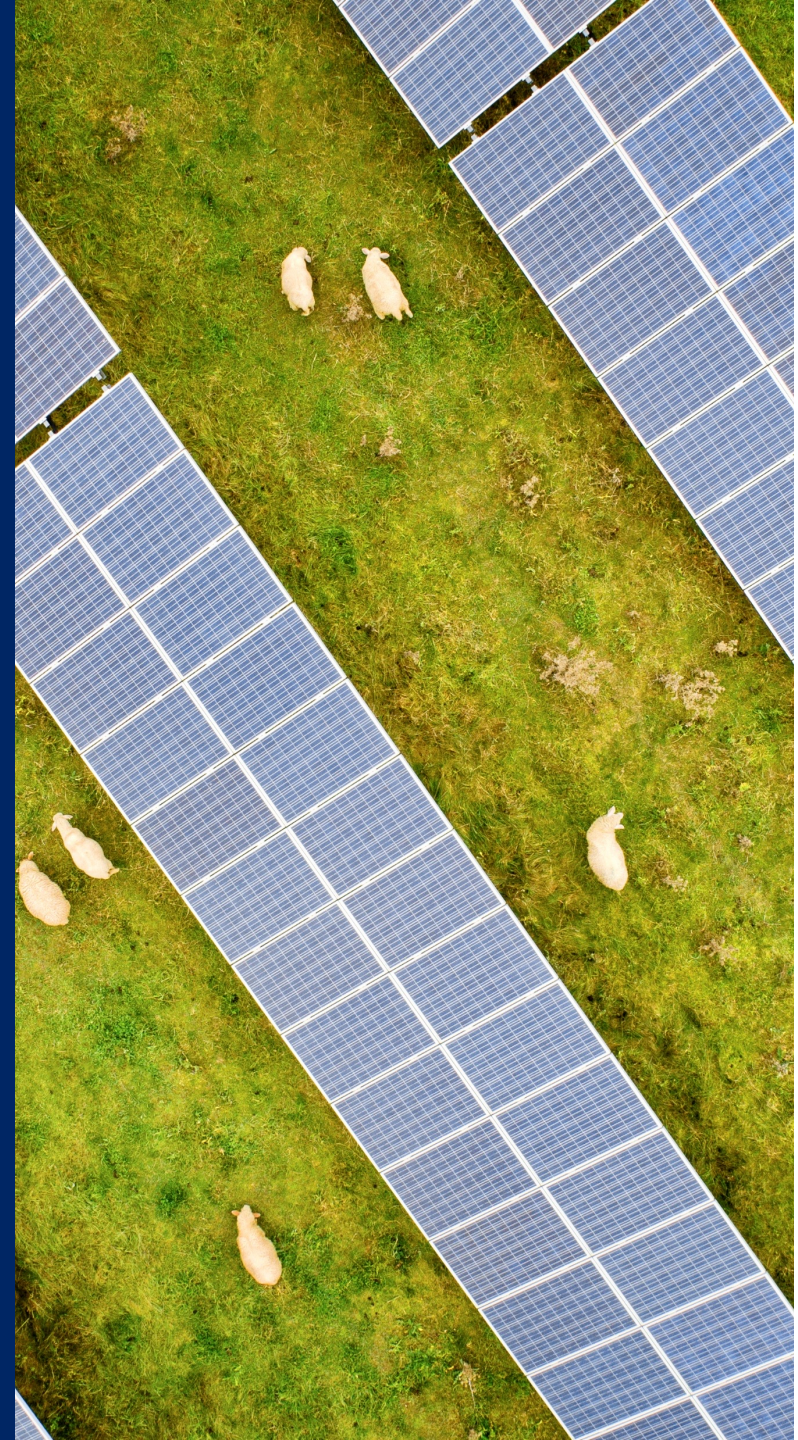


NSW Electricity Infrastructure Roadmap: The highway to 100% renewables

James Hay, Chief Executive
Energy Corporation of NSW

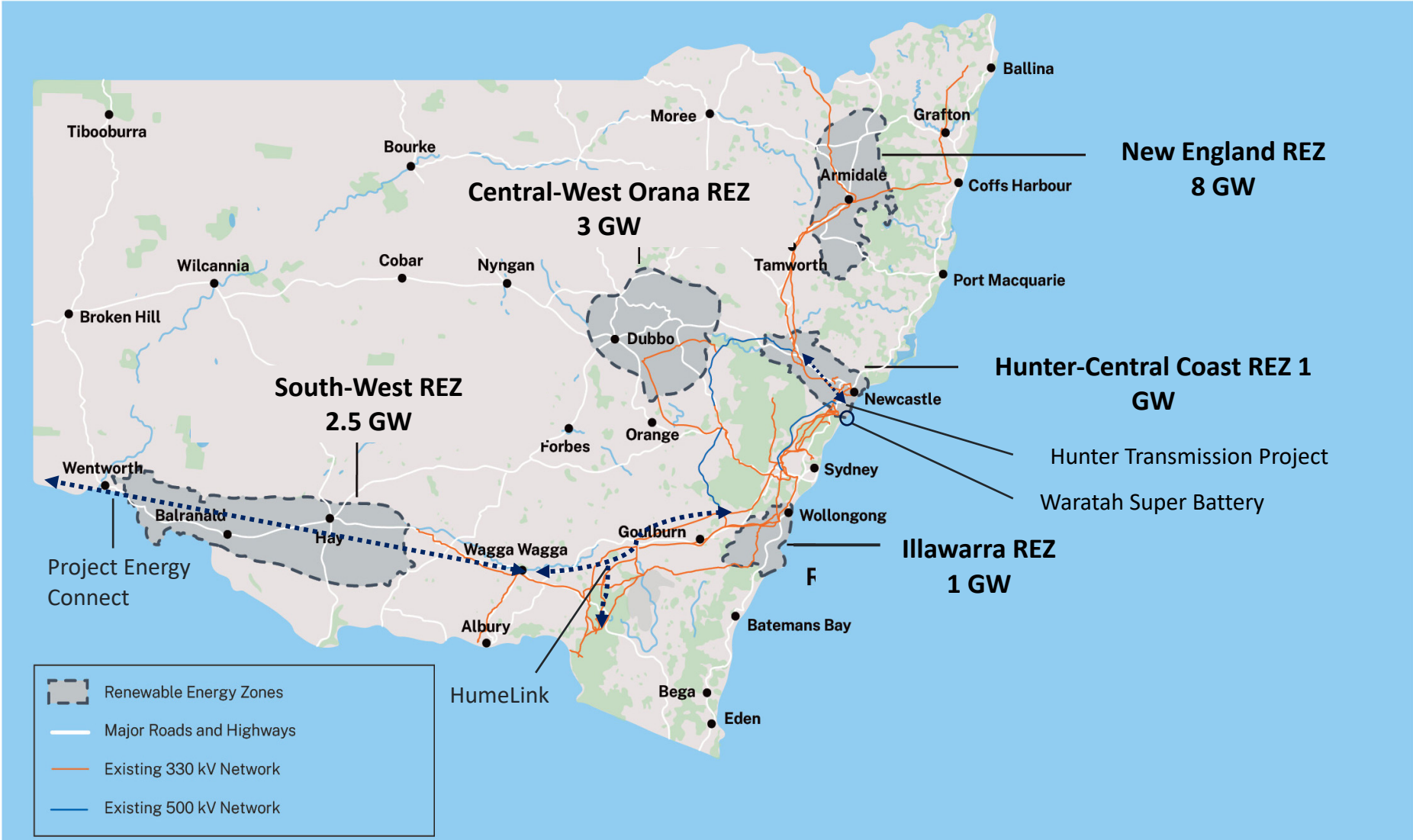
6 June 2023



1

Introduction

Five Renewable Energy Zones and two Priority Transmission Infrastructure Projects across NSW



Key implementation milestones since 2020



EnergyCo established Q4 2020 and resourcing and governance scaled up Q1 2023



Waratah Super Battery approved and contract awarded – Q1 2023 – construction begun Q2



All five **Renewable Energy Zones in EII Act** declared – Q1 2023



Established the \$1.2 billion **Transmission Acceleration Facility** – Q1 2022



First Ranked Network Operator for Central-West Orana REZ – Q2 2023



Strategic Benefit Payments Scheme policy finalised – Q4 2022



CSSI planning status for three EnergyCo projects



Pumped Hydro grants awarded to six projects totalling 2.5GW – Q3 2022



First **REZ access scheme** declared for Central-West Orana REZ and draft South-West REZ access scheme exhibited



