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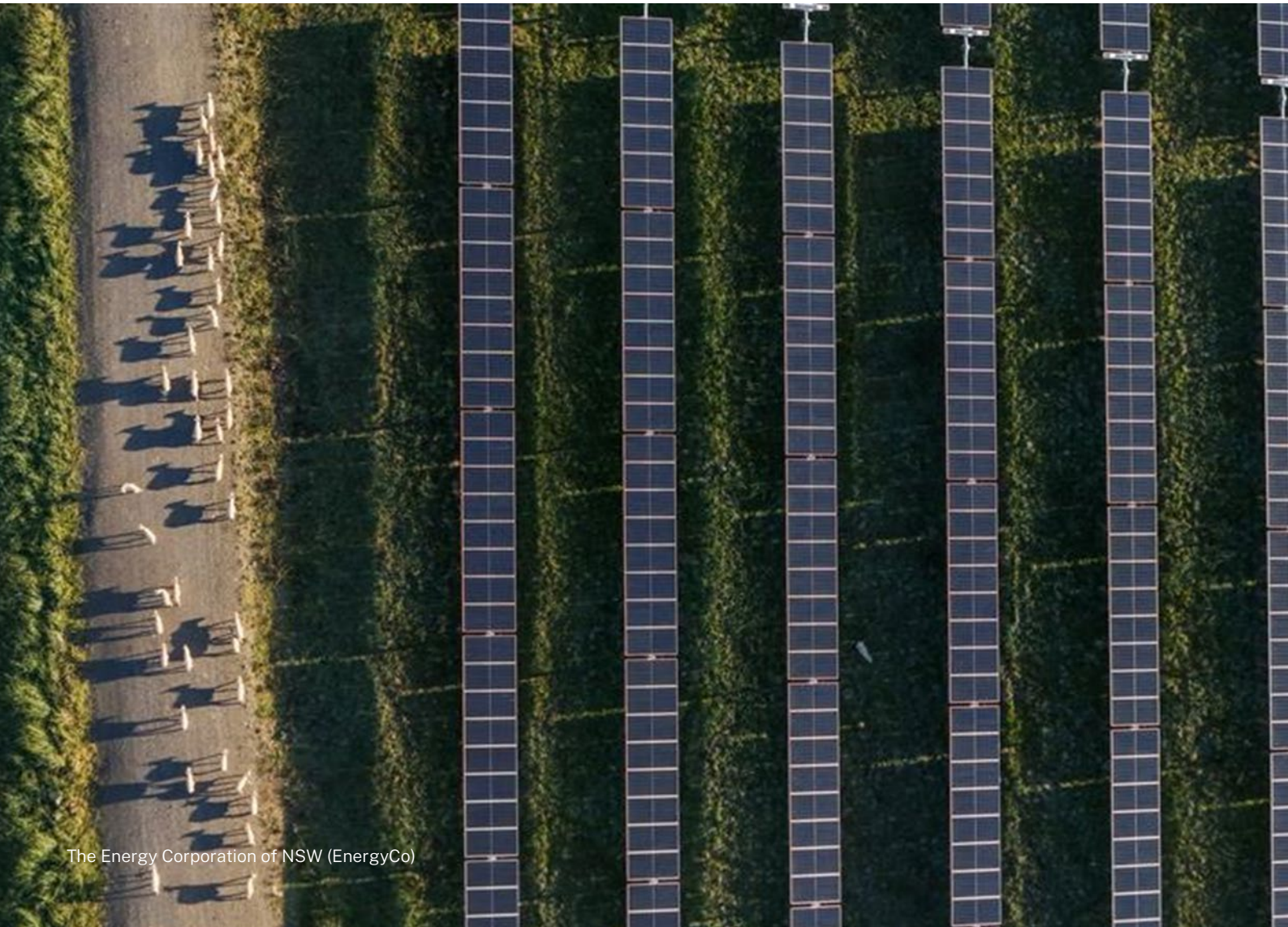
New England Renewable Energy Zone Generation and Storage Consultation Paper

August 2025



The Energy Corporation of NSW (EnergyCo)

Acknowledgement of Country

The Energy Corporation of New South Wales acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past and present through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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New England Renewable Energy Zone Generation and Storage Consultation Paper

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1 Introduction

1.1 Overview

Renewable Energy Zones (REZ) are designed to function as modern-day power stations. REZs bring together large-scale renewable energy generation projects, storage projects and network infrastructure to provide affordable, clean and reliable electricity to homes and businesses in NSW.

The New England REZ is the largest of the REZs identified in the NSW Electricity Infrastructure Roadmap (Roadmap). The REZ will deliver new network infrastructure to unlock renewable energy generation and storage projects within the region. It will play a critical role in delivering the State's energy transition, helping to keep the lights on as coal-fired power stations retire.

EnergyCo has been appointed as the Infrastructure Planner for the New England REZ and is responsible for coordinating the delivery of the New REZ Network Infrastructure, generation and storage in the REZ. This coordination is important to ensuring efficient utilisation of the new infrastructure and improving affordability for NSW electricity consumers.

1.2 Purpose of the consultation paper

EnergyCo and the NSW Government are committed to early and genuine consultation with industry, local communities and the public as we progress the design of the New England REZ.

We are seeking initial feedback on the approaches we are considering in four key areas for managing the coordination of generation and storage projects (Projects) connecting to network infrastructure:

Development of a potential Access Scheme

Facilitation of Connection Assets

Payments to landholders

Provision of system strength

We have considered these areas together given their intrinsic links and to ensure that there is comprehensive assessment of generation and storage approaches as part of the design and delivery of the New England REZ.

In developing the approaches under consideration, EnergyCo consulted with Transgrid, AEMO, ASL, SFV, the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW), Projects and other key stakeholders.

1.3 Navigating the Paper

To support readers in navigating the document it has been divided into three parts. Each part, and what engagement is being sought, has been summarised below. A glossary of key terms used in the consultation paper has been provided at the end of the document (see Glossary).

Part I: Proposed New England Access Scheme

EnergyCo is seeking feedback on how an Access Scheme could apply in the New England REZ. Given the unique characteristics of the REZ a bespoke approach will likely be required. Key areas where EnergyCo is seeking feedback are on the proposed scope of the Access Scheme (section 3.4), the transmission network that may be captured under the Access Scheme (section 3.5) and how transitional arrangements may apply to Projects (section 3.6).

Stakeholder views on Part I will inform whether and in what form we pursue an Access Scheme for the New England REZ.

Part II: Generator Connection Assets and landholder payments

EnergyCo is seeking feedback on a model under consideration to connect new generation and storage projects into the New England REZ and how landholders could receive payment for hosting these Connection Assets. Key areas where EnergyCo is seeking feedback are on the details of the proposed model (section 4.2), application of the proposed model (section 4.3), the proposed cost recovery structure (section 4.5) and payments to landowners who may host Connection Assets (section 5).

Feedback provided on Part II will inform the design of the Connection Assets model and how a framework for landholder payments could best apply.

Part III: Proposed system strength model

EnergyCo is considering how to efficiently manage the provision of system strength in the New England REZ to deliver beneficial outcomes for generators and consumers.

Feedback on Part III will support the development of a system strength model that enables the efficient delivery of system strength required to meet generator demand in the New England REZ.

The Paper does not cover:

- Community and employment benefits programs;
- Access fees;
- Interaction between Access Rights and long term service energy agreements or capacity investment scheme agreements;
- Proposed contents of REZ Access Standards for the New England; or
- Planning and environmental approvals for the New REZ Network Infrastructure.

The matters not covered in this Paper may be subject to separate consultation processes.

1.4 Providing your feedback

You are invited to provide feedback on the New England REZ Generation and Storage Paper. The end of each sub-section has targeted questions under the 'Have your say' call out boxes to guide feedback. **You do not need to respond to every question,** rather only those that are relevant to you or your organisation. You can use the New England REZ Generation and Storage Consultation Paper Submission Form for your responses or simply provide a free form submission.

Please submit your response to newengland.access@energyco.nsw.gov.au with **'Your Name – New England REZ Generation and Storage Consultation Paper'** in the subject line.

