia – Central South Australia (SESA-CSA) sub-regional maximum transfer capability of 650 MW.¹ Other than the preparatory activity upgrade, there are no augmentation options specifically for this REZ. The associated augmentations are the VIC-SESA and SESA-CSA flow path augmentations.

Jurisdictional body

The South East South Australia REZ’s jurisdictional planning body is ElectraNet.

¹ 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>.

Generation Hosting capacity or access rights				
There is no hosting capacity provided by the jurisdictional planning body which directly applies to this REZ. AEMO will work with the relevant parties to understand the hosting capacity for future publications.				
Resource metrics				
Resource	Solar		Wind	
Resource Quality	D		C	
Renewable Potential (MW)	100		3,200	
Climate hazard				
Temperature score	D		Bushfire score	D

Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
Solar	3.3 – 11	0.9802 - 0.9993
	132	1.009 - 1.0102
Wind	33	0.9709 - 0.9755

Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
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 Tailem Bend
S>NIL_SGBN_SGSE-T2	19.6	116,853.7	Generation contributing to flow from Snuggery to South East 132 kV on trip of the Snuggery-Blanche 132 kV line

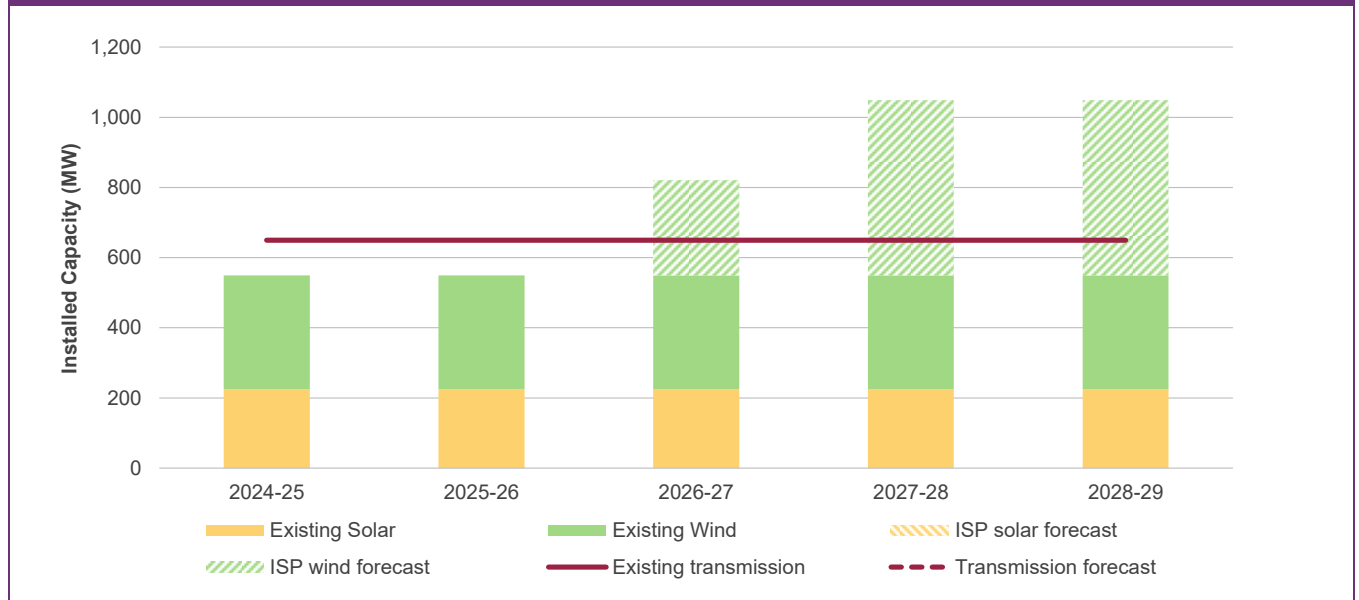
VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
CNUNDAWF	Canunda Wind Farm	46	0.2	0.0	205
LKBONNY1	Lake Bonney Wind Farm Stage 1	81	1.2	0.3	2,218
LKBONNY2	Lake Bonney Wind Farm Stage 2	159	1.6	0.7	5,977
LKBONNY3	Lake Bonney Wind Farm Stage 3	39	2.5	0.3	2,259
MAPS2PV1	Mannum - Adelaide Pipeline Pumping Station No 2, PV Units 1-6	13	0.5	0.0	131
MAPS3PV1	Mannum - Adelaide Pipeline Pumping Station No 3, PV Units 1-6	12	0.2	0.0	25
MBPS2PV1	Murray Bridge-Onkaparinga Pipeline Pumping Station No 2	10	0.0	0.0	2

VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	14%	-	13%	-	10%

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
Step Change	225	-	-	-	-	-	325	-	-	250	500	500

Transmission access expansion for Step Change

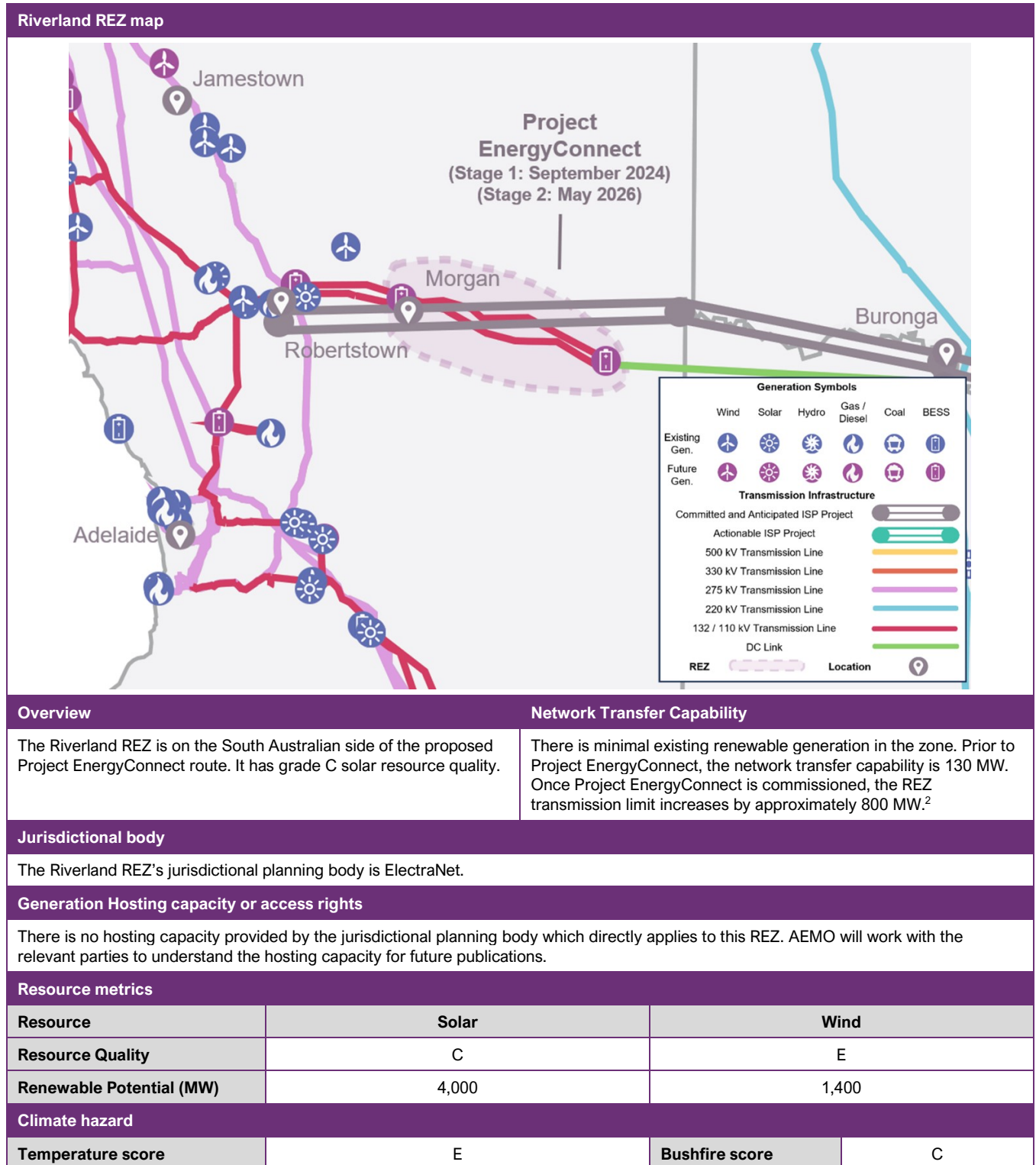


Note: The transmission limit is modelled using the SESA-CSA flow path limit.