Final **Network Infrastructure Strategy** released – Q2 2023



\$4.7 billion allocation for NSW projects under Rewiring the Nation – Q4 2022

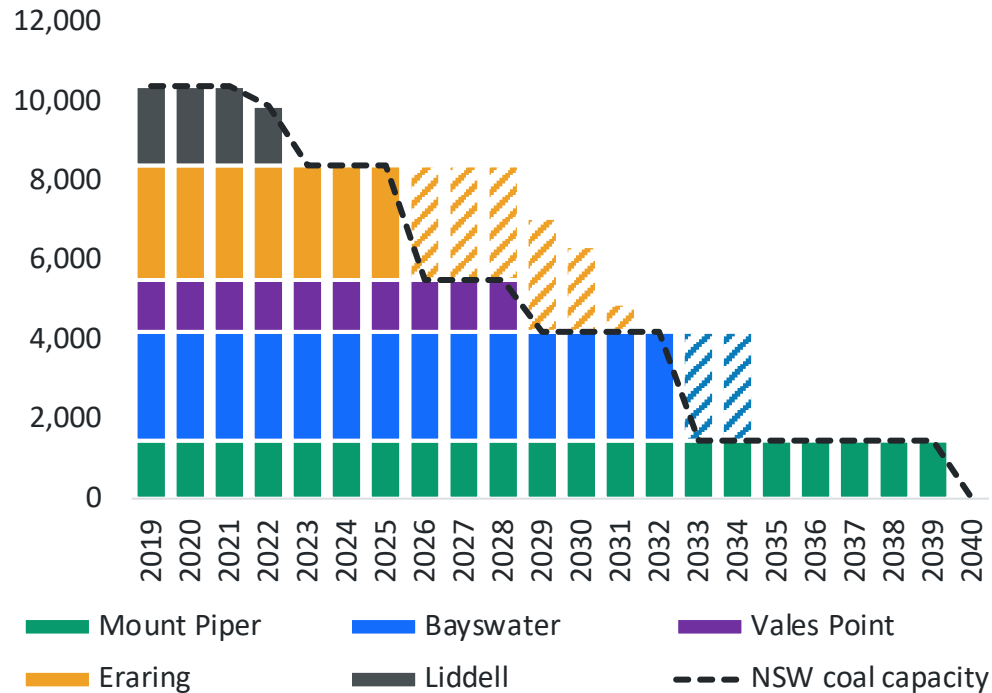


Preliminary transmission corridor identified for the New England REZ – Q2 2023

The Roadmap aims to deliver lowest-cost replacement infrastructure before coal-fired power stations retire

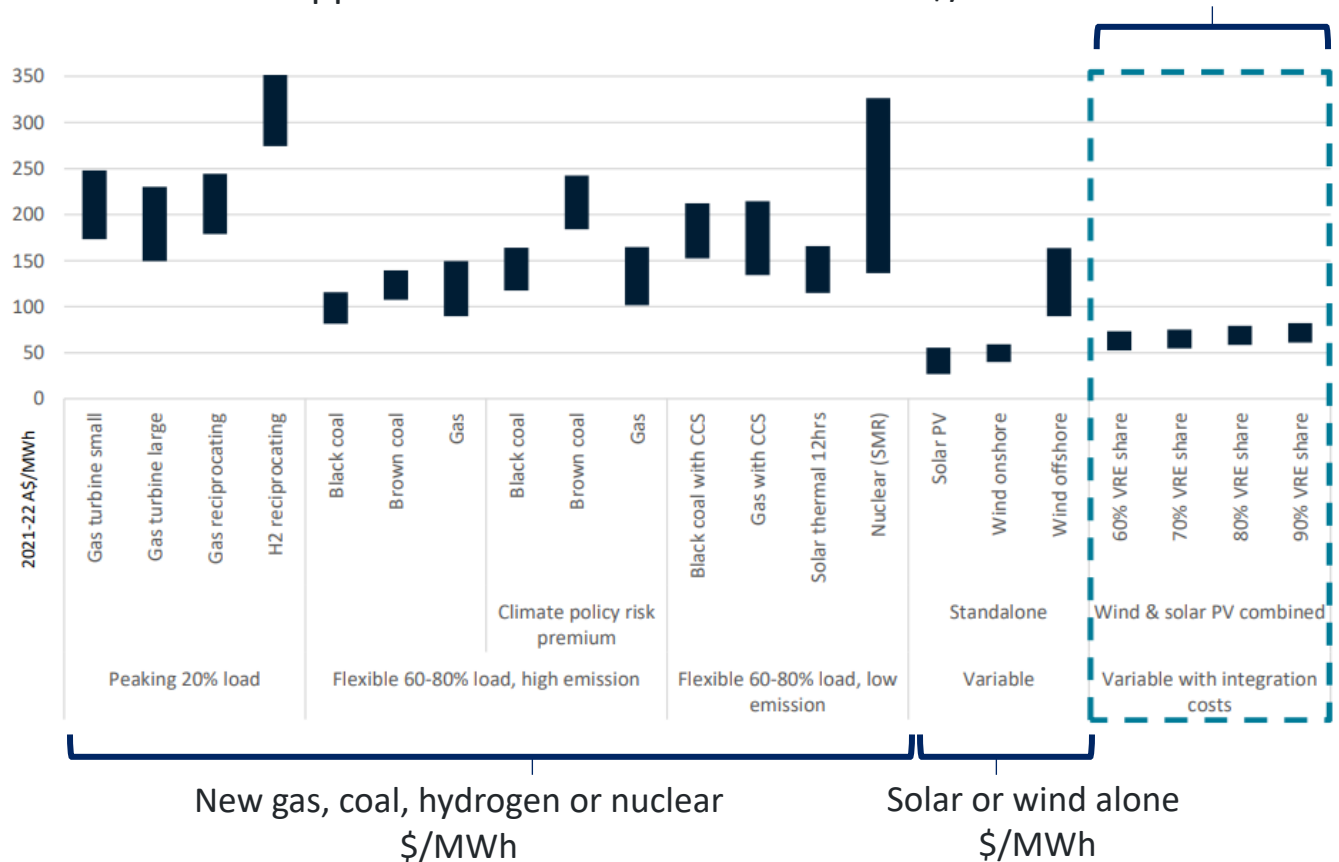
4 out of 5 of NSW's existing coal-fired power stations providing 70% of NSW electricity are scheduled to retire in next 10 years

Some have already brought forward retirement dates – with Eraring set to retire seven years early



