



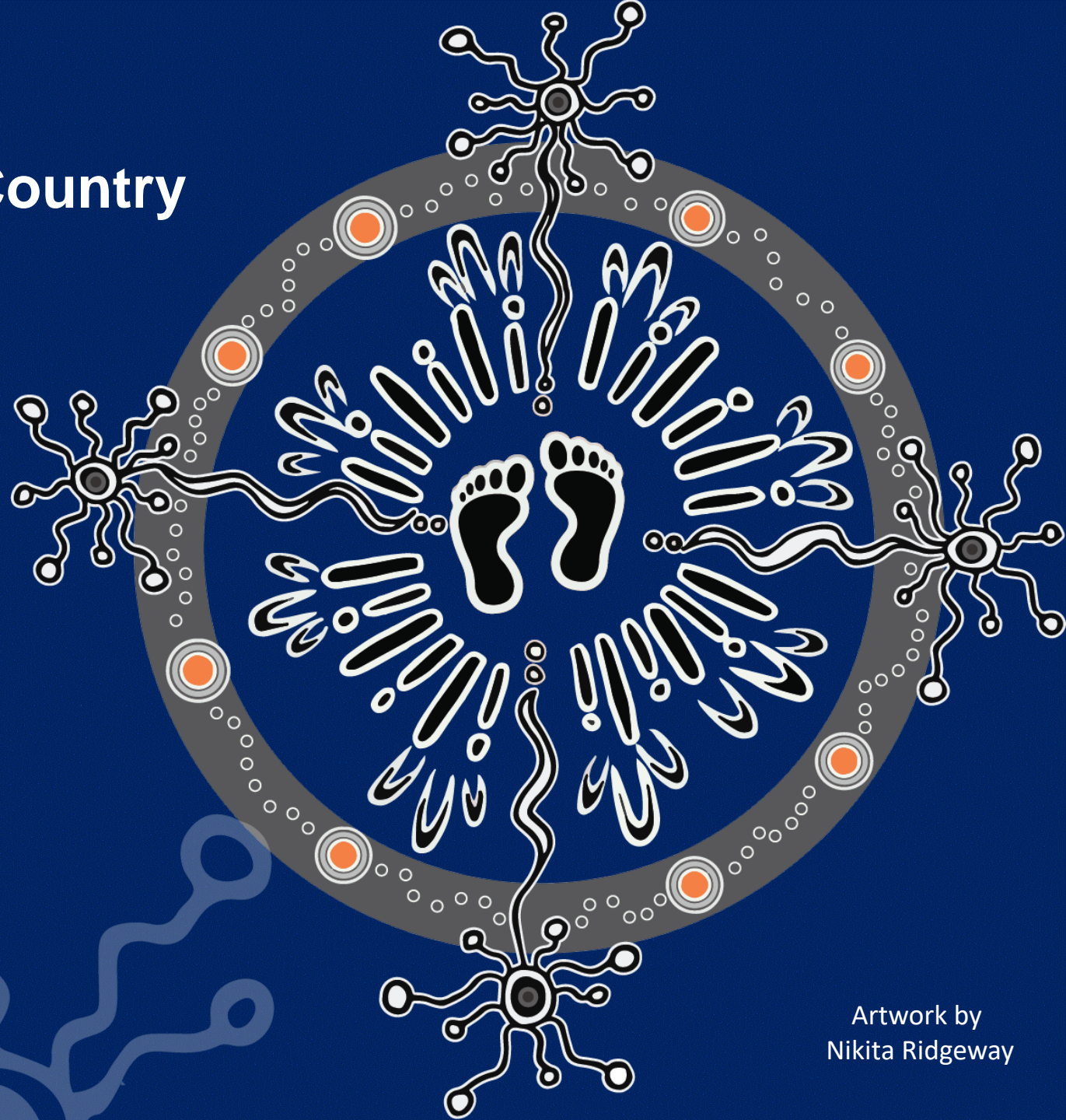
Access rights and scheme design: Central-West Orana paper

2 February 2022

Acknowledgement of Country

We acknowledge that today we meet on many Aboriginal lands.

We acknowledge the traditional custodians of the lands and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work.



Agenda

Welcome and acknowledgement of country

1. Overview of access rights and scheme design
2. Our design concepts
 - Allocation of access rights

Q& A

3. Streamline connection process
4. Access control mechanism
5. Access fees
6. Activating the access scheme

Q& A

7. How to make a submission



The purpose of today

1. Overview of access rights and scheme design

Challenges of current open access

The access right and scheme are intended to address high costs, delays and uncertainty associated with the National Electricity Market's open access regime and current connection process.