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

A5.3 S2 – Riverland

REZ information



² 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>.

Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
Solar	3.3	0.9751 - 0.9787

Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
S>NIL_MHNSW1_MHNSW2	1,336.6	8,148,303.7	Generation contributing to westward flow on the Murraylink DC interconnector
SVML^NIL_MH-CAP_ON	520.7	593,332.7	Generation contributing to Eastward flow on the Murraylink DC interconnector
S>NIL_NWRB2_NWRB1	376.8	2,716,676.0	Generation contributing to flow from North West Bend to Robertstown 132 kV on trip of a parallel line

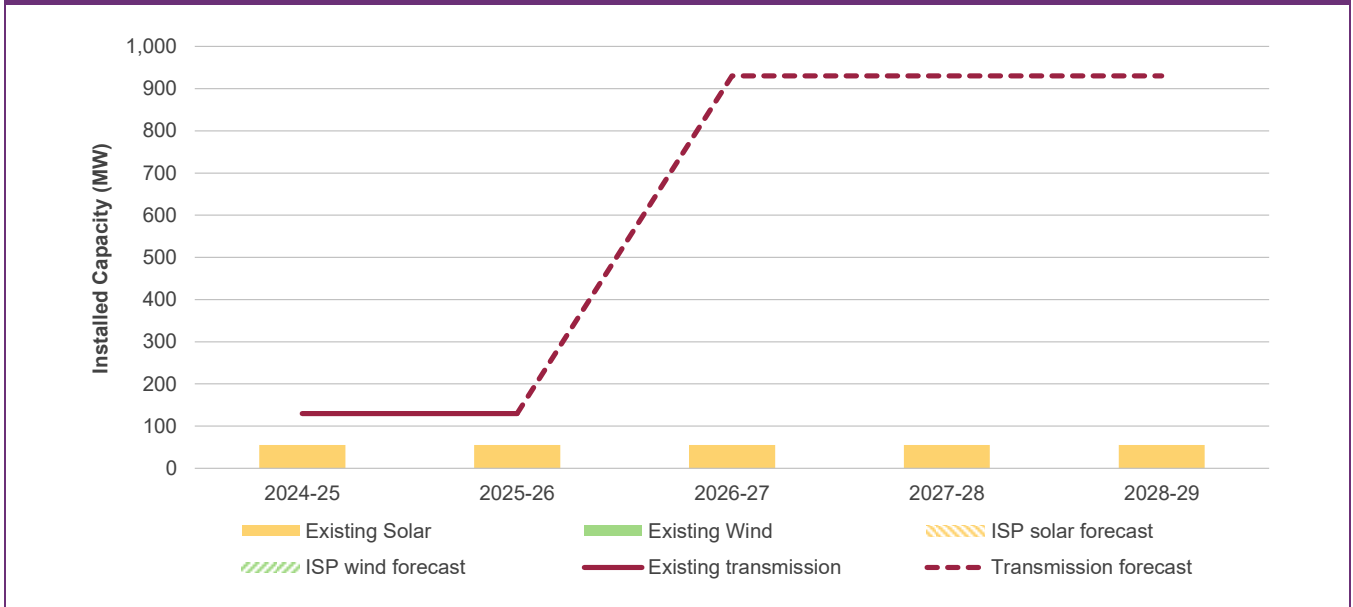
VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
MANNSF2	Mannum 2 Solar Farm	29	0.0	0.0	0
MWPS1PV1	Morgan-Whyalla Pipeline Pumping Station No 1	4	1.9	0.0	124
MWPS2PV1	Morgan-Whyalla Pipeline Pumping Station No 2	4	2.0	0.0	149
MWPS3PV1	Morgan-Whyalla Pipeline Pumping Station No 3	6	1.4	0.0	161
MWPS4PV1	Morgan-Whyalla Pipeline Pumping Station No 4	4	2.5	0.0	170

VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	17%	-	23%	-	19%

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
Step Change	55	-	-	-	-	-	-	-	-	-	-	-

Transmission access expansion for Step Change

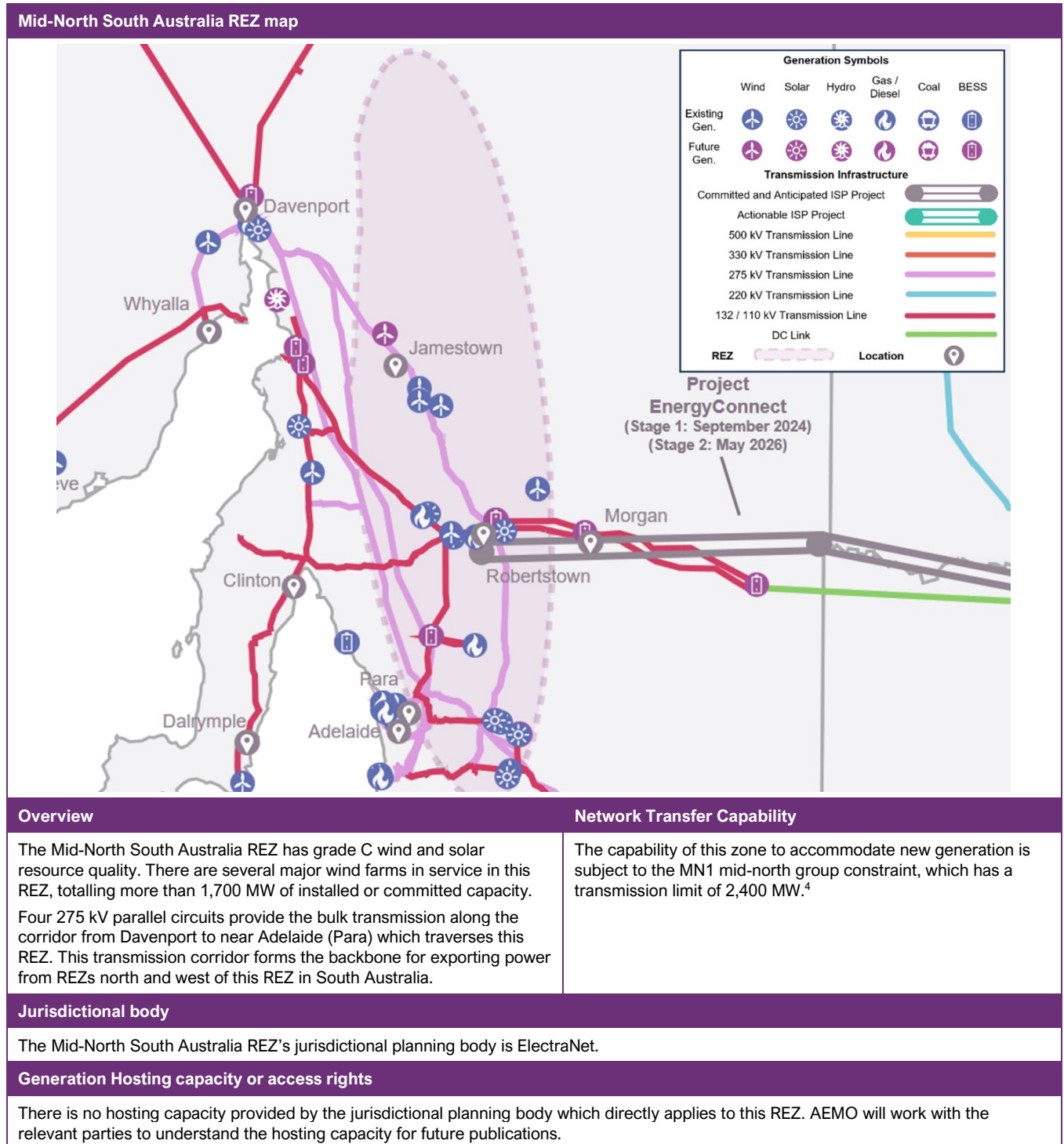


Committed, Anticipated, and Actionable Transmission Projects	Timing	Status	Increase in network transfer capability
Project EnergyConnect – Stage 2	May 2026 ³	Committed	800 MW

³ Under the Draft 2024 ISP Step Change scenario, the project is modelled with a timing of July 2026.

A5.4 S3 – Mid-North South Australia

REZ information



⁴ 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>.