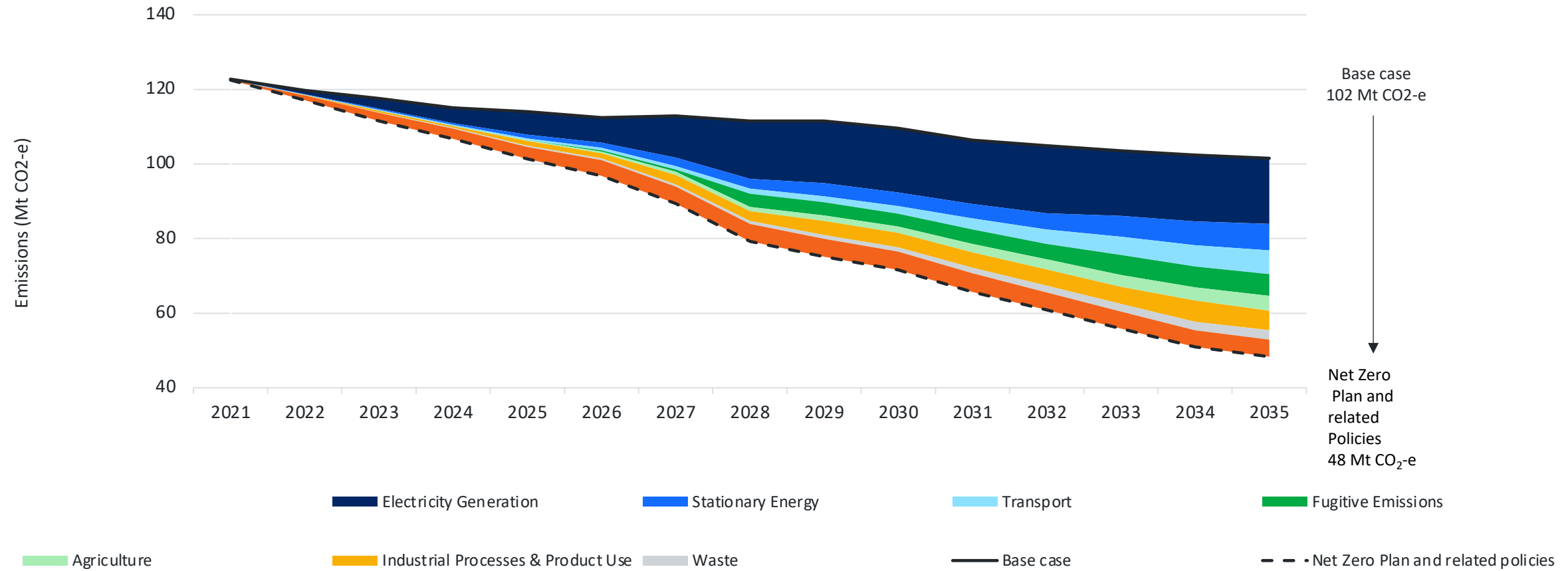
A firmed mix of renewables is the fastest, lowest cost way to deliver replacement electricity (CSIRO Gen Cost 2021-22)

Combined solar & onshore wind with transmission, storage and firming investment to support variable renewables – lowest \$/MWh