Revenue uncertainty for generation projects has increased because of higher congestion and marginal loss factor risk on the shared network



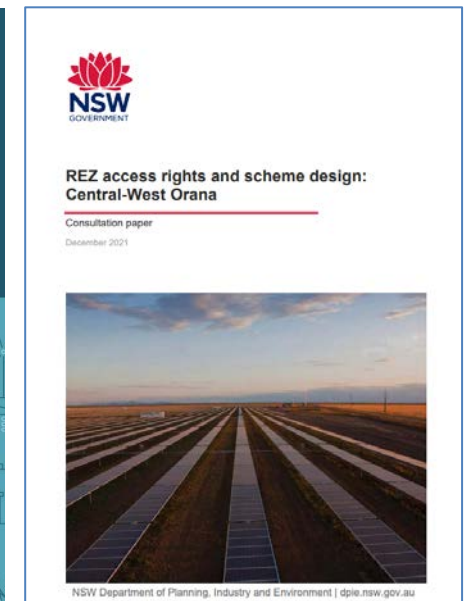
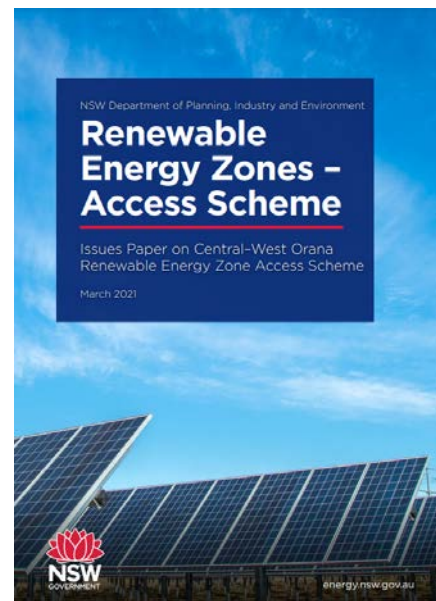
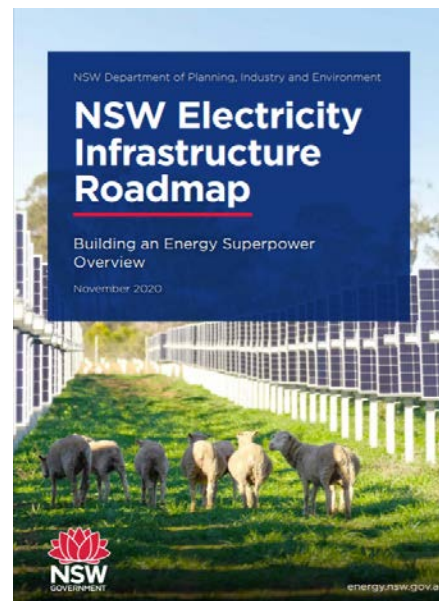
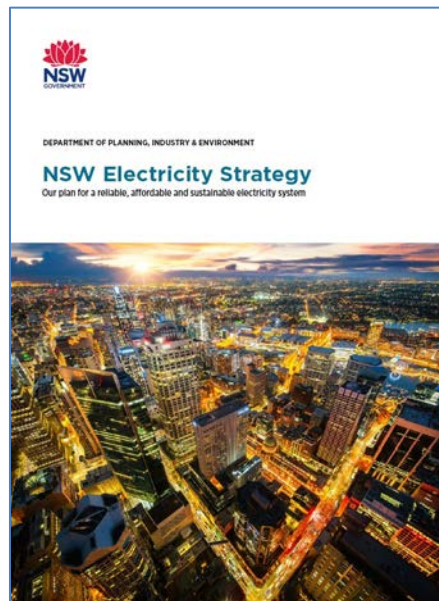
Generation proponents have **no incentive to fund shared network improvements** because other 'free rider' competitors may benefit from the investments, while also increasing network congestion



New renewable generation projects have had their **connection delayed or output significantly curtailed** due to system security issues, which are exacerbated by a lack of shared network capacity

Getting the policy settings right

Consulting on policy design and key implementation matters is an important part of the department's Electricity Infrastructure Roadmap implementation strategy. The REZ access rights and scheme design build upon previous feedback received on the CWO Issues Paper.



Access right and scheme objectives

Encourage investment in new generation and storage projects

Maximise financial value for NSW electricity consumers



Utilise the network efficiently

- The target transmission curtailment level is designed to ensure strategic and optimal use of the REZ Scheme Network to maximise benefits to consumers.

Foster community support and regional economic benefits

- It is vital that the communities who host new infrastructure benefit from it. Access fees will be used for community and employment purposes.

Improve certainty of connection timeframes

- Achieved through a bespoke streamlined connection process
- The REZ Network Operator will deliver specified system strength requirements designed to ensure stable network operation.

Provide sufficient certainty to investors

- The access right is a promise to limit capacity connected to the REZ Network Infrastructure based on a targeted level of transmission curtailment.

Access right product at a glance



1. Physical cap: The access scheme for CWO REZ will be based on a **physical connection model**.

- Period: **15 years** from the commissioning of the new REZ infrastructure.
- Entitlement: If you are the holder of an access right you will be able to:
 - connect to the new REZ infrastructure
 - export up to a **Maximum Capacity Profile**



2. Bespoke (streamlined) connection process: Including batched connections and a uniform REZ Access Standard



Proponents will pay a fee to the Scheme Financial Vehicle for participating in an access scheme to obtain and maintain an access right.