Resource metrics			
Resource	Solar		Wind
Resource Quality	C		C
Renewable Potential (MW)	1,300		4,600
Climate hazard			
Temperature score	D		Bushfire score
			D

Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
Wind	33	0.8932
	132	0.9486 - 0.9547
	275	0.9423 - 0.9643

Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
S>NIL_NWRB2_NWRB1	376.8	2,716,676.0	Generation contributing to flow from North West Bend to Robertstown 132 kV on trip of a parallel line
S>NIL_HUWT_STBG3	368.3	3,234,034.9	Generation contributing to flow from Snowtown to Bungama 132 kV on trip of the Hummocks-Waterloo 132 kV line
S>>NIL_TWPA_TPRS	64.3	352,652.4	Generation contributing to flow from Templers to Roseworthy 132 kV on trip of the Templers West-Para 275 kV line
S>>NIL_RBTU_RBTU	27.7	72,496.6	Generation contributing to flow from Robertstown to Tungkillo 275 kV on trip of a parallel line
S>NIL_BWMP_RHBR-T	22.8	138,366.1	Generation contributing to flow from Red Hill to Brinkworth 132 kV on trip of the Blyth West-Munno Para 275 kV line
S>>NIL_RBTU_WTTP	20.3	66,116.3	Generation contributing to flow from Waterloo to Templers 132 kV on trip of a Robertstown-Tungkillo 275 kV line
S>NIL_BWMP_HUWT	13.1	102,338.3	Generation contributing to flow from Hummocks to Waterloo 132 kV on trip of the Blyth West-Munno Para 275 kV line

VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
BLUFF1	The Bluff Wind Farm	53	0.3	0.0	418
CLEMPWF	Clements Gap Wind Farm	57	1.3	0.3	2,198
GSWF1A	Goyder South Wind Farm 1A	201	0.0	0.0	0
GSWF1B1	Goyder South Wind Farm 1B	196	0.0	0.0	0
HALLWF1	Hallett 1 Wind Farm	95	1.7	0.6	4,851
HALLWF2	Hallett 2 Wind Farm	71	2.0	0.5	4,319
HDWF1	Hornsedale Wind Farm	102	1.3	0.5	4,436

HDWF2	Hornsedale Wind Farm 2	102	1.2	0.5	3,953
HDWF3	Hornsedale Wind Farm 3	109	1.1	0.4	3,912
NBHWF1	North Brown Hill Wind Farm	132	0.4	0.2	1,736
SNOWNTH1	Snowtown Wind Farm Stage 2 North	144	0.4	0.2	1,562
SNOWSTH1	Snowtown South Wind Farm	126	0.2	0.1	954
SNOWTWN1	Snowtown Wind Farm Units 1 And 47	99	2.7	1.0	8,902
WATERLWF	Waterloo Wind Farm	130	1.9	0.7	6,510
WGWFF1	Willogeleche Wind Farm	119	8.4	3.4	29,563

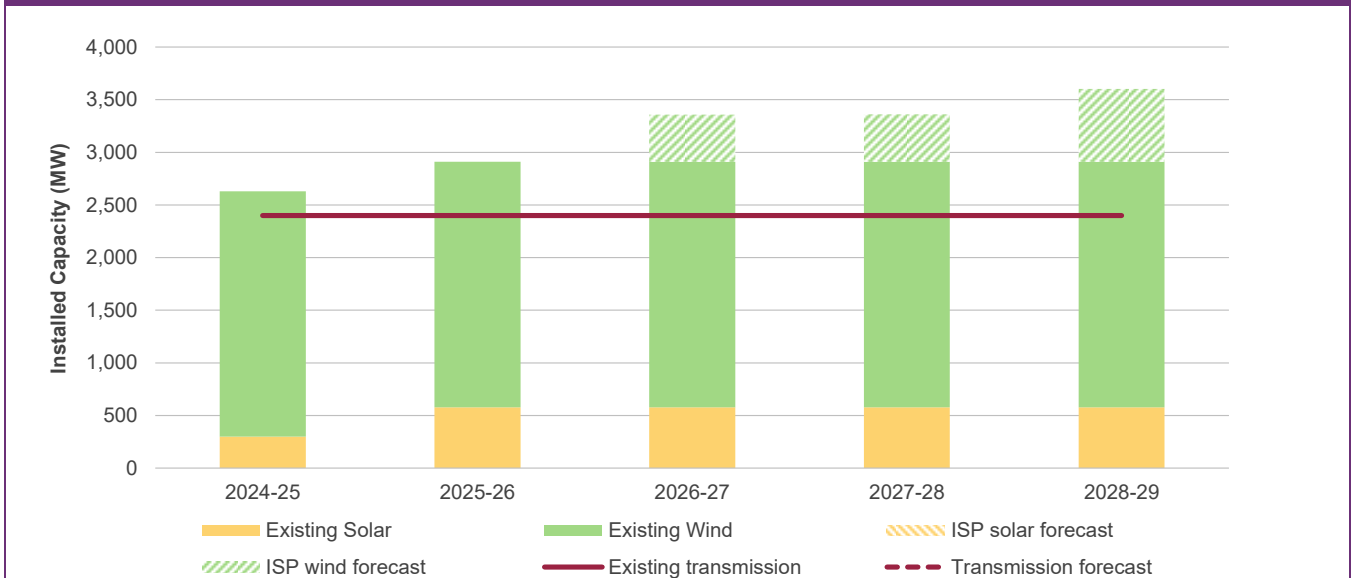
VRE curtailment – ISP forecast

Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	8%	-	9%	-	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
Step Change	-	-	-	-	-	-	1,732	-	-	450	450	550

Transmission access expansion for Step Change

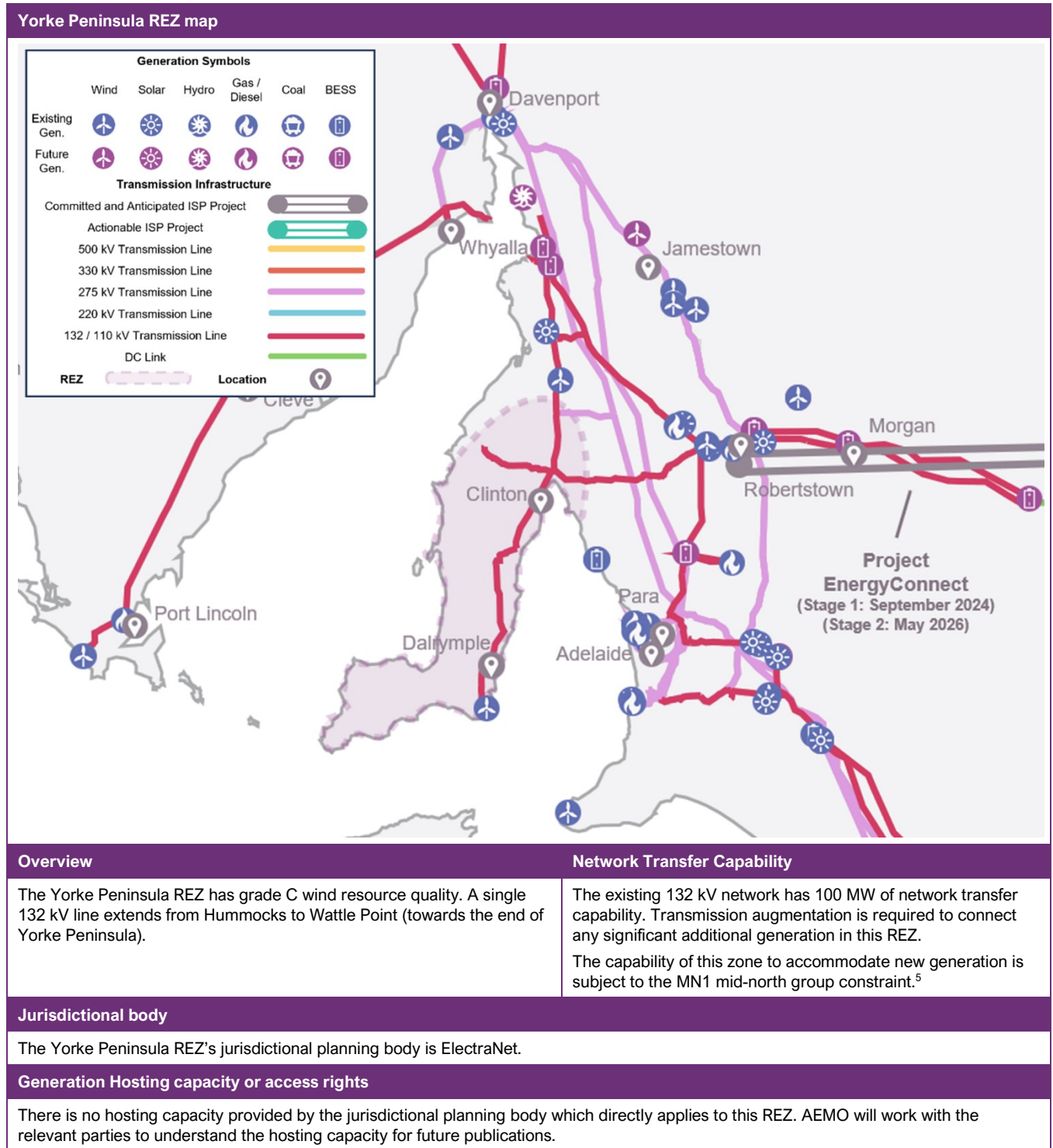


Note: The transmission access expansion forecasts show the results for the MN1 group constraint augmentation.