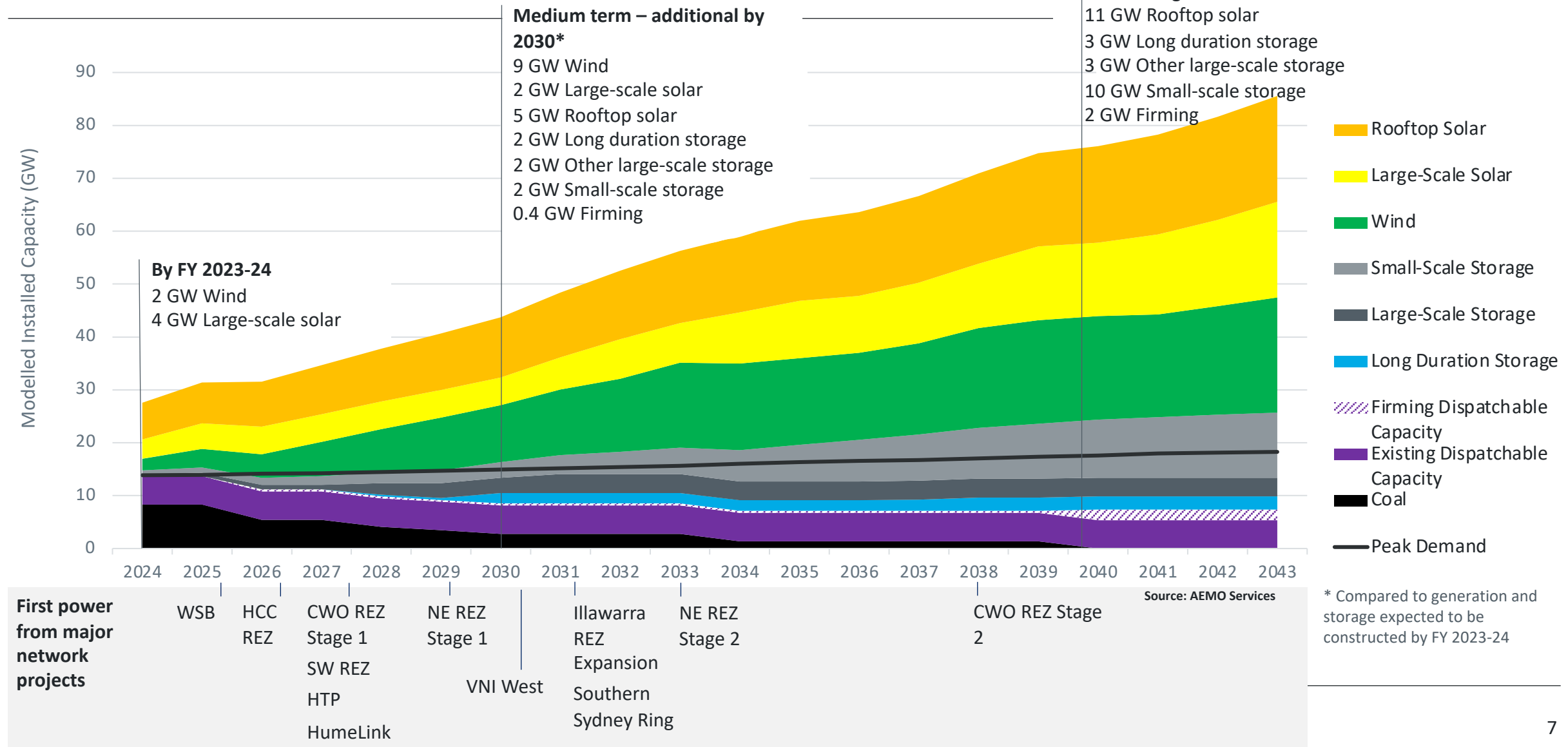


Replacing retiring power stations will provide the biggest contribution to NSW's 2030 emissions goal

The majority of forecast emissions reductions in NSW are derived from the change in electricity generation



A 20-year investment horizon to deliver over \$16 billion worth of transmission



2

NSW Network Infrastructure Strategy

The Network Infrastructure Strategy sets out network options over the immediate, mid-term and long-term horizons

1. Deliver now

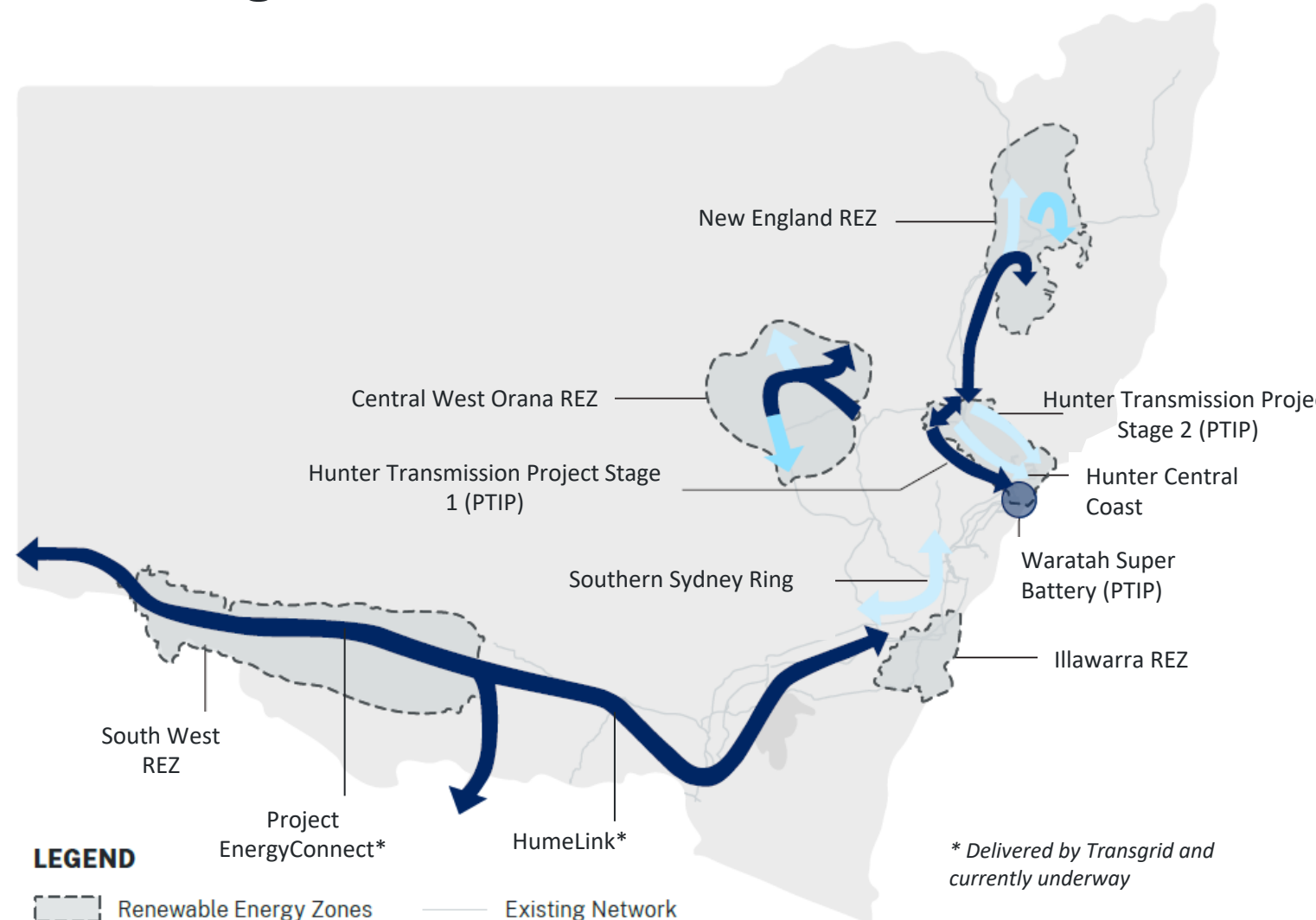
Options to be delivered as soon as practicable over the next decade to enable renewable generation to replace retiring power stations.