2. Our design concepts

Access right and scheme objectives

Encourage investment in new generation and storage projects

Maximise financial value for NSW electricity consumers



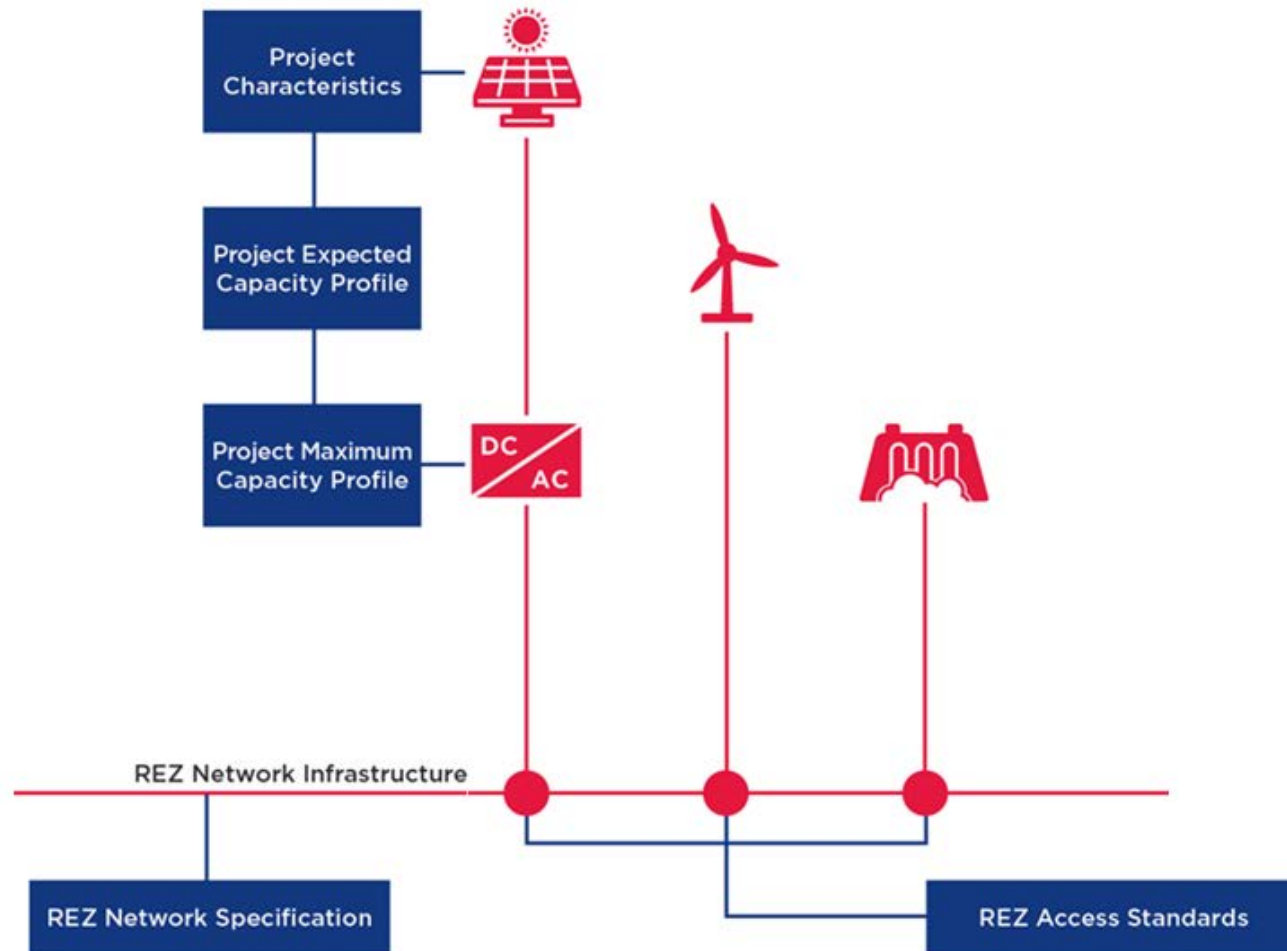
Utilise the network efficiently

Foster community support and regional economic benefits

Improve certainty of connection timeframes

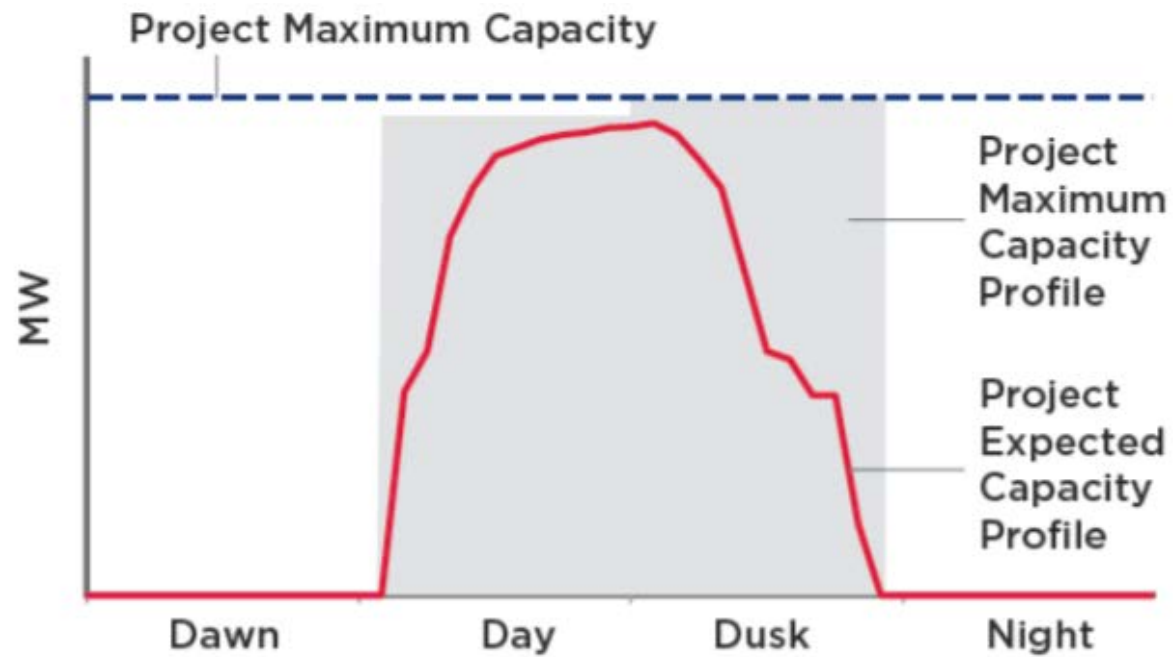
Provide sufficient certainty to investors