Consultation timeline

15 August 2025 – Release of paper and invitation to stakeholders to make submissions

12 September 2025 – Consultation closes

1.5 Next steps

Feedback received on this consultation paper will inform whether and in what form we pursue a potential Access Scheme, a model for Connection Assets, payments for landholders hosting Connection Assets and a system strength framework for Projects in the New England REZ.

If EnergyCo determines that an Access Scheme should be progressed for this REZ, we will develop a draft Access Scheme design and recommendation to the NSW Minister for Energy.

If the Minister supports proceeding with the development of an Access Scheme, it is expected to be set out in a draft Access Scheme Declaration published for consultation in Q1 2026. The draft Access Scheme Declaration will be accompanied by a position paper describing the contents of the Declaration to support stakeholder feedback. Informed by consultation on the draft Access Scheme Declaration, a New England REZ Access Scheme would be expected to be formally declared by the Minister in Q2 2026, if pursued.

As we work through detailed policy design for each of the key areas identified in this paper, to the extent they are pursued, EnergyCo will continue to engage with and seek input from stakeholders.

2 Background and context

2.1 The New England REZ

The New England REZ is located in the north of NSW, centred on the lands of the Biripi, Dainggatti, Nganyaywana, Ngarabal, and Gumbainggir people and situated within the local government areas (LGAs) of Armidale Regional, Tamworth Regional, Inverell, Glen Innes Severn, Tenterfield, Uralla, and Walcha (as seen in Figure 1 below).

The REZ has been shaped through input from these local communities and will support billions of dollars in investment and benefits for the region, to leave a legacy for the people who will host the infrastructure on behalf of everyone in NSW. The NSW Government and EnergyCo are committed to ensuring the New England REZ provides social and economic benefits for local and First Nations communities, in line with the NSW Renewable Energy Sector Board Plan[1] and the First Nations Guidelines[2].

The New England REZ will provide an initial network capacity of 6 gigawatts (GW), delivered over two stages, with the potential to increase the network capacity to 8 GW in the future. Indicatively, the 6 GW transfer capacity could support up to 12 GW of generation with up to 4 GW of storage. Unlocking this significant amount of generation and storage is critical to supporting affordable, reliable power for homes and businesses across the state.

It will contribute substantially to replacing the output from the State's retiring coal-fired power stations and achieving net zero emissions by 2050. It is also expected to deliver around $24 billion in private sector investment and support around 6,000 construction jobs and 2,300 operational jobs.

The New England region has high-quality natural energy resources, with the potential to generate significant renewable energy due to consistent wind patterns and high solar irradiance. In terms of energy storage potential, the large variations in elevation and diverse geographical features such as ridges and deep valleys provide favourable conditions for developing pumped hydroelectricity infrastructure. It is also strategically located close to the existing transmission lines that connect to the NSW east coast and Upper Hunter.

[1] NSW Renewable Energy Sector Board's Plan, https://www.energy.nsw.gov.au/sites/default/files/2022-09/nsw-renewable-energy-sector-board-plan.pdf

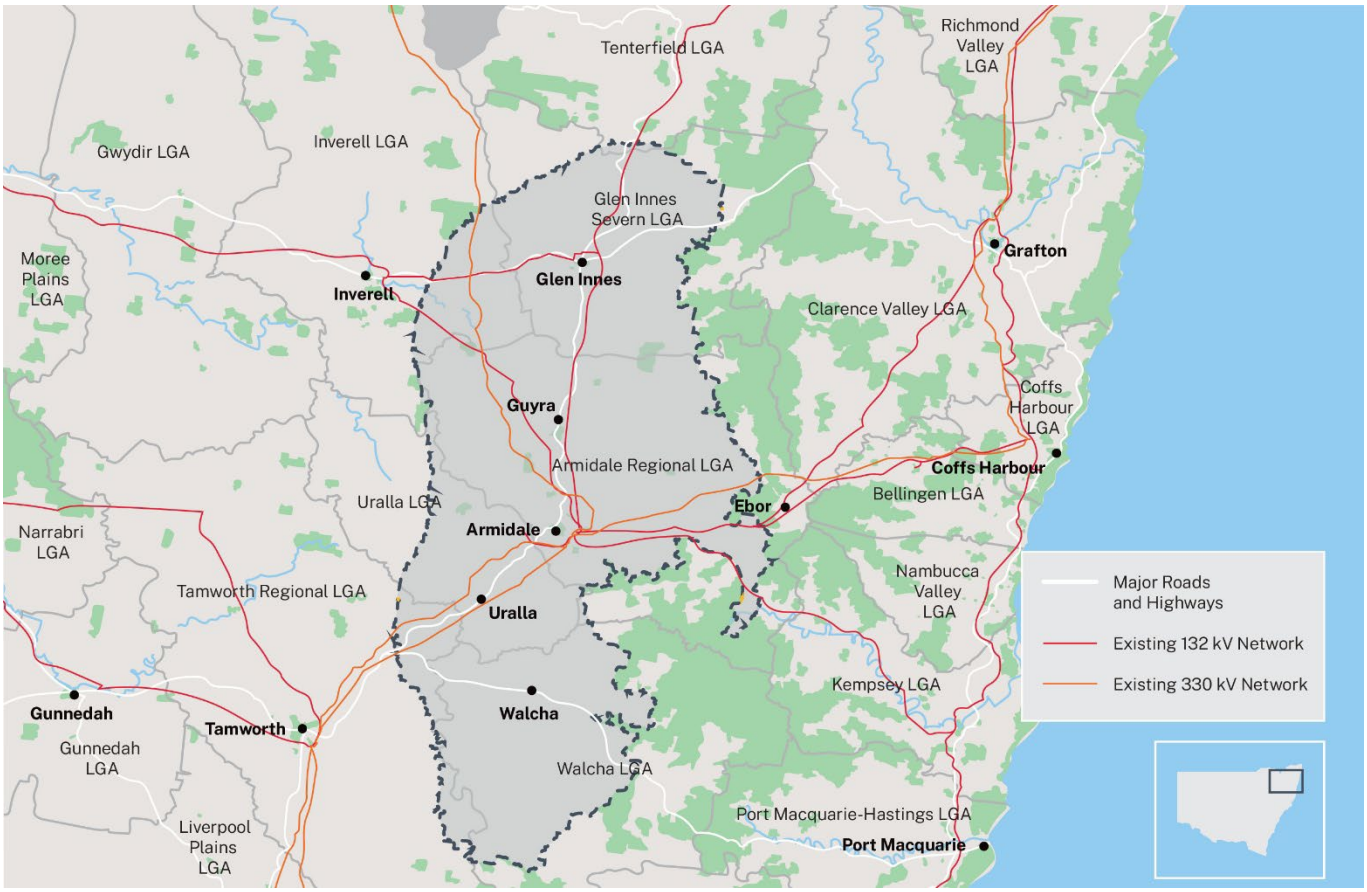
[2] NSW First Nations Guidelines, https://www.energy.nsw.gov.au/nsw-plans-and-progress/major-state-projects/electricity-infrastructure-roadmap/first-nations

The location and geographical area of the New England REZ have been identified as an optimal location to host renewable energy generation in NSW with strong renewable energy resource potential, proximity to the existing electricity network, and reduced environmental and land-use constraints compared to other parts of NSW.

Following extensive consultation, the New England REZ was formally declared by the Minister for Energy on 17 December 2021[3]. It is expected that the REZ Declaration will be amended prior to making a Draft Access Scheme Declaration for the New England REZ, if a decision is made to introduce an Access Scheme, to ensure the REZ Declaration aligns with the network infrastructure to which an Access Scheme would apply.

More information on the New England REZ can be found on the EnergyCo website.

Figure 1 - New England REZ and surrounding regions



[3] New England REZ Declaration, https://gazette.nsw.gov.au/gazette/2021/12/2021-643.pdf

2.2 New England power system

2.2.1 Existing Network Infrastructure

There is a substantial amount of existing transmission and distribution network infrastructure within the New England REZ area and broader New England region, operating at voltages of 330 kV, 132 kV, 66 kV and 33 kV. Transgrid is the Existing Network Operator, owning and operating the existing network infrastructure at voltages of 330 kV and 132 kV (as seen in Figure 2 below), while Essential Energy owns and operates the 66 kV and lower voltage networks in the region (not pictured in Figure 2).