2. Secure now

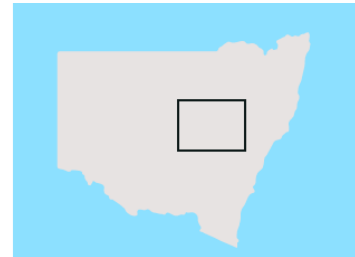
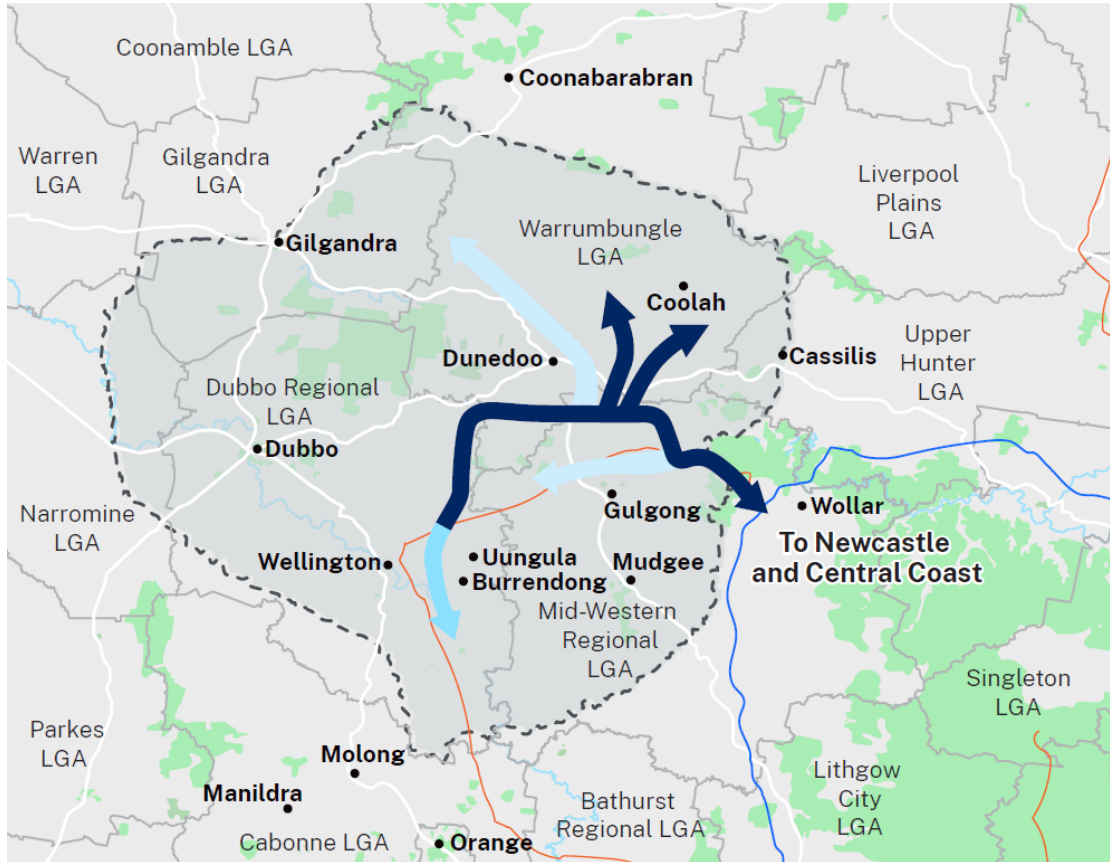
Options that will underpin the State's resilience to early coal retirement or infrastructure delivery delays and better integrate long-duration storage.

3. Plan for the future

Options to unlock deep electrification and decarbonisation to support NSW's long-term energy needs and enable a net zero future.