Design elements



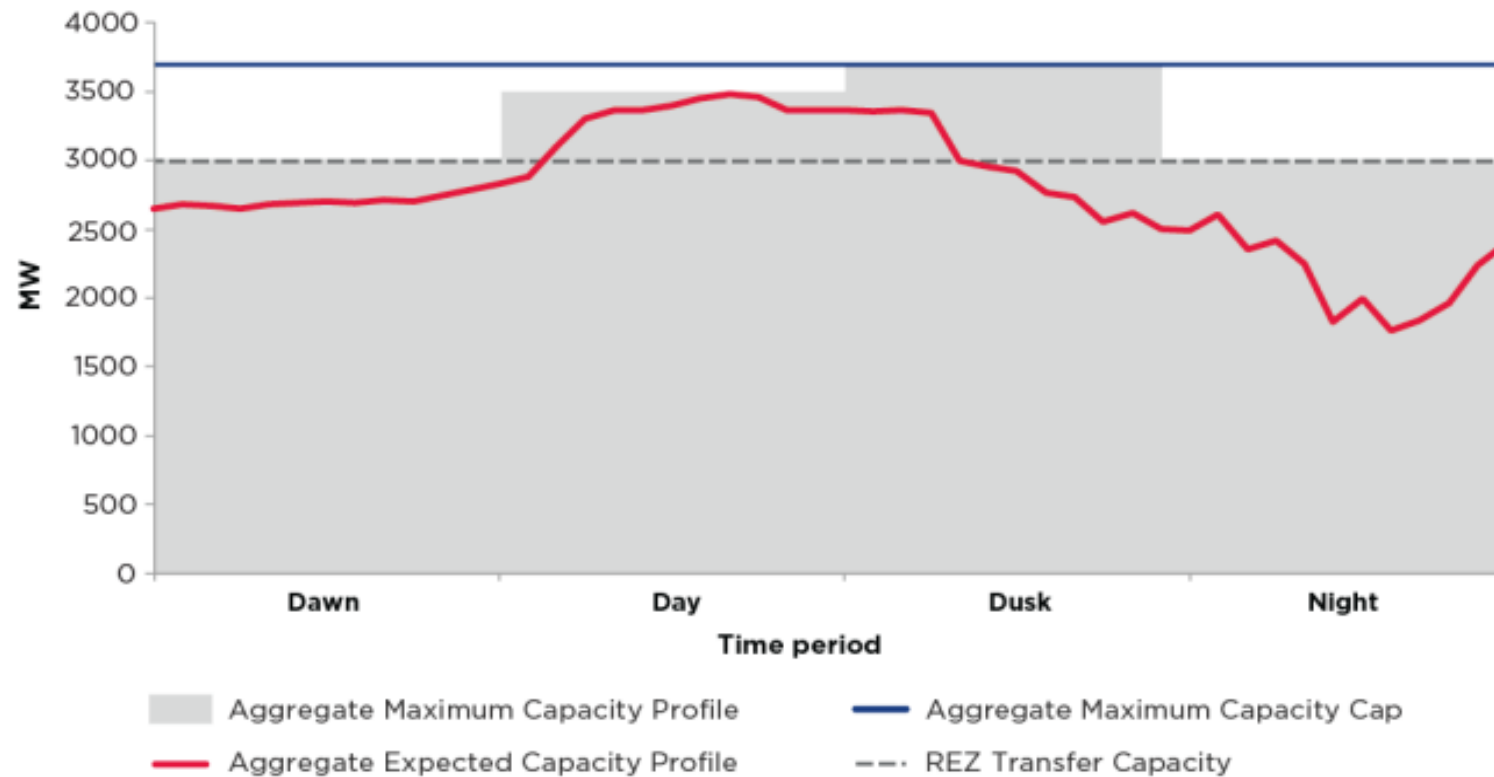
Design elements – project level

Project level information is set across four time periods of Dawn, Day, Dusk and Night