2.2.2 New REZ Network Infrastructure

EnergyCo, as the Infrastructure Planner for the New England REZ, is considering various network infrastructure design options for the New REZ Network Infrastructure.

The New REZ Network Infrastructure involves the delivery and operation of new high voltage electricity network infrastructure that is required to connect energy generation and storage Projects within the New England REZ to the existing network to the south of Muswellbrook adjacent to Bayswater Power Station, as shown in Figure 2.

The New REZ Network Infrastructure will provide an initial transfer capacity of 6 GW over two stages, as shown in Table 1, below. Additional transfer capacity of at least 2 GW (stage 3) may be developed in the future (subject to energy demand and separate approvals).

Table 1 - Cumulative network capacity targets

	Stage 1		Stage 2		Stage 3	
	Capacity	Timing	Capacity	Timing	Capacity	Timing
Network Capacity	2.4 GW	2032	6.0 GW	2034	8.0 GW	TBC

The project has the following components:

- new transmission infrastructure comprising:
  - two new double-circuit 500 kV transmission lines to connect the New England REZ to the existing NSW transmission network near Bayswater Power Station, located west of Singleton NSW;
  - new 500 kV and 330 kV lines to connect to the proposed energy hubs within the New England REZ,

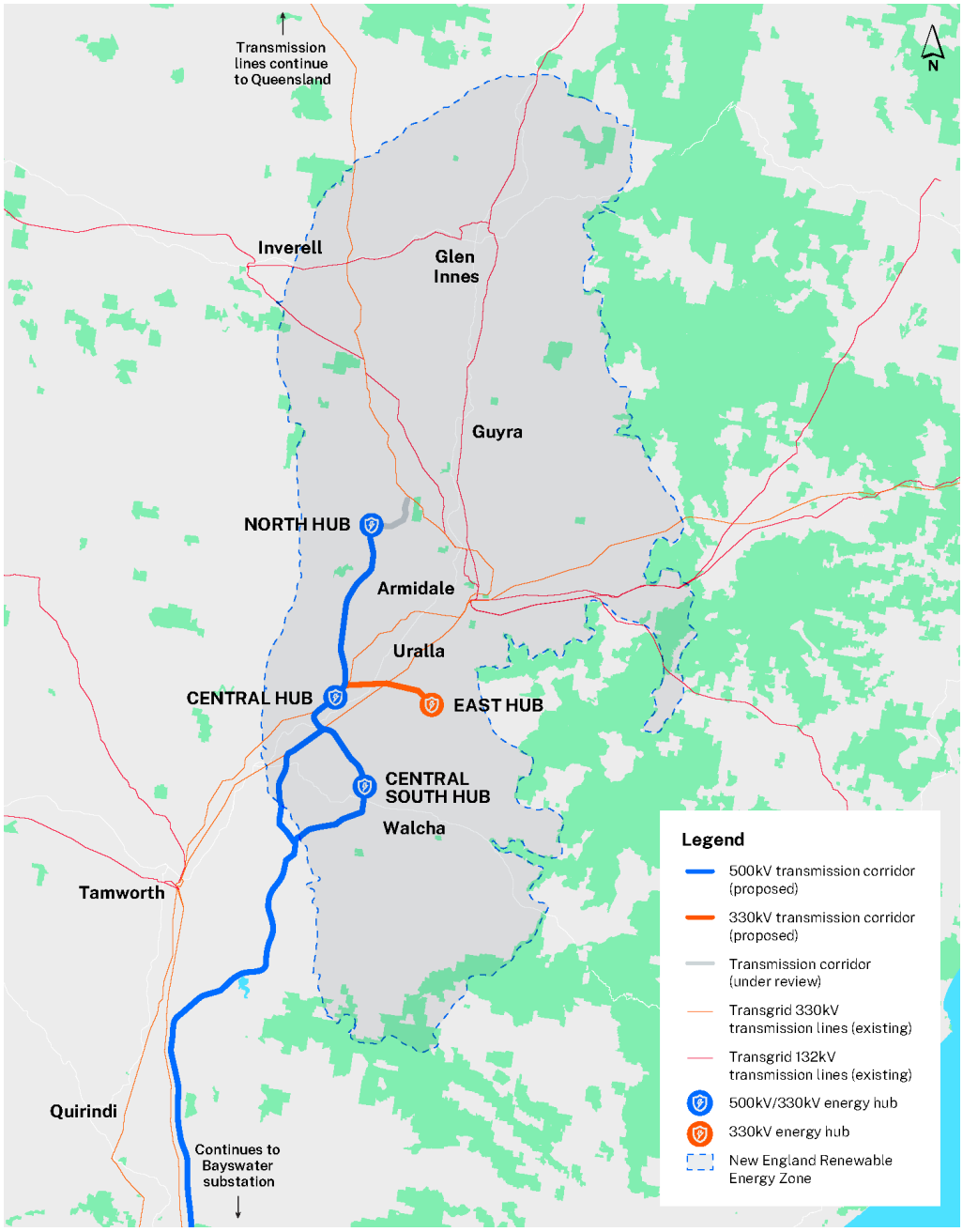
- four new energy hubs to connect future renewable energy generation and storage Projects within the New England REZ to the new 500 kV transmission infrastructure and a northern connection to link the North Hub with the existing 330 kV transmission network, and
- ancillary development, including road works, upgrade and/or augmentation to existing electricity and utility infrastructure, provision of communications infrastructure, and other construction-related works and facilities such as workforce accommodation camps.

The proposed network configuration involves a "meshed network", whereby the New REZ Network Infrastructure connects to the existing transmission network at multiple points within the REZ, as well as at Bayswater Power Station.

Figure 2 shows the key features of this network configuration. The proposed interfaces or 'meshing' points with Transgrid's network are shown at the proposed Northern and Central Energy Hubs within the REZ geographical area, and at Bayswater to the south.

In addition, EnergyCo and Transgrid are working together to explore the potential for local upgrades to the existing transmission network, referred to as "augmented meshed", which has the potential to leverage existing infrastructure and easements. Such an arrangement is expected to provide generation and storage projects with more connection options, as Projects connecting to either the New REZ Network Infrastructure or existing Transgrid transmission network can utilise some of the new network transfer capacity provided by the New REZ Network Infrastructure.

Figure 2 - Proposed REZ network scope and configuration



Source: Based on project layout as presented in New England REZ Network Infrastructure Project Scoping Report, July 2024

The majority of the New REZ Network Infrastructure is intended to be delivered contestably via a competitive tender process to select a New Network Operator to design, build, operate and own the project. EnergyCo is responsible for running the competitive tender process and entering into a contract with the successful New Network Operator to deliver the project following authorisation by the Consumer Trustee under the EII Act. A small subset of the New REZ Network Infrastructure will be delivered by Transgrid who is considered best placed to deliver these components.

At the time of this paper's publication, a tender process is underway to identify a preferred New Network Operator for the contestable components of the New REZ Network Infrastructure.

2.2.3 QNI Connect

The proposed new Queensland-New South Wales Interconnector, known as QNI Connect, has been identified in AEMO's 2024 Integrated System Plan as an actionable project. It is being jointly developed by Transgrid and Powerlink. The project has an indicative commissioning date of 2032/33 and would add approximately 1.7GW of additional transfer capacity of southward power flows from Queensland to NSW.[4]

The power flows from QNI Connect would have a direct pathway through the existing and New REZ Network Infrastructure. EnergyCo is considering the impact of QNI Connect on the New England REZ and the design of a potential Access Scheme.

2.3 Existing and proposed generation and storage projects in the New England REZ

The New England region currently hosts several large-scale wind and solar projects connected to Transgrid's existing 330 kV and 132 kV networks with a combined generation capacity of around 1 GW.

EnergyCo analysis suggests a further 3.1 GW of generation (wind and solar) and 2.6 GW of storage (batteries and pumped hydro) projects may seek connection to Transgrid's network within the REZ geographical area. EnergyCo is also aware of several Projects seeking connection to Transgrid's network outside the REZ geographical area, but within the New England region.