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

A5.5 S4 – Yorke Peninsula

REZ information



⁵ 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>.

Resource metrics			
Resource	Solar		Wind
Resource Quality	F		C
Renewable Potential (MW)	-		1,400
Climate hazard			
Temperature score	D	Bushfire score	C

Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
Wind	132	0.8179

Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
S>NIL_HUWT_STBG3	368.3	3,234,034.9	Generation contributing to flow from Snowtown to Bungama 132 kV on trip of the Hummocks-Waterloo 132 kV line
S>NIL_BWMP_HUWT	13.1	102,338.3	Generation contributing to flow from Hummocks to Waterloo 132 kV on trip of the Blyth West-Munno Para 275 kV line

VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
WPWF	Wattle Point Wind Farm	91	4.0	1.2	10,842

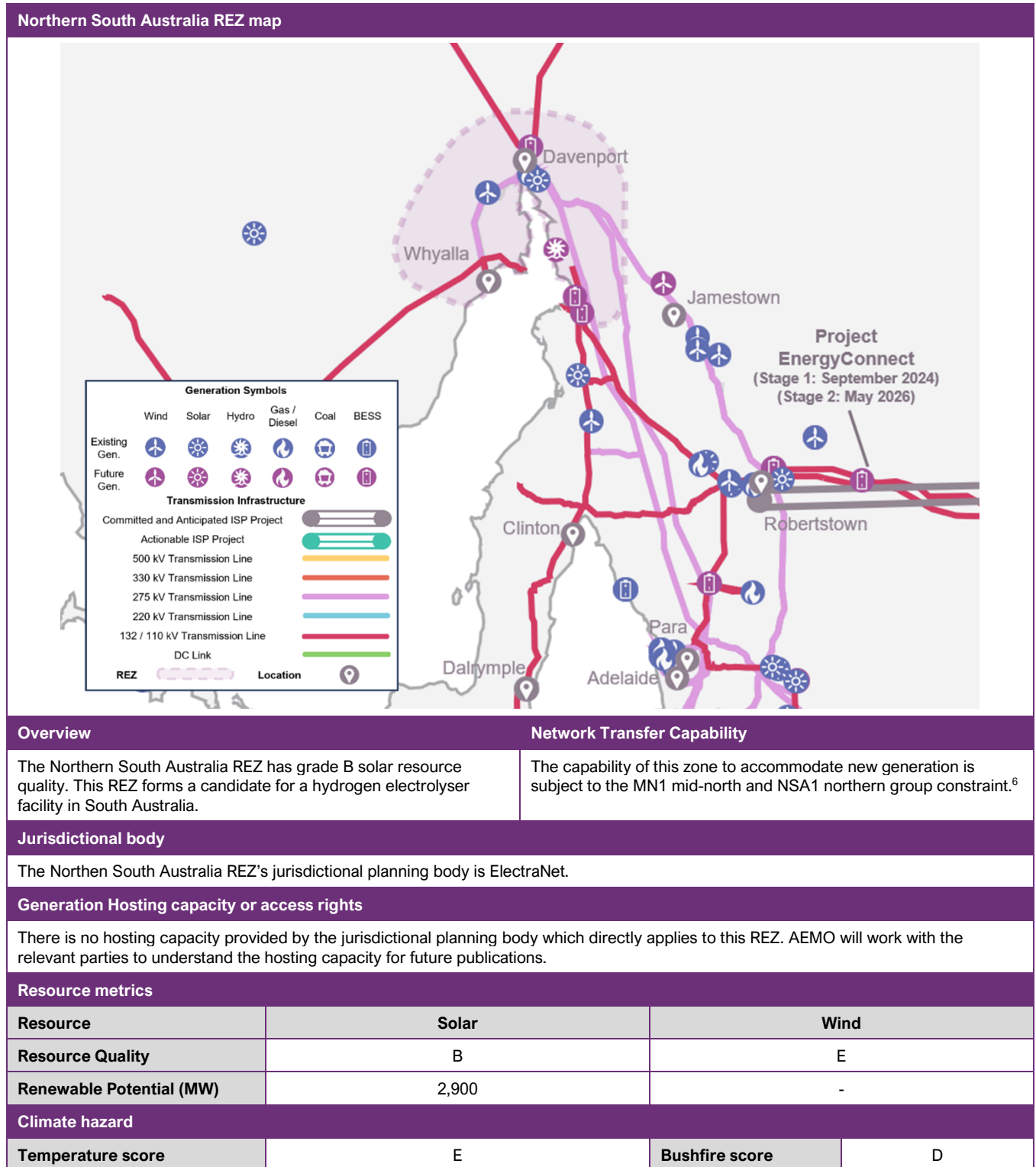
VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	13%	-	15%	-	11%

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																																										
Step Change	-	-	-	-	-	-	91	-	-	-	-	50																																										
Transmission access expansion for Step Change																																																						
<p>The chart displays the projected installed capacity in MW for five periods: 2024-25, 2025-26, 2026-27, 2027-28, and 2028-29. The y-axis ranges from 0 to 140 MW. Existing solar capacity is constant at 0 MW. Existing wind capacity is approximately 90 MW. The ISP solar forecast adds about 20 MW starting in 2026-27. The ISP wind forecast adds about 20 MW starting in 2026-27. Existing transmission is a constant 100 MW, and the transmission forecast is also 100 MW.</p> <table border="1"> <caption>Installed Capacity (MW) Data</caption> <thead> <tr> <th>Period</th> <th>Existing Solar</th> <th>Existing Wind</th> <th>ISP solar forecast</th> <th>ISP wind forecast</th> <th>Existing transmission</th> <th>Transmission forecast</th> </tr> </thead> <tbody> <tr> <td>2024-25</td> <td>0</td> <td>90</td> <td>0</td> <td>0</td> <td>100</td> <td>100</td> </tr> <tr> <td>2025-26</td> <td>0</td> <td>90</td> <td>0</td> <td>0</td> <td>100</td> <td>100</td> </tr> <tr> <td>2026-27</td> <td>0</td> <td>90</td> <td>20</td> <td>20</td> <td>100</td> <td>100</td> </tr> <tr> <td>2027-28</td> <td>0</td> <td>90</td> <td>20</td> <td>20</td> <td>100</td> <td>100</td> </tr> <tr> <td>2028-29</td> <td>0</td> <td>90</td> <td>20</td> <td>40</td> <td>100</td> <td>100</td> </tr> </tbody> </table>													Period	Existing Solar	Existing Wind	ISP solar forecast	ISP wind forecast	Existing transmission	Transmission forecast	2024-25	0	90	0	0	100	100	2025-26	0	90	0	0	100	100	2026-27	0	90	20	20	100	100	2027-28	0	90	20	20	100	100	2028-29	0	90	20	40	100	100
Period	Existing Solar	Existing Wind	ISP solar forecast	ISP wind forecast	Existing transmission	Transmission forecast																																																
2024-25	0	90	0	0	100	100																																																
2025-26	0	90	0	0	100	100																																																
2026-27	0	90	20	20	100	100																																																
2027-28	0	90	20	20	100	100																																																
2028-29	0	90	20	40	100	100																																																
Committed, Anticipated, and Actionable Transmission Projects				Timing	Status	Increase in network transfer capability																																																
-				-	-	-																																																

A5.6 S5 – Northern South Australia

REZ information



⁶ 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>.

Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
Solar	132	0.9565
	275	0.9608
Wind	275	0.9576 - 0.9608

Congestion and curtailment

Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
S>NIL_HUWT_STBG3	368.3	3,234,034.9	Generation contributing to flow from Snowtown to Bungama 132 kV on trip of the Hummocks-Waterloo 132 kV line

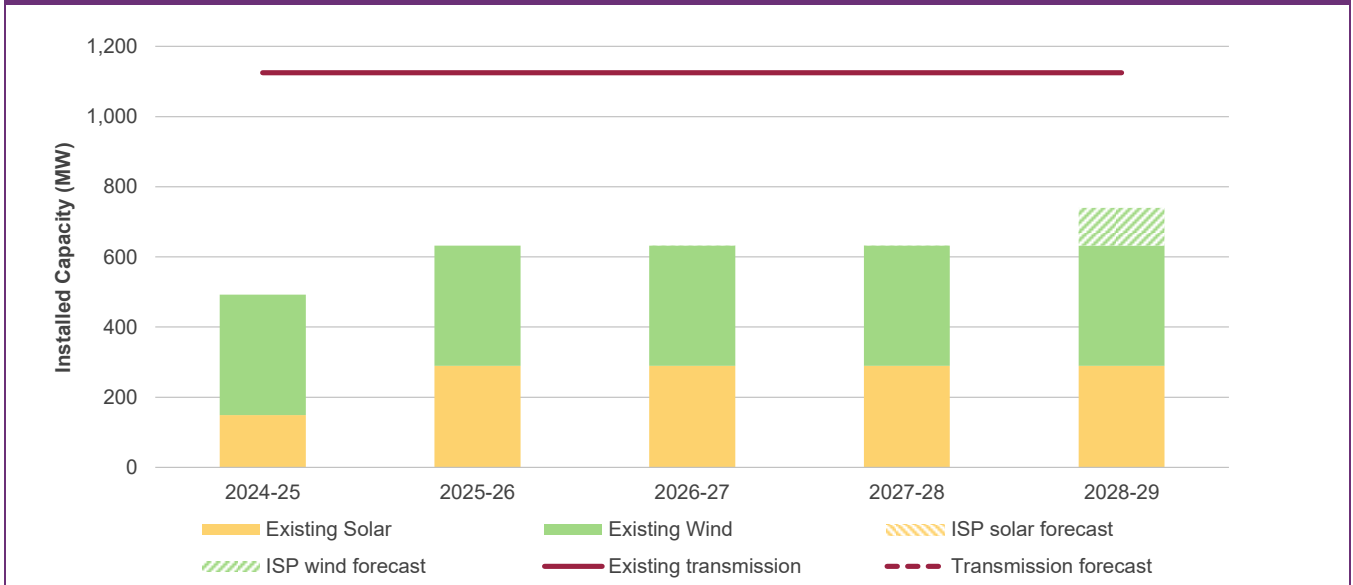
VRE semi-scheduled curtailment – calendar year 2023					
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)
BNGSF1	Bungala One Solar Farm	110	0.3	0.1	932
BNGSF2	Bungala Two Solar Farm	110	0.3	0.1	840
LGAPWF1	Lincoln Gap Wind Farm Stage 1	123	0.6	0.3	2,444
LGAPWF2	Lincoln Gap Wind Farm Stage 2	85	0.9	0.3	2,564
PAREPS1	Port Augusta Renewable Energy Park – Solar	77	1.5	0.3	2,670
PAREPW1	Port Augusta Renewable Energy Park – Wind	201	2.0	1.5	13,551

VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	9%	-	9%	-	8%

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
Step Change	578	-	-	-	-	-	422	-	-	-	-	-

Transmission access expansion for Step Change

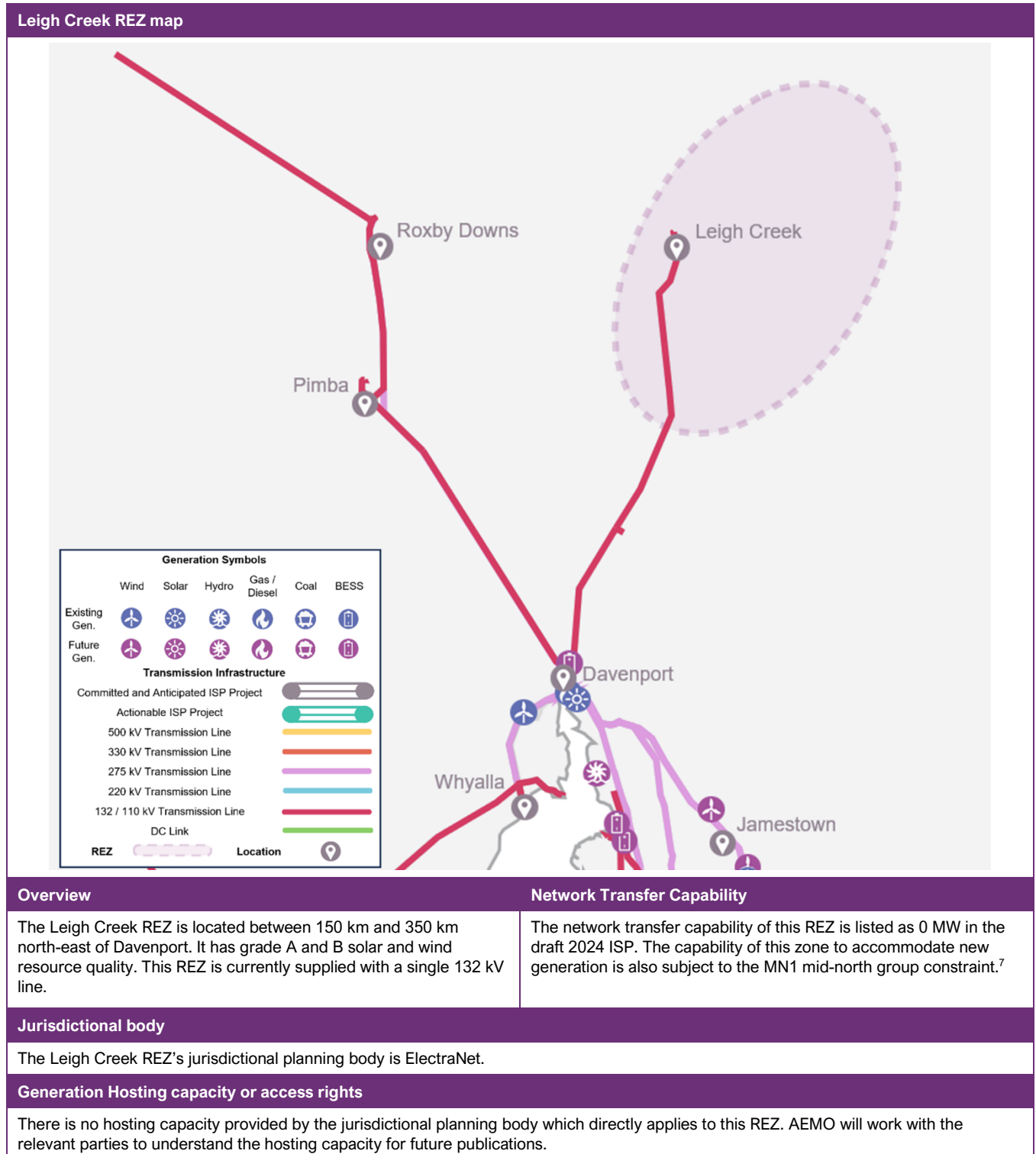


Note: S5 forecast shows results for the NSA1 group constraint augmentation.

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

A5.7 S6 – Leigh Creek

REZ information



Overview

The Leigh Creek REZ is located between 150 km and 350 km north-east of Davenport. It has grade A and B solar and wind resource quality. This REZ is currently supplied with a single 132 kV line.

Network Transfer Capability

The network transfer capability of this REZ is listed as 0 MW in the draft 2024 ISP. The capability of this zone to accommodate new generation is also subject to the MN1 mid-north group constraint.⁷

Jurisdictional body

The Leigh Creek REZ’s jurisdictional planning body is ElectraNet.

Generation Hosting capacity or access rights

There is no hosting capacity provided by the jurisdictional planning body which directly applies to this REZ. AEMO will work with the relevant parties to understand the hosting capacity for future publications.

⁷ 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>.