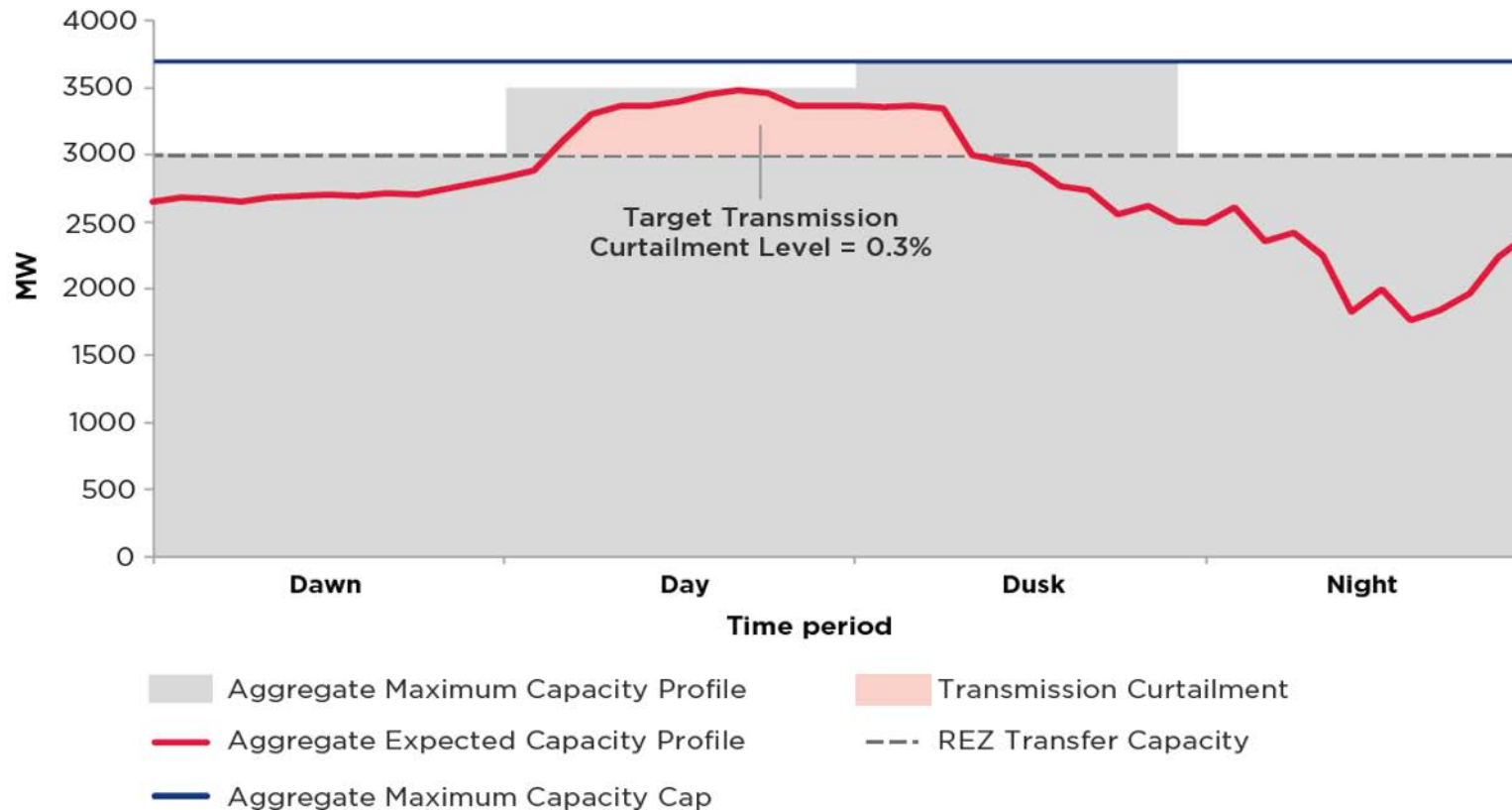
Design elements – REZ level

Project level information is aggregated for all projects across the REZ



Design elements – REZ level

An efficient level of oversubscription and a target transmission curtailment level are set



For CWO REZ, the proposed Aggregate Maximum Capacity Cap is **3.69 gigawatts**.

Indicative modelling for the CWO REZ indicates **the target transmission curtailment level would be set at 0.3%** of the annual volume of Aggregate Expected Capacity for Allocation 1 REZ projects.

The access right is not a firm right.

Allocation of access rights

Allocation approach provides a balance between constraining access to improve investor certainty while allowing for flexibility that promotes efficient network utilisation and augmentation of the network

1

Allocation 1 - Initial Aggregate Maximum Capacity Cap

- This **sets a limit** on the access rights which may be allocated.
- Internal modelling of an **efficient level of over-subscription**
- **Combined tender process run** for LTESA and access rights

2

Allocation 2 - Revised Aggregated Maximum Capacity Cap

- EnergyCo NSW to identify any under-utilisation that can be set as the **Headroom capacity**
- Headroom capacity is the additional capacity that can connect without breaching the **target transmission curtailment level**
- EnergyCo NSW-led expansion of a REZ's network capacity

3

Allocation 3 - Market proposed network augmentations

- To expand the REZ intended network capacity
- Proposals will be assessed based on 'Do No Harm' principle for Allocation 1 and 2 access right holders

Q&A

3. Streamlined connection process

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Maximise financial value for NSW electricity consumers



Utilise the network efficiently

Foster community support and regional economic benefits

Improve certainty of connection timeframes

Provide sufficient certainty to investors

Streamlined connection process



Minimise re-work of complex power system modelling



Reduce time to market



Improve certainty of timeframes for proponents



Greater certainty of technical requirements at an earlier stage

REZ Access Standards

REZ-specific Generator Performance Standards and inverter-based resource standards.

System strength solutions

The REZ Network Operator must meet specified system strength requirements for the New REZ Infrastructure based on forecasts of connecting generation and storage.