In addition to the projects interested in connecting to Transgrid's existing network infrastructure, EnergyCo analysis indicates Projects representing an additional 8.2 GW of generation capacity and 5.0 GW of storage capacity have expressed interest in connecting to the proposed New REZ Network Infrastructure.

EnergyCo notes that some but not all of these Projects will proceed, however the high level of interest in developing Projects in the New England region reinforces the value of developing the New England REZ along with an Access Scheme that coordinates generation, storage and network infrastructure.

[4] At points in time power flows from both the existing network within the REZ and QNI Connect will flow northwards from NSW towards Queensland.

Part I

Potential New England REZ Access Scheme

3 Proposed Access Scheme design

3.1 Introduction

Access Schemes coordinate investment in energy infrastructure by managing the access to and use of specific network infrastructure by network, generation and storage operators. They are fundamental to realising the objectives of the Roadmap, including encouraging investment in new generation and storage by reducing risk for investors, and fostering local community support.

An Access Scheme is under consideration for application in the New England REZ. Given the scale of the REZ, and particularly the scale of the New REZ Network Infrastructure being developed, applying an Access Scheme may be an appropriate way to coordinate and promote the efficient utilisation of the transmission infrastructure. This is important to ensure the REZ is supporting an affordable, secure and reliable electricity system.

Access Schemes benefit host communities by coordinating the delivery of generation and storage infrastructure in line with community expectations. An Access Scheme also recovers funds for community and employment purposes from connecting Projects through access fees and centrally manages the use of these funds to support high-impact community projects. These contributions help to promote regional development, provide training opportunities, support local legacy projects and social programs[5].

Introducing an Access Scheme in the New England REZ would be consistent with the approach taken to coordinating electricity infrastructure in the South West REZ and the Central-West Orana REZ, in which Access Schemes have been declared.

3.2 What factors are relevant in designing an Access Scheme?

EnergyCo has worked through a range of factors in determining the design of an Access Scheme under consideration for the New England REZ.

[5] Access Fees paid by Projects who participate in the Access Scheme will fund a Community and Employment Benefit Program in the New England REZ. Prior to developing the program, EnergyCo will undertake comprehensive community consultation. This may include engagement sessions, investigative studies, online webinars and Q&A sessions, facilitated workshops and community drop-in sessions.

The Access Scheme must be consistent with the objects of the EII Act, which includes encouraging investment in new generation, storage, network and related infrastructure by reducing risk for investors.

In assessing alignment with the objects of the EII Act, EnergyCo has considered how power will flow through the network infrastructure forming part of the REZ and the likely impact of those power flows on Projects located inside and outside the REZ geographical area.

Under the meshed network configuration proposed for the New England REZ, there will be a high level of electrical interconnectivity between the proposed New REZ Network Infrastructure and the existing Transgrid network inside and outside the REZ geographical area. This means it is not only Projects connecting to the New REZ Network Infrastructure that will benefit from the REZ Transfer Capacity, but also some Projects connecting to Transgrid's network within and outside the REZ. Conversely, Projects located in some parts of Transgrid's network outside the REZ geographical area may impact curtailment outcomes for Projects located within the REZ geographical area. This is relevant because a key policy intent of the Roadmap is for Projects to locate in REZ geographical areas (see section 3.4).

3.3 Objectives of the New England REZ Access Scheme

The objectives of the New England REZ Access Scheme under consideration are as follows:

Support investment in the REZ: through reducing risk to investors by providing greater assurance of curtailment within the REZ compared to open access;

Utilise the network efficiently: through coordinated and optimised utilisation of the existing and new network infrastructure by generation and storage Projects, ultimately benefiting consumers;

Foster community support and regional economic benefits: by delivering outcomes and benefits for local communities, mitigating cumulative impacts and managing land use considerations;

Support affordability for NSW electricity customers: through Project contributions to REZ network infrastructure costs and ensuring sufficient supply to place downward pressure on electricity prices; and

Improve certainty in connection timeframes: by enabling a REZ Connection Process (section 3.14) that facilitates timely and efficient connection of generation and storage Projects.

Aligned with these objectives, an Access Scheme is expected to provide benefits to consumers, host communities, Projects and investors.

3.4 Proposed scope of Access Scheme under consideration

An Access Scheme authorises or prohibits access to, and use of, specified network infrastructure forming part of a REZ. The network infrastructure that forms part of a REZ may include existing and planned or future network infrastructure. Defining the scope of the Access Scheme involves specifying the network infrastructure[6] that will be covered by the scheme and the ways in which access to the relevant network infrastructure (called Access Scheme Network) will be 'controlled'.

An Access Scheme can include two main tools:

- **Access Rights Regime**: introducing a requirement for Projects to hold an Access Right to connect to network infrastructure specified as Access Rights Network under an Access Scheme, and defining how Access Rights will be allocated.
- **Access Control Mechanism**: introducing a requirement for Projects to receive consent from the Infrastructure Planner to connect to network infrastructure specified as Access Control Network under an Access Scheme, and defining the conditions these Projects must meet before consent will be granted.

An Access Rights Regime and an Access Control Mechanism can be applied to different elements of network infrastructure in the same REZ but cannot be applied to the same network infrastructure.

Currently, EnergyCo is considering introducing an Access Rights Regime (where Access Rights are awarded) and potentially introducing an Access Control Mechanism (where EnergyCo's consent would be required to connect) on specified network infrastructure.

If an Access Control Mechanism is introduced, this would be a different approach to that taken in Access Schemes in other NSW REZs to date, reflecting that the scale and nature of the New England REZ are unique. For example, the large size and meshed nature of the New REZ Network Infrastructure mean that the most fit-for-purpose Access Scheme design to deliver the objectives may look different to those applied elsewhere.

The decision on whether and how an Access Scheme is applied, and particularly whether an Access Control Mechanism is introduced, will be informed by the feedback received through this consultation process as well as further power flow analysis and policy design work.

[6] Network infrastructure may include transmission lines, distribution lines, switching stations and other related infrastructure.

Have your say

1. What are your views on the Access Scheme under consideration for New England REZ, including both an Access Rights Regime and an Access Control Mechanism?

3.4.1 Access Rights Regime

The proposed Access Rights Regime model is a limited 'physical' access connection model which essentially caps the amount of expected generation hosting capacity available. This is the same type of model implemented under the Central-West Orana REZ and South West REZ Access Schemes. It reduces risks to investors by providing increased certainty for proponents around the level of curtailment Projects in the REZ as a whole will likely experience as compared to under the NER 'open access' arrangements.

EnergyCo is considering applying an Access Rights Regime to both the New REZ Network Infrastructure and existing transmission network infrastructure within the REZ geographical area, which would become an Access Rights Network.

Outside of the REZ geographical area, EnergyCo is also considering the inclusion of the new 500 kV transmission network infrastructure from where it exits the southern boundary of the New England REZ geographical area to Bayswater as Access Rights Network.

Section 3.5 describes the scope of network infrastructure to which the Access Rights Regime would apply.

Eligible Projects

Projects fully or partially located within a REZ geographical area and seeking connection to the Access Rights Network would be eligible to apply for Access Rights.

For Projects seeking connection to the 500 kV transmission network infrastructure from the southern New England REZ area to Bayswater, Projects would likewise need to be fully or partially located in a REZ geographical area. In this case, eligibility includes New England and Hunter-Central Coast REZ geographical areas, to the extent there is overlap of the specified network infrastructure in the REZ Declarations. This would enable high quality Projects fully or partially located within a REZ and seeking connection to the Access Rights Network to compete for Access Rights.

Transitional arrangements would be introduced to clarify the eligibility of existing projects and those in the development pipeline, these arrangements are contemplated in section 3.6 of this Paper.

Rationale

The application of the Access Rights Regime to all New REZ Network Infrastructure and existing lines located in the REZ geographical area is under consideration as it would provide a means to manage how the new REZ Transfer Capacity is utilised.

This potential approach supports equitable outcomes within the REZ, as all Projects would need to compete for Access Rights.[7] In the case of Projects connecting to Transgrid's existing network within the REZ, these Projects are likely to experience similar benefits, including improved curtailment outcomes, from the new REZ Network Transfer Capacity as Projects connecting directly to the New REZ Network Infrastructure, and these benefits would be recognised with the application of an Access Rights Regime.