Resource metrics			
Resource	Solar		Wind
Resource Quality	A		B
Renewable Potential (MW)	6,500		2,400
Climate hazard			
Temperature score	D		Bushfire score C

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	-	-	-	-	-	-

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
Step Change	-	-	-	-	-	-	-	-	-	-	-	-

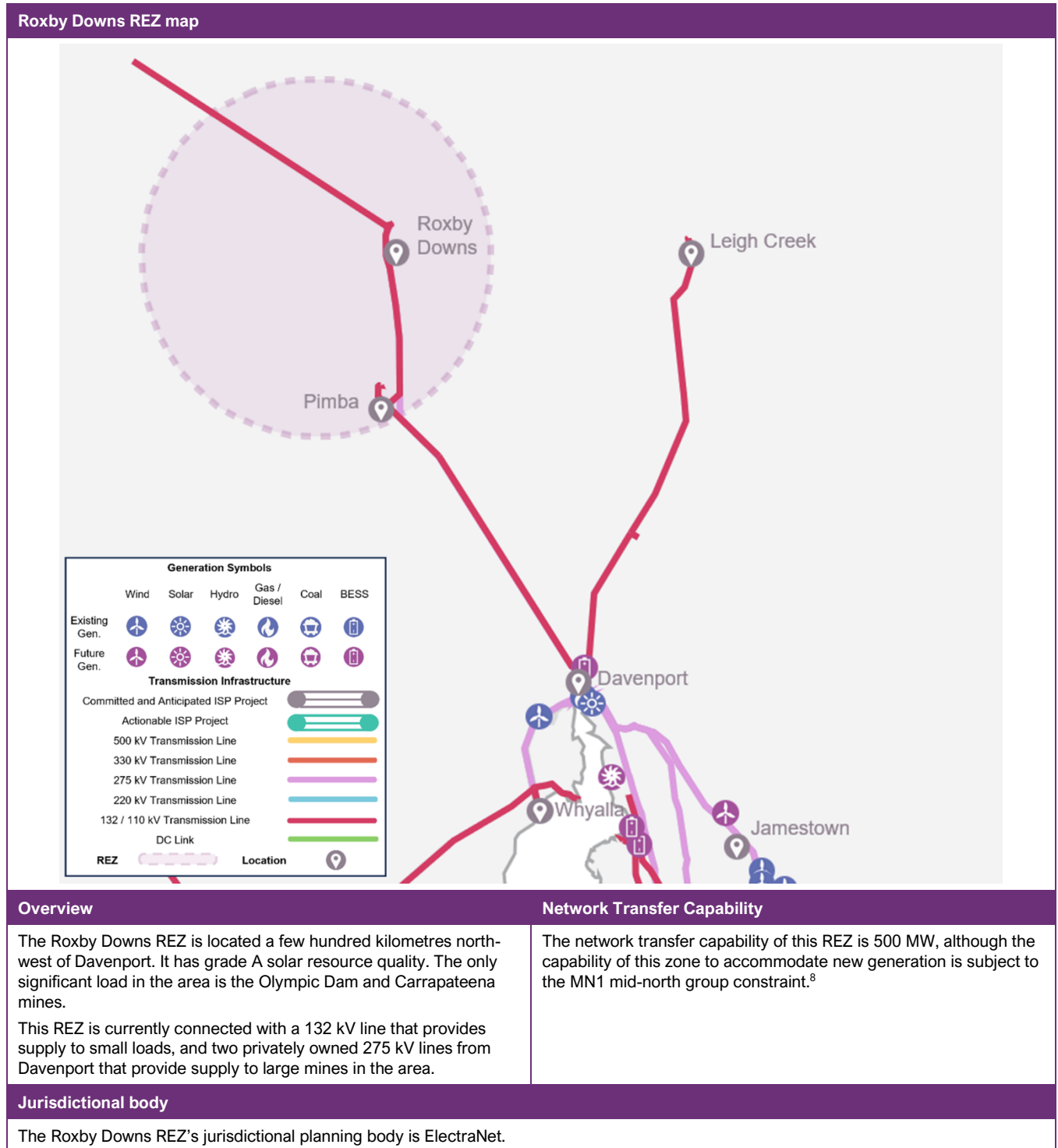
Transmission access expansion for Step Change

There are no existing, committed, anticipated VRE projects for this REZ and the modelling outcomes for the *Progressive Change* and *Step Change* scenarios did not project any additional VRE for this REZ.

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

A5.8 S7 – Roxby Downs

REZ information



Overview

The Roxby Downs REZ is located a few hundred kilometres north-west of Davenport. It has grade A solar resource quality. The only significant load in the area is the Olympic Dam and Carrapateena mines.

This REZ is currently connected with a 132 kV line that provides supply to small loads, and two privately owned 275 kV lines from Davenport that provide supply to large mines in the area.

Network Transfer Capability

The network transfer capability of this REZ is 500 MW, although the capability of this zone to accommodate new generation is subject to the MN1 mid-north group constraint.⁸

Jurisdictional body

The Roxby Downs REZ's jurisdictional planning body is ElectraNet.

⁸ 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>.

Generation Hosting capacity or access rights			
There is no hosting capacity provided by the jurisdictional planning body which directly applies to this REZ. AEMO will work with the relevant parties to understand the hosting capacity for future publications.			
Resource metrics			
Resource	Solar		Wind
Resource Quality	A		E
Renewable Potential (MW)	3,400		-
Climate hazard			
Temperature score	E		Bushfire score
			C

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
-	-	-	-

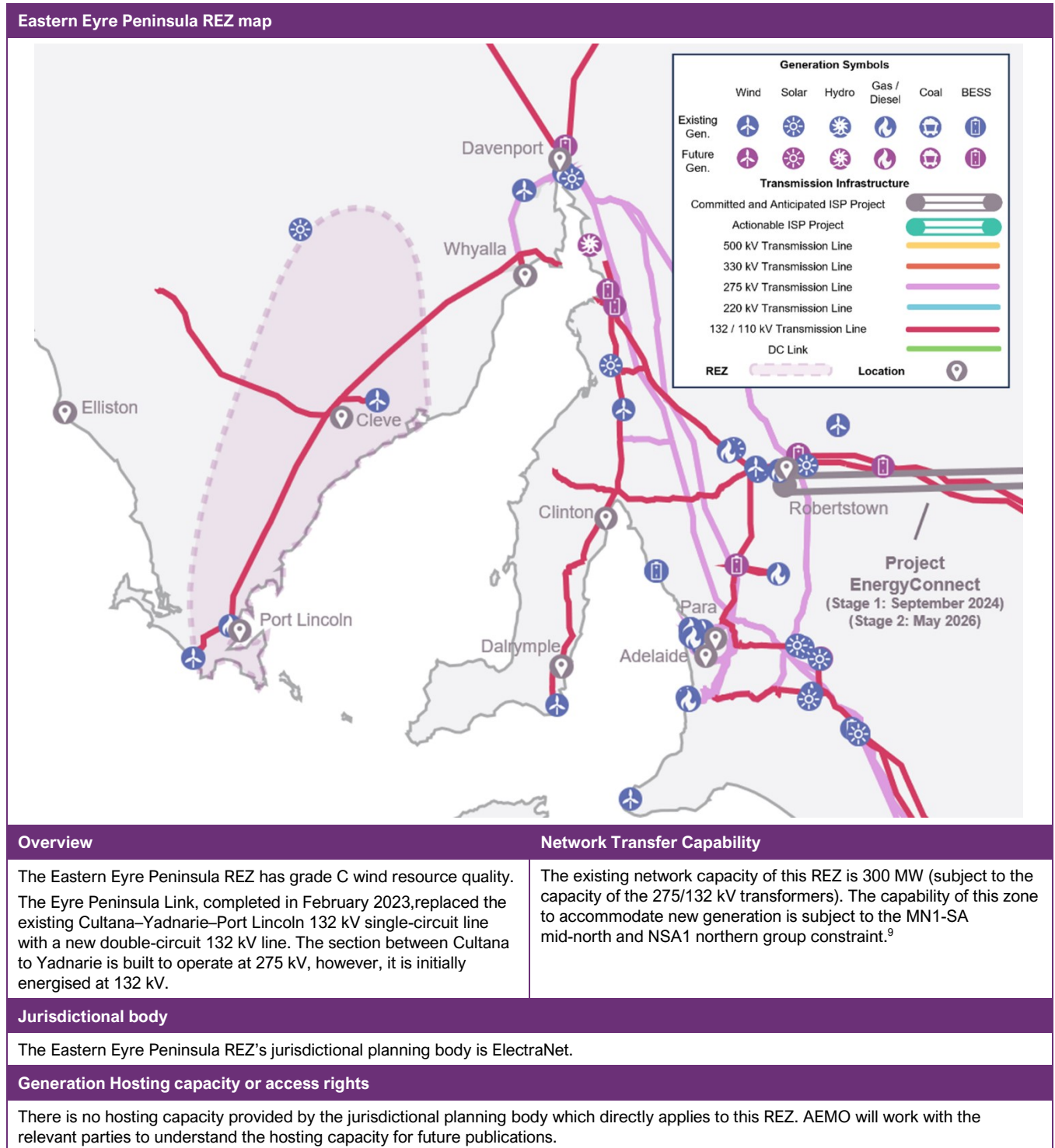
VRE semi-scheduled curtailment – calendar year 2023						
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)	
-	-	-	-	-	-	
VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	-	-	-	-	-