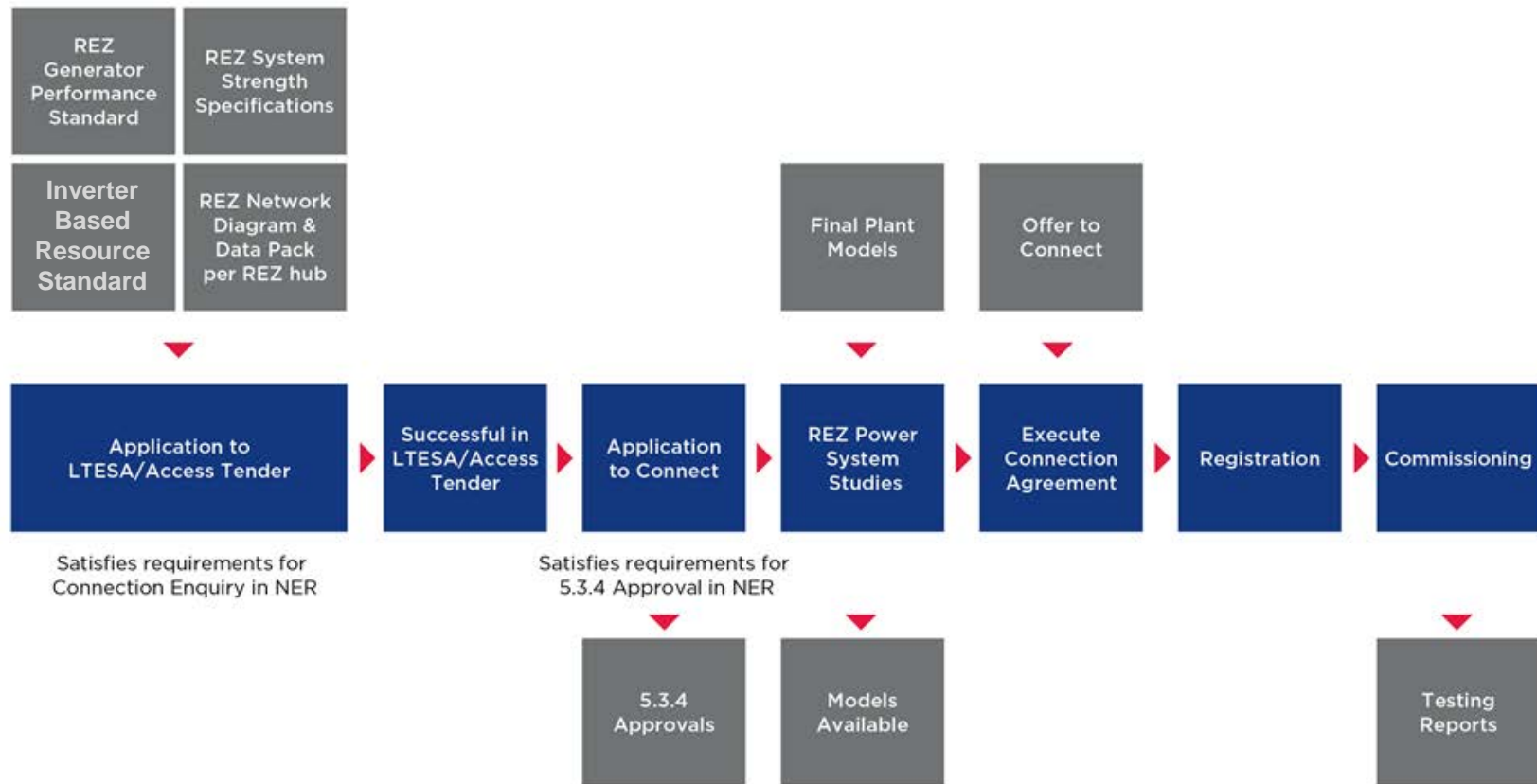
Batching of power system studies

The Primary TNSP will conduct REZ power system studies for all projects that have submitted applications to connect to the REZ Scheme Network within a specified time window (e.g. in the previous 6-month period).

Common connection assets

The centralised coordination of connection assets can minimise costs and social licence.