This approach should result in Projects inside the REZ geographical area being indifferent as to which network they connect to from an access perspective, leading to more efficient design of Project connection infrastructure. It also incentivises Projects to locate within the REZ geographical area, as Access Right Holders will be entitled to the benefits of the REZ Transfer Capacity.

3.4.2 Access Control Mechanism

EnergyCo is currently considering whether it would be appropriate to introduce an Access Control Mechanism alongside an Access Rights Regime, as a complementary tool to coordinate network, generation and storage infrastructure and deliver the objectives of the Access Scheme (see section 3.3).

The purpose of the mechanism is to safeguard access arrangements for Access Right Holders by protecting them from the impacts of Projects connected to other network infrastructure, such as increased curtailment or losses[8].

Essentially, an Access Control Mechanism may be used to set conditions that must be met by Projects seeking connection to the Access Control Network, such as demonstrating that the impact of their Project on the curtailment of Access Right Holders is minimal. A Project would need to receive Infrastructure Planner consent before it can submit an application to connect to the Access Control Network[9].

An Access Control Mechanism is currently being considered as an option to apply to specified network infrastructure outside the REZ geographical area. EnergyCo is not proposing to control

[7] Unless a Project is covered by transitional arrangements – see section 3.6.

[8] Minister's *Guidelines for Access Scheme Declarations*

[9] Specifically, a Project must not submit an application to connect to the network unless it has obtained the consent of the Infrastructure Planner as specified in NER Cl 9A.5.5. Chapter 9A of the NER is available here: NSW Government Gazette No 476 of 06 December 2024. Unless a Project is covered by transitional arrangements – see section 3.6.

access widely across the existing Transgrid network and is only contemplating this option where technical analysis indicates it is merited in proximity to the REZ geographical boundary.

High-level design features under consideration include:

- **Access Control Network** – defining the network infrastructure on which an Access Control Mechanism would apply. This design feature is contemplated in this Consultation Paper.
- **Acceptable level of curtailment impact** – defining the level of curtailment impact on Access Right Holders which is acceptable for issuing consent to connect to the Access Control Network;
- **Curtailment impact test** – how the curtailment impact of a prospective Project will be assessed, the inputs and assumptions of this assessment, and responsibility for undertaking the assessment;
- **Process for assessing and issuing consent** – the process of assessing Projects seeking to connect to the Access Control Network and issuing consent, including the appropriateness of a competitive process versus another allocation approach; and
- **Transitional arrangements** – how transitional arrangements could apply to Projects in the development pipeline seeking connection to the Access Control Network. This design feature is contemplated in this Consultation Paper.

If a decision is made to progress with an Access Control Mechanism following this consultation process, EnergyCo will undertake further consultation with stakeholders on the details of the Access Control Mechanism design as we continue to work through the policy options.

Eligible Projects

If an Access Control Mechanism is introduced, Projects seeking connection to Access Control Network would be eligible to seek consent from EnergyCo for access to that network[10]. For clarity, this is likely to follow a separate assessment process than the Access Right allocation process.

Section 3.6 provides approaches under consideration to transitional arrangements for existing projects and those currently being developed.

Rationale

Projects connecting to certain Network Elements outside the REZ geographical area may impact on as well as benefit from the new REZ Transfer Capacity, including through improved curtailment outcomes. In some cases these Projects may negatively impact on the curtailment outcomes of

Access Right Holders within the REZ. For these reasons, some network infrastructure located outside the REZ may be covered by the Access Scheme.

While an Access Control Mechanism has not been implemented in other NSW Access Scheme's to date, the unique features of the New England REZ mean the use of this complementary tool may be warranted. The introduction of an Access Control Mechanism on selected network infrastructure could safeguard the integrity of Access Rights by ensuring that Projects connecting outside the Access Rights Network do not unacceptably impact the curtailment of Access Right Holders. This would support curtailment targets and the value proposition for the Access Rights Regime.

Introducing an Access Control Mechanism would also avoid sending unintended market signals for Projects to locate outside the REZ geographical area and receive benefits from the new REZ Transfer Capacity without participating in the Access Scheme.

Encouraging Projects to locate within the REZ geographical area is important as this region has been strategically selected as a preferred location for coordinated network, generation and storage development. Projects connected within this area will also benefit from the coordinated community and employment benefits delivered by EnergyCo, to ensure the local communities receive benefits from the infrastructure.

Have your say

2. What are your views on the benefits and challenges of introducing an Access Control Mechanism, and the potential value of this Mechanism for Access Rights Holders?
3. There are several ways that the curtailment impact of a Project connecting to the Access Control Network could be assessed. What are your views on how this should be assessed? How should a materiality threshold be determined?

3.5 Specified network infrastructure proposed to be subject to the Access Scheme

3.5.1 Existing network infrastructure

EnergyCo is considering whether to apply an Access Scheme to specified existing transmission network infrastructure located within and proximate to the REZ geographical area. For existing infrastructure, EnergyCo has undertaken an initial assessment of transmission lines (and related

infrastructure) in the region that may be covered by the Access Scheme, noting these are preliminary approaches.

The initial assessment was based on the following:

- High level load flow analysis considering:
  - Line capacities and existing levels of line congestion
  - Expected power flows across the REZ area and wider region
  - Possible future network augmentations
- High level analysis of projects currently in development, considering type, size, location and level of maturity.
- Policy considerations that reflect the objectives of the Access Scheme.

A summary of the potential approaches and options (where multiple options are under consideration) to be applied to certain Network Elements are set out in Table 2, below. This includes whether Network Elements are proposed to be subject to either an Access Rights Regime (ARR) or Access Control Mechanism (ACM). Where multiple options are being considered, further details including potential benefit and impacts of each option are outlined in Table 3.

Table 2: Summary of Access Scheme scope approaches under consideration and proposed mechanism

Network Elements	Approach under consideration		
All New REZ Network Infrastructure	Included (ARR)		
Network Elements	**Options under consideration**		
Existing Transgrid 330 kV Tamworth to Armidale Lines (Line 85, 86 & 8U)	**1.** Include sections within the REZ geographic area as ARR only	**2.** Include sections inside the REZ geographic area as ARR and outside the REZ geographic area as ACM	
Network Elements	**Options under consideration**		
Existing Transgrid 330 kV Qld Border to Armidale via Dumaresq (Lines 8E, 8C, 8J, 8L, 8M)	**1.** Include from Armidale to Guyra as ARR only	**2.** Include sections within the REZ geographic area as ARR only	**3.** Include sections inside the REZ geographic area as ARR and outside the REZ

			geographic area as ACM
Network Elements	**Approach under consideration**		
Existing Transgrid 330 kV Armidale to Coffs Harbour (Line 87)	Include sections within the REZ geographic area as ARR		
Network Elements	**Options under consideration**		
Existing Transgrid 132 kV inside REZ geographic area (Lines 96C, 965, 966K, 966A, 96T, 96N, 96R, 9UG, 9U4)	**1.** Exclude	**2.** Include as ARR	
Network Elements	**Approach under consideration**		
All future 500 kV, 330 kV and 132 kV[+] network located inside the REZ geographical area developed while the Access Scheme is in place	Include as ARR		
Network Elements	**Approach under consideration**		
All other lines (multiple lines)	Exclude		

Note: Options for each Network Element are under consideration for feedback and should be reviewed independently of each other.

[+] If existing 132 kV network is excluded from the scope of the Access Scheme then any further 132 kV network will also be excluded.

Essential Energy's 66 kV (and lower voltage) network infrastructure is not proposed to be included in any potential Access Scheme for New England REZ. This network has a limited hosting capacity and is therefore not expected to materially impact curtailment conditions within the REZ.