Central-West Orana REZ



At least 3 GW intended network capacity

First ranked network operator announced

Access scheme declared

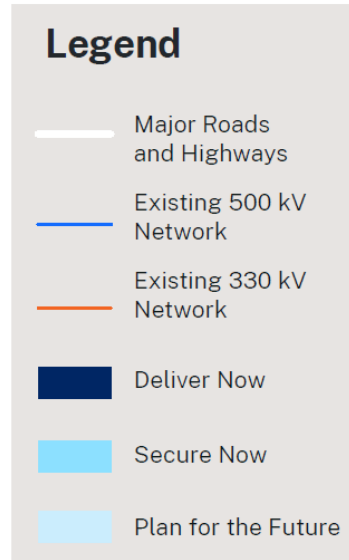
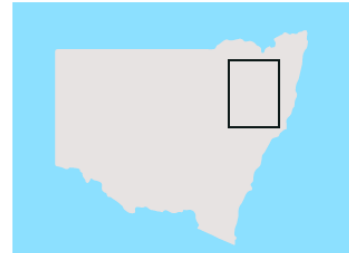
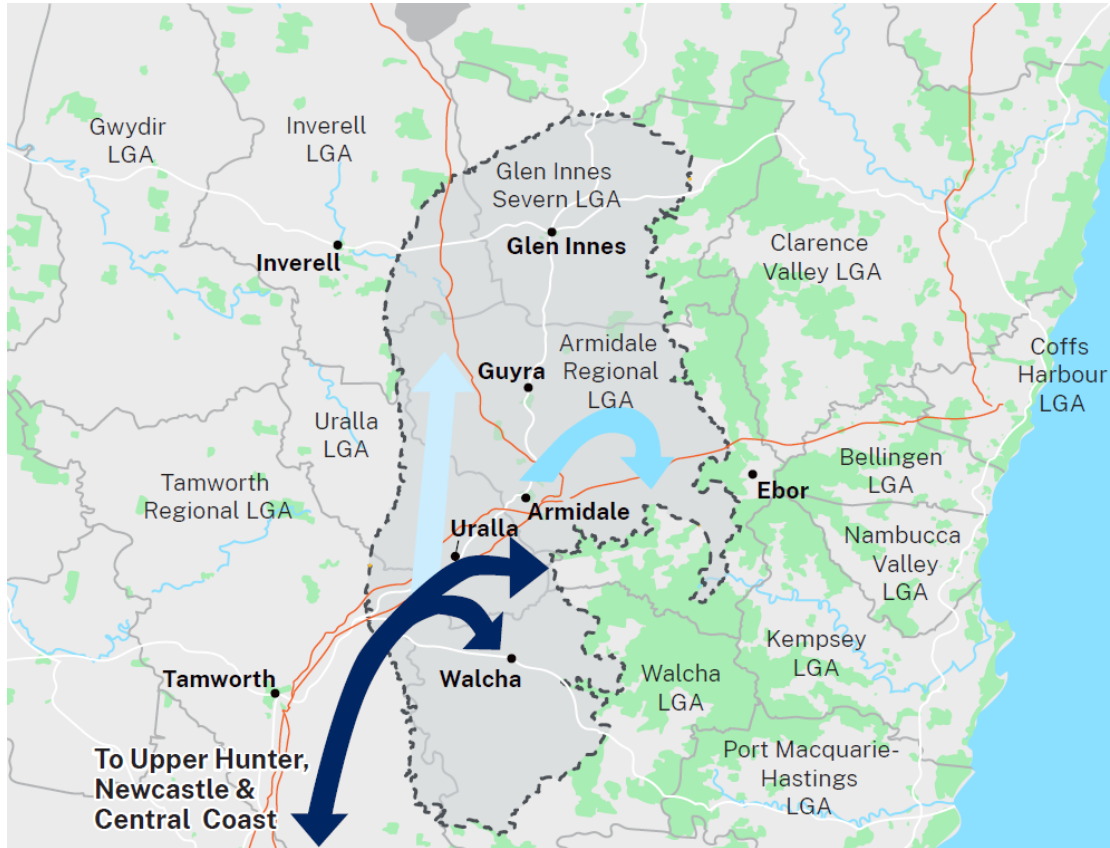
Legend

- Major Roads and Highways
- Existing 500 kV Network
- Existing 330 kV Network
- Deliver Now
- Secure Now
- Plan for the Future

Area	20,944 km ²
Declaration	5 November 2021
REZ ROI results	113 ROI responses from wind, solar and storage projects totalling ~27 GW
Initial energisation date	2027/2028
<i>Deliver Now</i> network capacity	4.5 GW
<i>Secure Now</i> network capacity	2.3 GW
<i>Plan for the Future</i> network capacity	3.5 GW

1. Estimates are Class 5b accuracy (i.e. +/- 50%) and for development and construction costs only (excluding finance, generator connection and system strength costs). This provides a comparable basis with estimates for projects under the National Electricity Rules. The total cost for a REZ also includes finance, generator connection and system strength costs at typically an additional 70% to 110% of development and construction costs. Generator and storage proponents that hold access rights will contribute connection and system strength costs. All values are in real 2021 Australian dollars.