Streamlined connection process



4. Access control mechanism

Access right and scheme objectives

Encourage investment in new generation and storage projects

Maximise financial value for NSW electricity consumers



Utilise the network efficiently

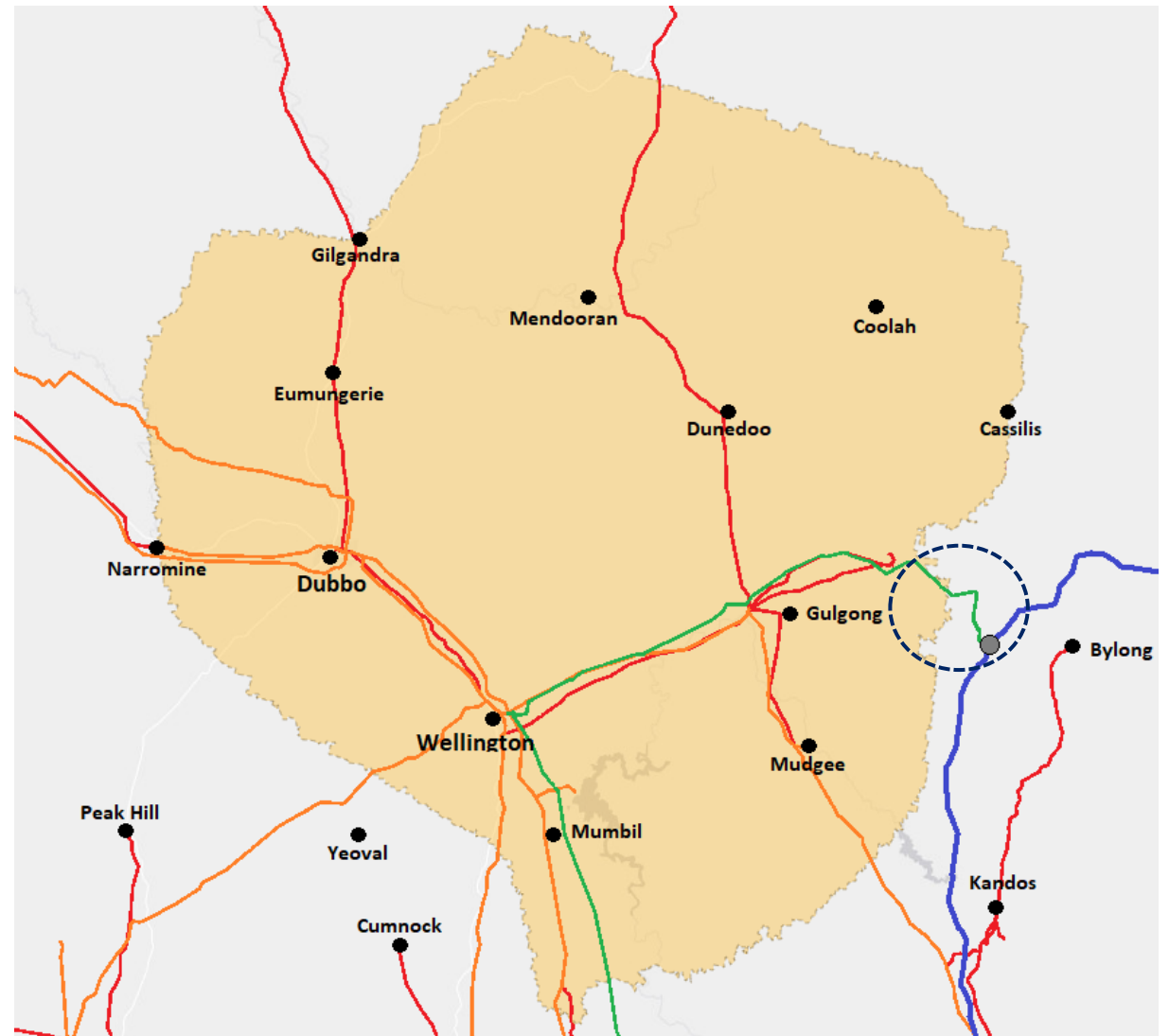
Foster community support and regional economic benefits

Improve certainty of connection timeframes

Provide sufficient certainty to investors

Central-West Orana Renewable Energy Zone

CWO REZ declared on 5 Nov 2021



Access control mechanism

Projects connecting to nearby infrastructure can impact the overall REZ network performance, marginal loss factor, and curtailment risk of access right holders.

Options 1 and 2

1. Competitive tender
 - Criteria including community benefits and regional economic development
2. Do no harm test
 - Applied by relevant Network Service Provider

Cut-off dates

- Triggers:
 - Development consent
 - Application to connect
- 6 months from access scheme declaration

5. Access fees

Access right and scheme objectives

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Maximise financial value for NSW electricity consumers



Utilise the network efficiently

Foster community support and regional economic benefits

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Access fee principles



AEMO Services will determine the fees payable to the Scheme Financial Vehicle by participants in an access scheme in accordance with the following principles:

- Supporting legislated community and employment purposes
- Maximising financial value for NSW electricity consumers
- Optimising REZ Infrastructure utilisation and wholesale electricity/contract markets



Setting and usage of access fees



- Exploration on the composition of access fees, including whether access fees should **recoup network related costs in part or full, is currently being undertaken.**



- If the **existing NEM model** for network costs was applied to the REZ, consumers would pay for the shared REZ network and generators would pay for their connection to it.
- If new REZ generation is required to cover the costs in part or full of the REZ this could:
 - increase the cost of LTESA strike prices
 - create a significant disparity between the costs to generators in/outside the REZ

Access fee format

Mechanisms for recovering access fees could include up-front capital payments by projects, annuity payments, or a combination of both.

Option	One-off payment	Yearly subscription fee	Combination of one-off and yearly fee
Description	Entire access fee is paid upfront (e.g. when connecting to the network)	Annual subscription fee is paid over the life of the access right (e.g. 20 years)	A portion is paid as a one-off 'joining fee' and the remainder over time
Illustrative example	\$12 million total	\$600,000 per annum	\$5 million + \$350,000 per annum
Benefits	Simple administration that allows proponents to capitalise cost	Less capex-intensive, can be funded through operations.	Cost recovery aligned with scheme expenses

6. Activating the access scheme

Activating the access scheme

The access scheme will be delivered through a combination of an access scheme declaration, regulation, and contract.

Regulation under EII Act

Regulations made by the Minister under the EII Act.

- Modifications and amendments to the National Electricity Rules and the National Electricity Law
- Further regulations to implement the scheme

Access Scheme Guidelines

Access Scheme Declaration

Declared by the Minister under Section 24 of the EII Act.