Table 3: Options under consideration for proposed lines specified under the New England REZ Access Scheme

Network Element	Options under consideration for Access Scheme	Proposed access mechanism	Benefits	Risks/Impacts
Transgrid 330 kV Tamworth to Armidale Lines *Line numbers 85, 86 and 8U*	**Option 1:** Include sections only within the REZ geographical area	Access Rights Regime	• Captures the portion of the lines which most materially make use of REZ flowpaths, and which have experienced the most development interest to date • Existing projects which are progressing outside the REZ geographic area can continue development without interruption	• Remaining potential for uncoordinated connections (under open access) south of the REZ geographic area. Projects connecting in this region will make some use of REZ flowpaths and impact the curtailment experience of Access Right Holders • Reduced certainty and value proposition for Access Scheme participants • Reduced ability for EnergyCo to collect access fees (that fund the community and employment benefit scheme) and coordinate cumulative impacts
	Option 2: Entirely included (Tamworth to Armidale)	Access Rights Regime for lines inside REZ geographical area; Access Control Mechanism for lines outside REZ geographical area	• EnergyCo can coordinate connections on entire line from Armidale to Tamworth • Provides greatest certainty to Access Right Holders on curtailment experience, and provides a stronger scheme value proposition • Stronger coordination of network utilisation, cumulative impacts • Broadest funding collected for community and employment benefit program • Greatest control to ensure highest quality Projects are permitted to connect	• May prevent Projects outside the REZ area geographical area from being able to connect to the grid • Projects connecting South of the REZ are expected to have a relatively minor impact on curtailment outcomes for REZ generators
Transgrid 330 kV Qld Border to Armidale via Dumaresq[11] *Line numbers 8E, 8C, 8J, 8L, and 8M*	**Option 1**: Include from Armidale to Guyra only	Access Rights Regime	• Open access retained for projects north of Guyra ensures consistency with Queensland projects connecting to the same lines • Lines north of Guyra are likely to be more congested than those to the south, as south of Guyra QLD-NSW interconnector flows will be split between the existing network and the New REZ Network Infrastructure. This reduces the likelihood of generator connections north of Guyra, and therefore the magnitude of impact on REZ Access Right Holders.	• Potential for uncoordinated connections (under open access) north of Guyra. Projects connecting in this region will make substantial use of REZ flowpaths and impact the curtailment experience of Access Right Holders. • Reduced certainty and value proposition for Access Scheme participants • Reduced ability for EnergyCo to collect access fees (that fund the community and employment benefit scheme) and coordinate cumulative impacts
	Option 2: Include inside the REZ geographical area only	Access Rights Regime	• Compared to Option 1, captures a greater portion of the line under the Access Scheme. This allows for greater curtailment certainty for Access Right Holders • Existing projects which are progressing outside the REZ geographic area can continue development without interruption	• Potential for uncoordinated connections (under open access) outside of the REZ geographic area to impact curtailment experienced by Access Right Holders • Reduced certainty and value proposition for Access Scheme • Reduced ability for EnergyCo to collect access fees (that fund the community and employment benefit scheme) and coordinate cumulative impacts

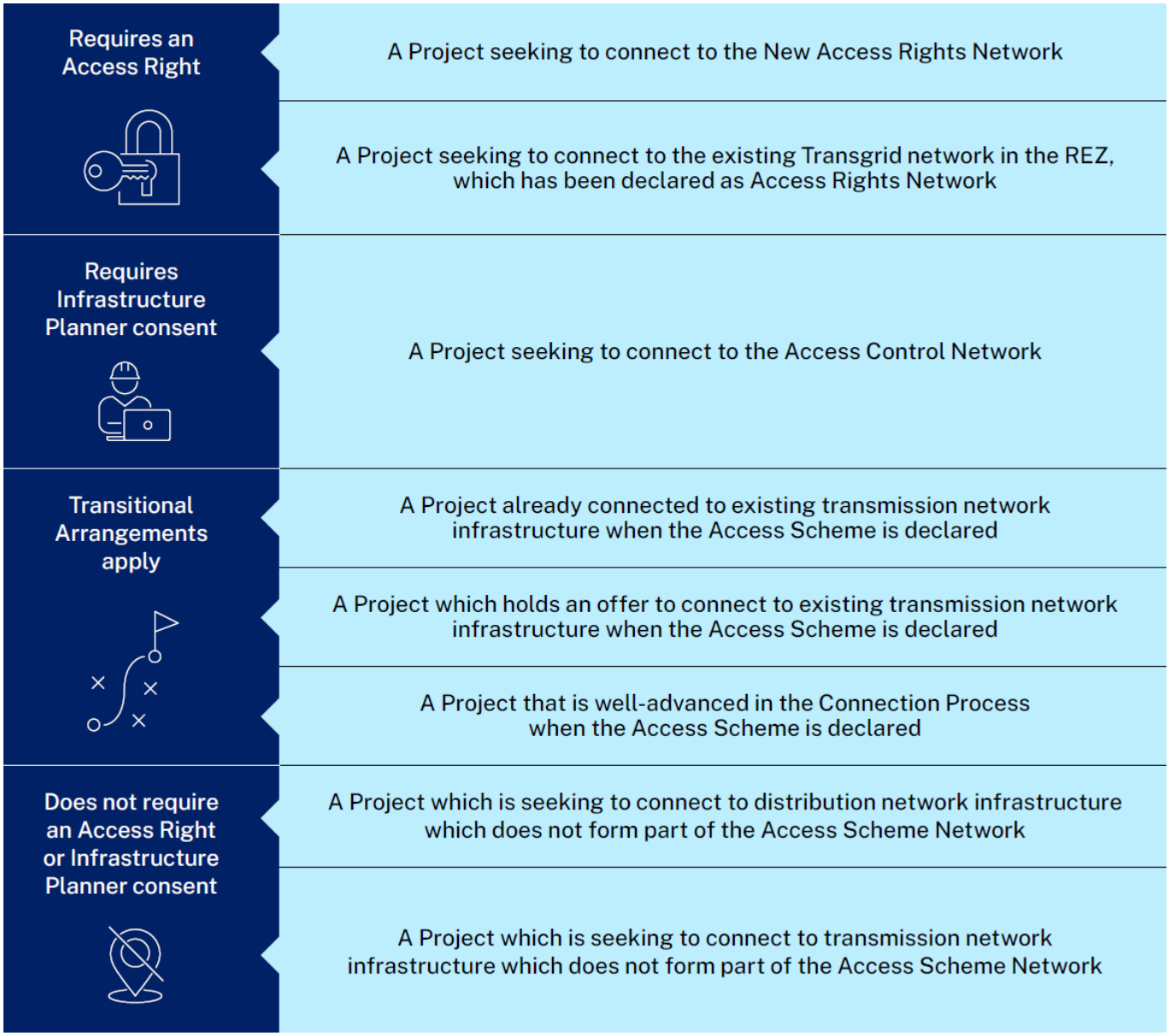
[11] EnergyCo is aware of the projects proposed on this line, the complexities created by different treatment of projects proposing to connect on different sides of the NSW/QLD border, and that power flows from QLD cannot be avoided in any case. EnergyCo welcomes discussion on this point.

Network Element	Options under consideration for Access Scheme	Proposed access mechanism	Benefits	Risks/Impacts
	Option 3: Entirely included (from Armidale to Qld Border)	Access Rights Regime for lines inside the REZ geographic area; Access Control Mechanism for lines outside the REZ geographic area	• Provides greatest certainty to Access Right Holders on curtailment experience (noting projects located in QLD can still impact curtailment outcomes), and provides a stronger scheme value proposition • Strong coordination of network utilisation, cumulative impacts • Broadest funding collected for community and employment benefit program • Greatest control to ensure highest quality projects are permitted to connect	• May prevent Projects outside the REZ geographic area from being able to connect to the grid • Unequal treatment of projects on either side of the state border. This may result in perverse incentive for projects to develop and connect in QLD to bypass the Access Scheme
Transgrid 132 kV inside REZ geographical area ***All Lines (96C, 965, 966K, 966A, 96T, 96N, 96R, 9UG, 9U4) Included only in REZ geographical area***	**Option 1:** Excluded	NA	• Greatest certainty of connection for Projects seeking to connect on the 132 kV network	• Potential for uncoordinated connections to impact curtailment experienced by Access Right Holders • Potential for future augmentations to the 132 kV network in the region to allow significant quantities of generator connections, exacerbating the curtailment impacts • May incentivise Projects to connect to 132 kV network to avoid participating in Access Scheme • May erode developer confidence due to the perceived risk of uncontrolled curtailment • Uncoordinated development may lead to inefficient development and curtailment on the 132 kV network itself • Least oversight to ensure high quality projects connecting to the grid
	Option 2: Included within the REZ geographic area	Access Rights Regime for lines inside REZ geographic area	• Improved certainty and value proposition for Access Scheme • Improved coordination of Project connections allowing for more optimised network utilisation and improved management of cumulative impacts • Creates efficiencies by allowing 132 kV projects to be captured by the same generator connections and system strength strategies as the other REZ generators • Broadest funding collected for community and employment benefit program	• May hinder the development of smaller Projects, as participation in an Access Rights Tender may present a barrier • May hinder the development of existing in-progress Projects on the 132 kV network (if not captured by transitional arrangements) • The current network capacity of the 132 kV system is small and therefore the curtailment impact on Access Right Holders may possibly not be significant enough to justify coverage under an Access Scheme