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
Step Change	-	-	-	-	-	-	-	-	-	-	-	-
Transmission access expansion for Step Change												
<p>The chart displays the installed capacity in MW over five financial years. The y-axis is labeled 'Installed Capacity (MW)' and ranges from 0 to 600 in increments of 100. The x-axis shows financial years from 2024-25 to 2028-29. A solid red horizontal line is drawn at the 500 MW mark, representing 'Existing transmission'. A dashed red horizontal line is also drawn at the 500 MW mark, representing the 'Transmission forecast'. A solid yellow horizontal line is drawn at the 500 MW mark, representing 'Existing Solar'. A dashed yellow horizontal line is also drawn at the 500 MW mark, representing the 'ISP solar forecast'. A solid green horizontal line is drawn at the 0 MW mark, representing 'Existing Wind'. A dashed green horizontal line is also drawn at the 0 MW mark, representing the 'ISP wind forecast'.</p>												
Committed, Anticipated, and Actionable Transmission Projects				Timing		Status		Increase in network transfer capability				
-				-		-		-				

A5.9 S8 – Eastern Eyre Peninsula

REZ information



⁹ 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>.

Resource metrics			
Resource	Solar		Wind
Resource Quality	D		C
Renewable Potential (MW)	5,000		2,300
Climate hazard			
Temperature score	D		Bushfire score
			D

Marginal loss factors

Marginal Loss Factor		
Technology	Voltage (kV)	2024-25 MLF
Wind	33	0.9162
	132	0.9309

Congestion and curtailment

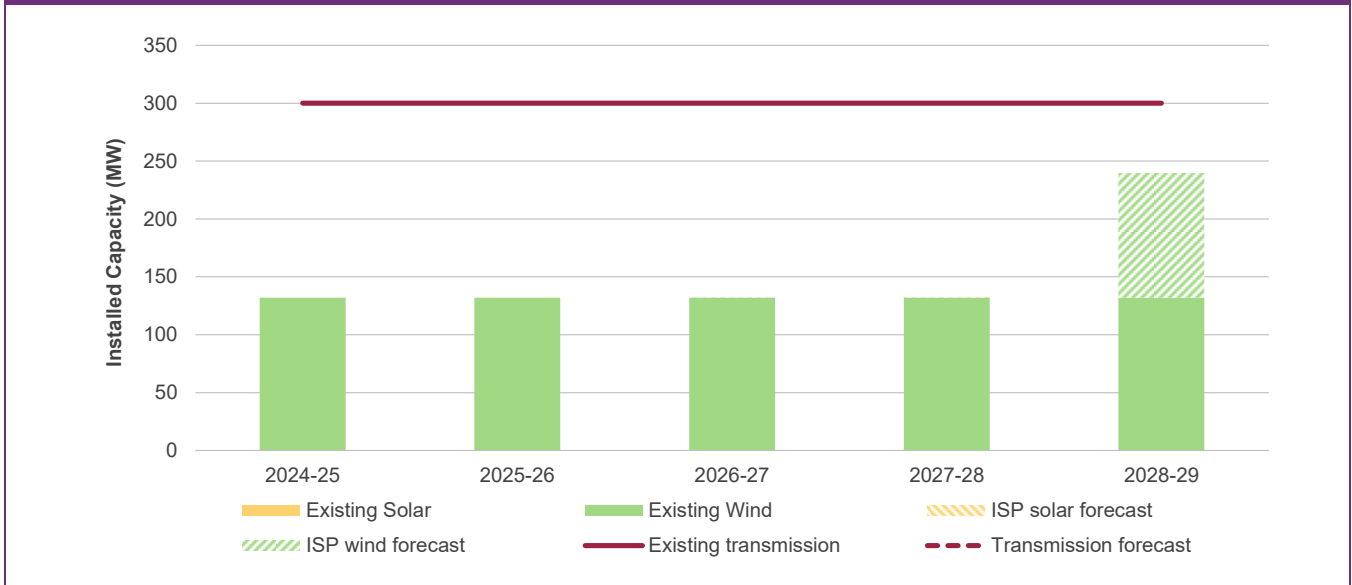
Congestion information – calendar year 2023			
Constraint ID	Binding hours	Marginal value (\$)	Most affected generation
S^NIL_CRK+MTM_95	35.8	51,176.8	Eyre Peninsula non-synchronous generation. Note, this constraint has been archived. It is no longer required due to the completion of Eyre Peninsula Link in 2023.

VRE semi-scheduled curtailment – calendar year 2023						
DUID	Generator name	Maximum Capacity (MW)	Average curtailment (%)	Average curtailment (MW)	Curtailment (MWh)	
CATHROCK	Cathedral Rocks	66	6.1	1.2	10,107	
MTMILLAR	Mt Millar Wind Farm	70	9.0	2.0	17,458	
VRE curtailment – ISP forecast						
Scenario	2025		2026		2027	
	Curtailment	Economic offloading	Curtailment	Economic offloading	Curtailment	Economic offloading
Step Change	-	9%	-	10%	-	5%

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
Step Change	-	-	-	-	-	-	132	-	-	-	-	100

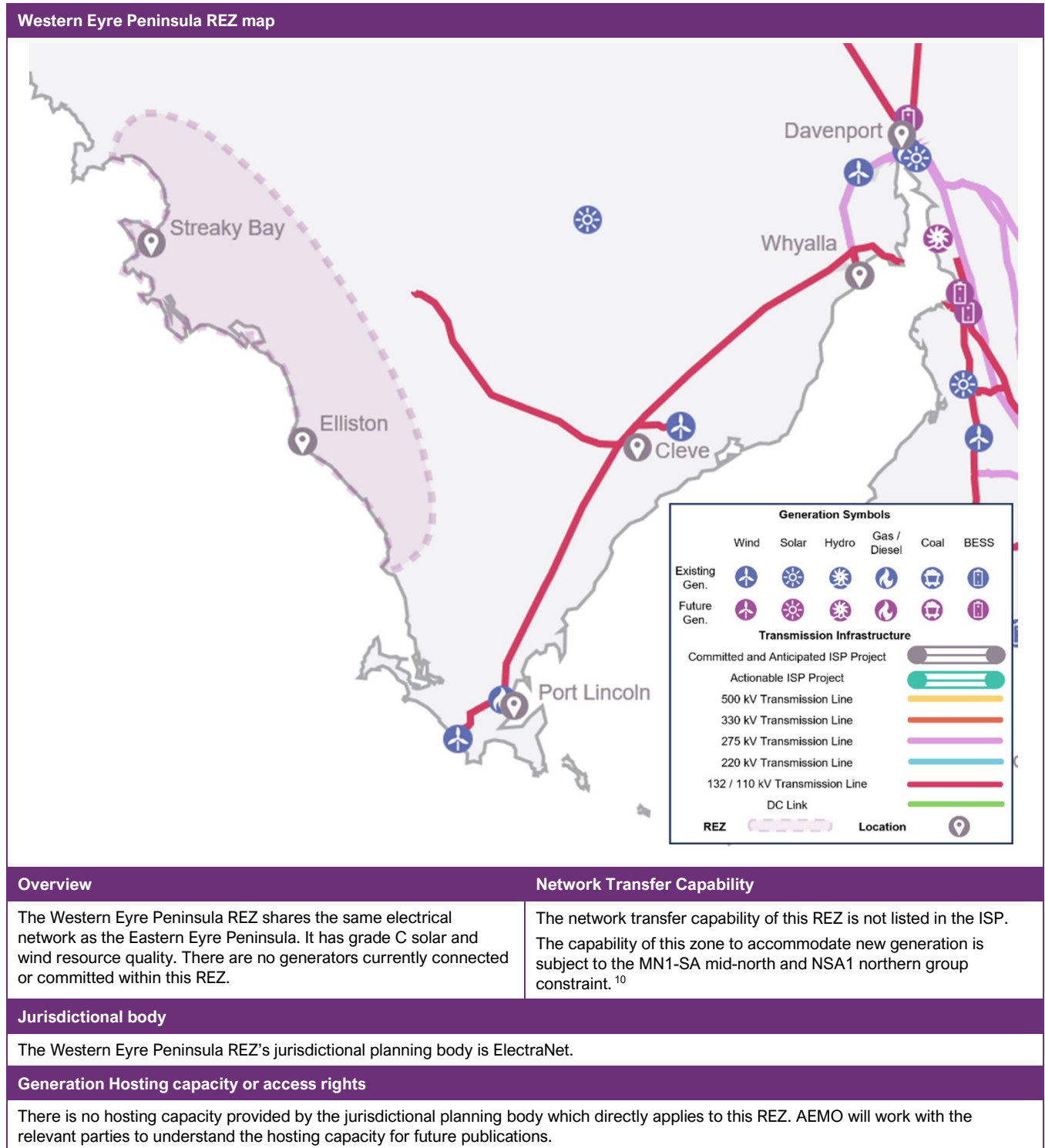
Transmission access expansion for Step Change