- How access rights are allocated and conferred.
- Register of access rights

Contract

The Project Delivery Agreement contains contractual obligations, including:

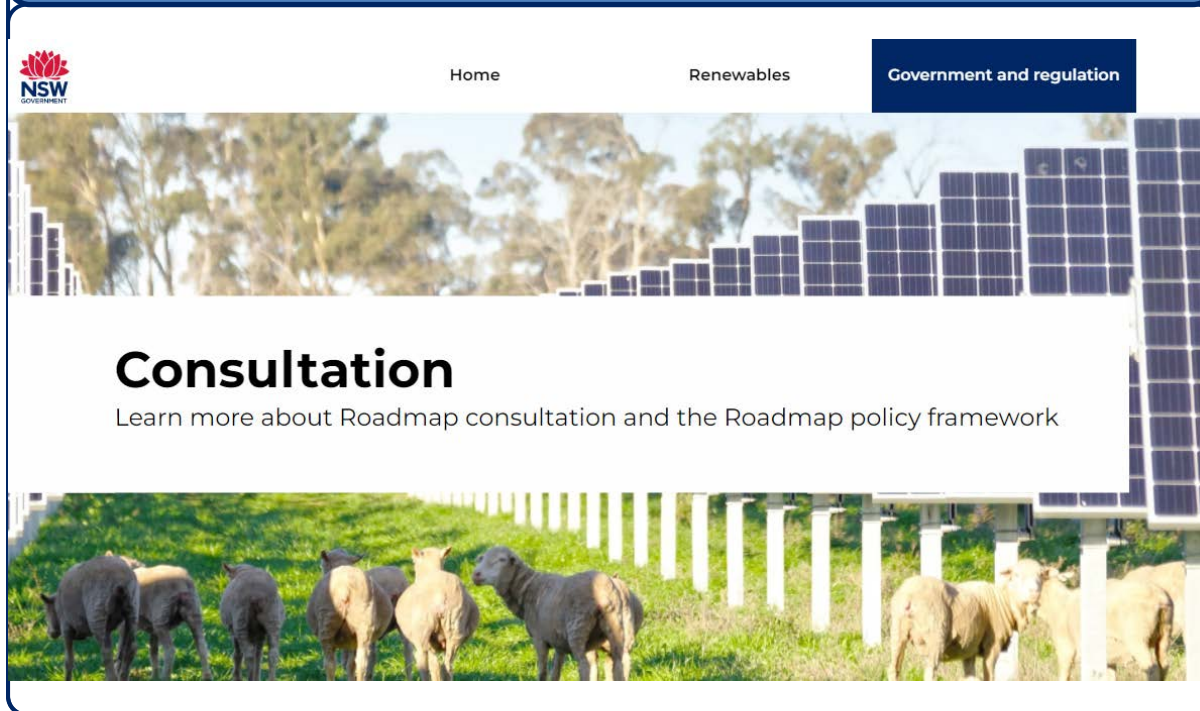
- Project construction milestones
- Project characteristics

Q&A

7. How to make a submission

Have your say

www.energy.nsw.gov.au/government-and-regulation/electricity-infrastructure-roadmap

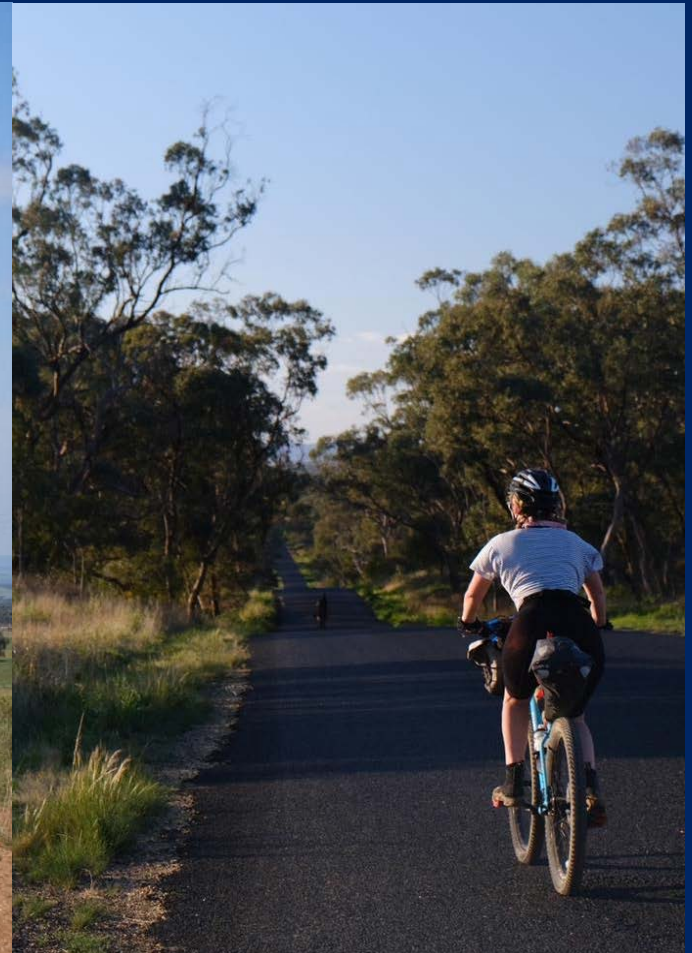


The consultation paper is open open for feedback from **20 December 2021 to 14 February 2022**.

There are two methods to provide feedback:

- Download and complete the Word version of the submission form from the Electricity Infrastructure Roadmap webpage and email it to Electricity.Roadmap@dpi.nsw.gov.au with 'Your Name' Access product design consultation submission' in the subject line
- Provide a free form submission via email to Electricity.Roadmap@dpi.nsw.gov.au with 'Your Name' Access product design consultation submission' in the subject line.

Thank you



energy.nsw.gov.au/renewable-energy-zones