3.5.2 Impact of approaches under consideration

If an Access Scheme is introduced in the New England REZ, comprised of both an Access Rights Regime and an Access Control Network, Figure 3 explains the way in which it would apply to a Project. This depends on the location of the Project (refer to Eligible Projects in section 3), the Network Element it wishes to connect to and connection status at the time an Access Scheme is declared.

Figure 3: How a potential Access Scheme may apply to Projects



EnergyCo is working through design decisions concerning how the Access Scheme would apply in different situations and for different Projects including:

- the most appropriate way to manage and coordinate storage connecting into the REZ and the opportunities for large load in the REZ.

- the potential for Projects located in the REZ geographical area to seek connection to the Access Control Network.
- the interaction between the New England REZ and the Hunter Central Coast REZ, given the New REZ Network Infrastructure extends to Bayswater, which is located within the Hunter Central Coast REZ.

Have your say

4. For Network Elements referred to in Table 2, what are your views on the proposed approaches? Where options are provided, which option do you prefer and why?
5. Are there risks or unintended consequences for potential approaches and options? If so, can you please describe these?

3.6 Transitional Arrangements

3.6.1 Overview

Until an Access Scheme is declared, Projects seeking connection to Transgrid's network in the New England REZ may continue to progress their connection under the National Electricity Rules (NER) Connection Process (as set out in Chapter 5 of the NER).

If an Access Scheme is declared, a Project will require an Access Right to seek connection to the Access Rights Network or Infrastructure Planner consent to seek connection to the Access Control Network, unless the Project is covered by transitional arrangements. The Access Scheme Declaration can include transitional arrangements that specify how the Access Scheme will apply to existing and planned Projects.

Transitional arrangements seek to ensure that the application of an Access Scheme is fair and equitable for projects that are significantly progressed in their development and the NER Connection Process. These arrangements also seek to reduce the risk of delaying or deterring Projects already in development as a result of the Access Scheme being introduced.

3.6.2 Approaches under consideration

Projects that are already connected or have received an offer to connect under the NER

Projects that are connected to the Access Scheme Network before the date the Access Scheme is declared, or have received an offer to connect by this point in time, will be subject to transitional

arrangements. This means they will not need an Access Right or EnergyCo consent to connect (or remain connected) to the Access Scheme Network for their capacity at the relevant date. If these projects intend to increase their Maximum Capacity after that date, an Access Right or EnergyCo consent will be required.

Projects that have made an application to connect under the NER

The decision about whether to apply transitional arrangements to Projects which have made an application to connect, and how this category is defined, will need to balance facilitating the ongoing progress of Projects with the broader objectives of the Access Scheme.

EnergyCo does not want to unnecessarily delay or deter Projects that are well progressed in their NER Connection Process, as these Projects would likely support the NSW energy transition and progress towards targets. EnergyCo will work closely with Transgrid and other key stakeholders on whether transitional arrangements should apply to Projects that have made an application to connect under the NER by the date the Access Scheme is declared but have not received an offer to connect by that date. Two options are under consideration:

- Option A: Transitional arrangements would apply if the Project has submitted a valid and complete application to connect by the date the Access Scheme is declared, and has received an offer to connect by the date the first tender for Access Rights commences.
- Option B: Transitional arrangements would apply if the Project has made a valid and complete application to connect by the date the Access Scheme is declared, and has received confirmation of compliance with Generator Performance Standards (a section 5.3.4A letter) by the date the first tender for Access Rights commences.

Projects that have made a connection enquiry under the NER

EnergyCo is not considering applying transitional arrangements to Projects that have made a connection enquiry but have not made a valid and complete application to connect at the time the Access Scheme is declared. The position under consideration is that these Projects will require an Access Right to connect to the Access Rights Network or consent to connecting to the Access Control Network, as relevant.

How Projects covered by transitional arrangements will be treated under the Access Scheme

EnergyCo will take the capacity of Projects covered by the transitional arrangements into account when determining the capacity to be made available for other Projects to connect under the Access Scheme.

Have your say

6. What are your views on the proposed options to apply transitional arrangements? Should transitional arrangements be considered for any other scenarios?

3.7 Scheme Term

3.7.1 Overview

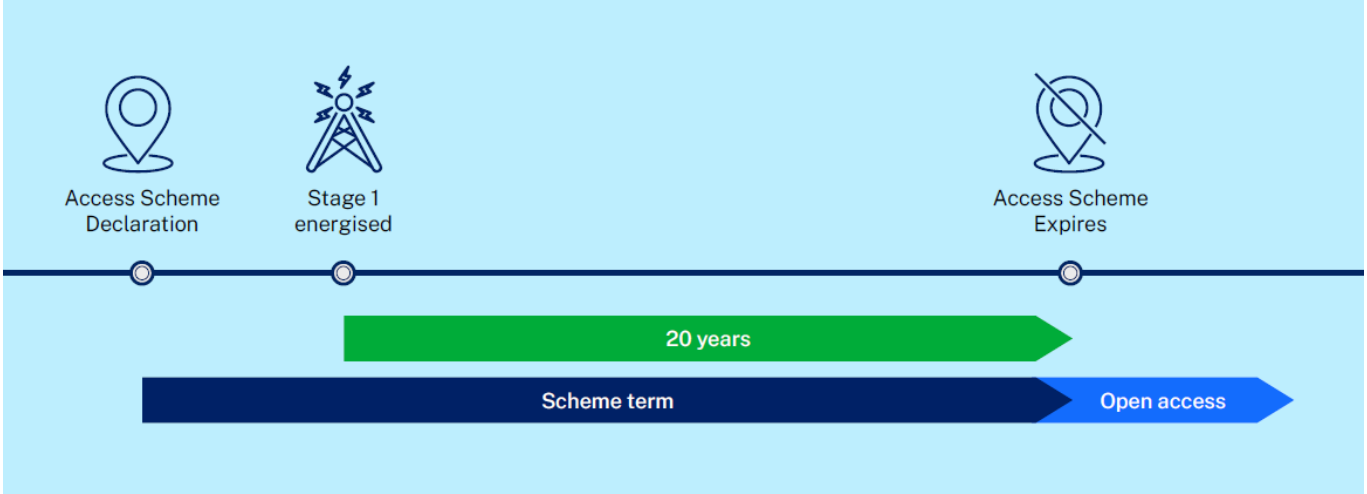
The term of an Access Scheme begins from the date of the Access Scheme Declaration (through publication in the NSW Gazette) and ends at a date defined in the Access Scheme Declaration. Once the term of the Access Scheme reaches its end date, the network subject to the Access Scheme will revert to the NER arrangements for managing connections, currently the 'open access' regime. For the avoidance of doubt, Connection Agreements between the relevant Network Operator and Projects will remain in place, and Projects will continue to operate in the market as they had under the Access Scheme, but the access arrangements will revert to the national framework from this point.

3.7.2 Approach under consideration

EnergyCo is considering a term for the New England REZ Access Scheme that would commence at the date the Access Scheme is declared and expire on the date that is 20 years from when the transfer capacity of Stage 1 of the New REZ Network Infrastructure is energised. Indicatively, if the first stage of the New England REZ is energised in 2032, the term for the Access Scheme (including for Projects connecting to later stages of the REZ) would be expected to expire in 2052.