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

A5.10 S9 – Western Eyre Peninsula

REZ information



Overview

The Western Eyre Peninsula REZ shares the same electrical network as the Eastern Eyre Peninsula. It has grade C solar and wind resource quality. There are no generators currently connected or committed within this REZ.

Network Transfer Capability

The network transfer capability of this REZ is not listed in the ISP. The capability of this zone to accommodate new generation is subject to the MN1-SA mid-north and NSA1 northern group constraint.¹⁰

Jurisdictional body

The Western Eyre Peninsula REZ’s jurisdictional planning body is ElectraNet.

Generation Hosting capacity or access rights

There is no hosting capacity provided by the jurisdictional planning body which directly applies to this REZ. AEMO will work with the relevant parties to understand the hosting capacity for future publications.

¹⁰ 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>.

Resource metrics			
Resource	Solar		Wind
Resource Quality	C		C
Renewable Potential (MW)	4,000		1,500
Climate hazard			
Temperature score	D		Bushfire score C

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	-	-	-	-	-	-

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
Step Change	-	-	-	-	-	-	-	-	-	-	-	-

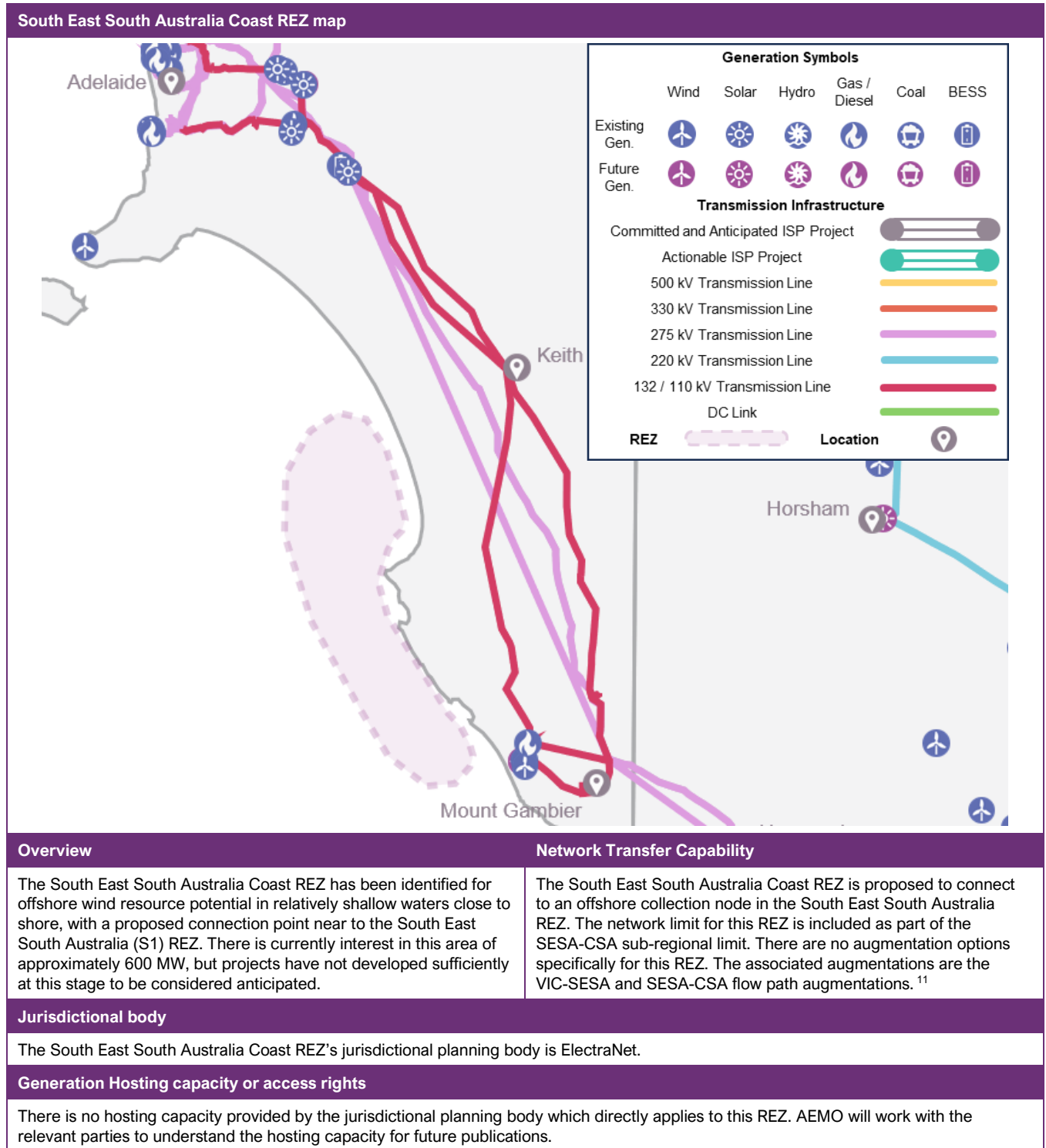
Transmission access expansion for Step Change

There is no existing, committed, or anticipated VRE projects for this REZ, and the modelling outcomes for *Progressive Change* and *Step Change* scenarios did not project any additional VRE for this REZ.

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

A5.11 S10 – South East South Australia Coast

REZ information



Overview

The South East South Australia Coast REZ has been identified for offshore wind resource potential in relatively shallow waters close to shore, with a proposed connection point near to the South East South Australia (S1) REZ. There is currently interest in this area of approximately 600 MW, but projects have not developed sufficiently at this stage to be considered anticipated.

Network Transfer Capability

The South East South Australia Coast REZ is proposed to connect to an offshore collection node in the South East South Australia REZ. The network limit for this REZ is included as part of the SESA-CSA sub-regional limit. There are no augmentation options specifically for this REZ. The associated augmentations are the VIC-SESA and SESA-CSA flow path augmentations.¹¹

Jurisdictional body

The South East South Australia Coast REZ's jurisdictional planning body is ElectraNet.

Generation Hosting capacity or access rights

There is no hosting capacity provided by the jurisdictional planning body which directly applies to this REZ. AEMO will work with the relevant parties to understand the hosting capacity for future publications.

¹¹ 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>.

Resource metrics			
Resource	Offshore Wind (fixed)		Offshore Wind (floating)
Resource Quality	A		A
Renewable Potential (MW)	20,428		7,032
Climate hazard			
Temperature score	D		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	-	-	-	-	-	-

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
Step Change	-	-	-	-	-	-	-	-	-	-	-	-

Transmission access expansion for Step Change

There is no existing, committed, anticipated VRE projects for this REZ and the modelling outcomes, for all scenarios and the offshore wind sensitivities, did not project any additional VRE for this REZ. Therefore, no VRE curtailment or transmission expansion occurs in this REZ.

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

A5.12 Non-REZ

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)
ADPPV1	Adelaide Desalination Plant	19	0.1	0.0	28
BOWWPV1	Bolivar Waste Water Treatment Plant	6	4.4	0.0	419
HVWWPV1	Happy Valley Water Treatment Plant	8	0.2	0.0	20
STARHLWF	Starfish Hill Wind Farm	35	0.0	0.0	0
TB2SF1	Tailem Bend 2 Hybrid Renewable Power Station	87	0.0	0.0	1
TBSF1	Tailem Bend Solar Project 1	95	0.0	0.0	1