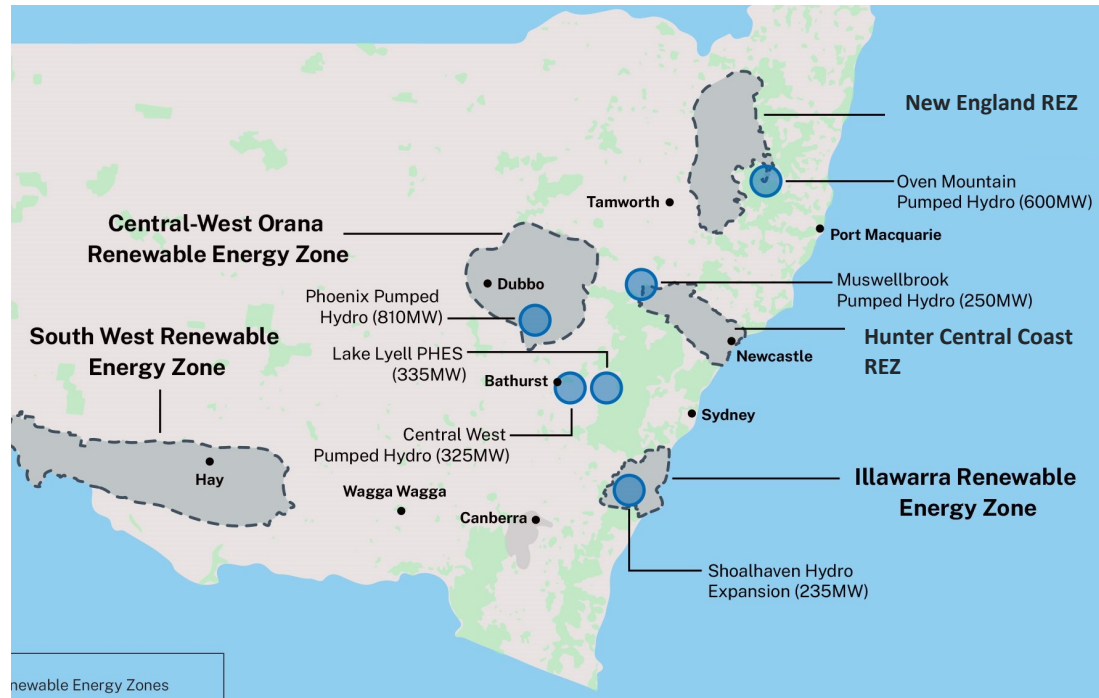
New England REZ



8 GW intended network capacity	
To be delivered in stages	
Preliminary transmission corridor	
Area	15,495 km ²
Declaration	17 December 2021
REZ ROI results	80 ROI responses from wind, solar and storage projects totalling ~34 GW
Initial energisation date	2029
<i>Deliver Now</i> network capacity	6 GW
<i>Secure Now</i> network capacity	0.8 GW
<i>Plan for the Future</i> network capacity	1.5 GW

1. Estimates are Class 5b accuracy (i.e. +/- 50%) and for development and construction costs only (excluding finance, generator connection and system strength costs). This provides a comparable basis with estimates for projects under the National Electricity Rules. The total cost for a REZ also includes finance, generator connection and system strength costs at typically an additional 70% to 110% of development and construction costs. Generator and storage proponents that hold access rights will contribute connection and system strength costs. All values are in real 2021 Australian dollars.

The strategy will leverage the full benefits of long duration storage



Key features	
Funding awarded	\$51.85 million in recoverable grants
Funding mechanism	Recoverable grant – with Government to recover funds if a recipient project reaches financial close
Projects	Six projects with 2.56 GW capacity: <ul style="list-style-type: none"> • Lake Lyell (335 MW); • Central West (325 MW); • Muswellbrook (250 MW); • Oven Mountain (600 MW); • Phoenix (810 MW); and • Shoalhaven (235 MW).
Network Infrastructure Strategy	Includes network projects to leverage the full benefits and system services of pumped hydro

3

Fostering local community support

Community engagement

Understanding the local community



- Community Reference Groups, First Nations & Regional Reference Groups
- Opening local offices

Working with impacted residents



- Early, frequent and direct landowner engagement to consider best location of transmission routes and infrastructure

Direct engagement



- Regional workshops and town halls
- 'Community weeks' on location to discuss proposed routes
- E-distribution lists and postal drops
- Regular meetings with local councils

Community benefits

REZ community and employment benefit schemes



- Benefit-sharing programs funded through Transmission Acceleration Facility and generator access fees
- Estimated scale in hundreds of millions.

Better compensation for transmission hosts



- Strategic Benefits Payment scheme offering \$200,000 per km of transmission hosted
- Additional to land acquisition compensation
- Estimated at an additional \$786 million to landowners to 2041

Prohibiting connection for unsupported projects



- Legislated powers to prohibit connection of projects in a REZ
- Conditions for prohibition include if it is in the public interest and necessary to maintain community support.

Long-term infrastructure upgrades



- Agency partnerships to deliver supporting infrastructure needed for REZ development in ways that can also benefit host communities
- This includes road, housing and telecommunications upgrades.

Learn more: Interactive Maps