The amount of time that a Project will be subject to the Access Scheme will differ depending on when the Project connects to the Access Scheme Network. Figure 4 provides a visual representation of the proposed approach for the term of the Access Scheme.

Figure 4: Proposed Scheme Term under consideration



3.7.3 Impact of approach under consideration

Projects connecting into the Access Rights Network or Access Control Network under the Access Scheme would be subject to the Access Rights Regime or Access Control Mechanism (as applicable) until the end of the term of the New England REZ Access Scheme.

Projects would benefit from the capped volume of generation and storage capacity connected to the Access Scheme Network and coordinated community and employment benefit sharing arrangements for this term. They will also pay annual access fees for the term. Projects which connect later will benefit from the Access Scheme for a shorter period of time (from the point of their connection until the expiry of the Access Scheme) and pay access fees for this shorter period of time.

Have your say

7. What are your views on the term of the Access Scheme under consideration? Is this term likely to provide investment certainty for Projects, including Projects connecting at later stages of the New England REZ (such as stage 2)?

3.8 Target Transmission Curtailment Level

3.8.1 Overview

The Target Transmission Curtailment Level (TTCL) is the total annual level of Forecast Curtailment (expressed as a percentage) on the Access Rights Network for which EnergyCo has identified a

target for planning purposes. The TTCL acts as a limit on the volume of Access Rights which will be allocated, based on aggregate Forecast Curtailment.

The TTCL is calculated by modelling a range of power system inputs and parameters including power system flows, congestion and constraints, the anticipated mix of wind and solar project development and associated capacity factors for each technology type.

The TTCL is intended to provide investors with an indication of the potential level of curtailment the REZ might experience, supporting investor confidence and thereby incentivising development in the region.

It is important to clarify that the TTCL is an estimate and **not a guarantee of actual curtailment outcomes** for Access Right Holders on the Access Rights Network.

3.8.2 Approach under consideration

An indicative **TTCL of 5.19%** is currently being considered for the New England REZ Access Scheme.

Calculating the TTCL

The proposed TTCL is informed by modelling performed by ASL. ASL has undertaken modelling to determine the economically optimal build out of generation and network infrastructure across the state, considering things like network costs, connection costs and resource quality across the state.

To determine the TTCL for a particular REZ, EnergyCo considers the modelled economically optimal build out of generation in the REZ each year and calculates the Forecast Curtailment of that generation on the relevant network transfer capacity. The TTCL is then chosen considering the Forecast Curtailment once generation build out has plateaued for the network capacity enabled by a particular network option.

The TTCL in each REZ points to the economically optimal build out of generation in the REZ for a particular level of network development, compared to building generation in a different REZ or building more network infrastructure. Since each REZ has different resource quality and costs of development, both the built generation mix and quantity of generation per MW transfer capacity are different in every REZ, resulting in a different TTCL.

3.8.3 Impact of approach under consideration

Applying a TTCL of 5.19% provides guidance to renewable generation and storage developers on the amount of technical curtailment they can expect to experience on the Access Scheme Network.

The TTCL also determines how much capacity will be awarded through Access Rights and is used to determine the aggregate Maximum Capacity of the Access Scheme, which can indicate to communities how much generation and storage infrastructure will be developed within the REZ.

If the TTCL were set higher than 5.19%, more capacity would be available for allocation under Access Rights but Access Right Holders would, on average over a year, experience higher curtailment outcomes. The inverse would be the case if the TTCL were set lower than 5.19%, with less capacity likely to be available under Access Rights and Access Right Holders experiencing lower curtailment outcomes on average over a year.

Have your say

8. Does the proposed TTCL provide sufficient certainty of Forecast Curtailment to support a strong value proposition for Access Right Holders? If not, why?

3.9 Aggregate Maximum Capacity Cap

3.9.1 Overview

An Aggregate Maximum Capacity Cap (AMCC) is a cap on the volume of REZ connection capacity available for Projects seeking to connect to the Access Rights Network. The AMCC only applies to an Access Rights Regime and not network infrastructure subject to an Access Control Mechanism.

The AMCC is intended to define how much generation and storage capacity (in GW) could connect to the Access Rights Network without the level of Forecast Curtailment in the REZ breaching the TTCL. The AMCC is initially based on an assumed technology mix and expected capacity profiles of projects in that mix. The AMCC may be changed following the running of a headroom assessment to account for the actual transfer capacity of the REZ, actual technology mix and actual capacity profiles of connected Projects.

The AMCC is intended to provide certainty to connecting Projects and investors and gives communities an indication of how much generation and storage development will occur in the region.

Based on assessing a range of likely technology mixes, the draft TTCL of 5.19% indicates that the 6 GW transfer capacity unlocked by Stages 1 and 2 could support up to 12 GW of generation with 4 GW of storage. The level of generation and storage supported could increase in the future if additional load is developed in the REZ or further stages of network infrastructure are delivered. Alternatively, the level of generation and storage may be slightly lower if the generation profiles of

the Projects that connect differ from the profiles used in the assessment. These figures are also subject to the final decision on the AMCC approaches under consideration (noted below).

What is a headroom assessment?

The headroom assessment is designed to enable the AMCC to be adjusted upwards where more capacity can be allocated to Access Rights without Forecast Curtailment exceeding the TTCL, based on actual and expected capacity profiles of Projects. The 'headroom' refers to extra capacity that may be available for allocation under Access Rights following the process.

3.9.2 Approaches under consideration

EnergyCo is considering two options for how an AMCC could apply in the New England REZ Access Scheme, to accommodate unique features of this REZ including its' scale and staged development approach.

Option 1 – AMCC specified in the Access Scheme Declaration

Under Option 1, an initial AMCC is set early and provides certainty of the volume of capacity to be made available in the initial Access Rights allocation. Specifically, an AMCC (in GW) would be published in the Access Scheme Declaration to limit the aggregate Maximum Capacity available for allocation to Access Right Holders in the Initial Allocation round for Access Rights.

This initial AMCC can then be adjusted upwards over time, through headroom assessments, once EnergyCo has assessed the utilisation of the network based on the Projects connecting.

This is the approach applied in both the Central-West Orana REZ and the South West REZs.

Option 2 – AMCC periodically determined and notified on EnergyCo website

Consistent with Option 1, under Option 2 the AMCC would still be used to limit the aggregate Maximum Capacity available for allocation under Access Rights (at a point in time) but the AMCC would not be specified in the Access Scheme Declaration. Instead, the Access Scheme Declaration would include an indicative range, and would require the Infrastructure Planner to determine and publish the AMCC for the Access Scheme at specified points in time.

Option 2 is intended to provide more flexibility to EnergyCo to adjust the AMCC as the REZ Transfer Capacity increases and as more information becomes available about connecting Projects and network utilisation. Both Option 1 and Option 2 would see the AMCC adjusted from time to time to reflect the changing capacity of the REZ and the nature and operation of Projects connecting. However, Option 2 allows for a less rigid approach to setting and changing the AMCC over time by shifting it out of the Access Scheme Declaration.

The Infrastructure Planner could revise the AMCC and give notice if the REZ Transfer Capacity or assumed technology mix were to change (e.g. an additional stage of the New REZ Network Infrastructure is authorised, increasing the authorised transfer capacity of the new REZ). The Access Scheme Declaration would set out the steps to make an AMCC determination and a separate methodology paper would be published to detail how an AMCC figure is determined (similar to the existing headroom assessment in the Central-West Orana REZ and South West REZ Access Schemes). It is envisaged that an AMCC will be determined before each Access Right allocation period to give guidance on how much capacity is available for allocation under Access Rights in that process.

Importantly, the TTCL would remain the same while the AMCC is revised, with increases in AMCC reflecting drivers that allow more generation to be hosted within the AMCC, such as additional storage or load in the REZ.

3.9.3 Impact of approaches under consideration

Option 1 – AMCC specified in the Access Scheme Declaration

An AMCC set early will provide some certainty of how much capacity will be awarded during the Initial Allocation of Access Rights. This figure contributes to a developers' understanding of the value proposition of the Access Scheme, as it provides the amount of available capacity ahead of an Access Right allocation process. Once the Initial Allocation of Access Rights is complete, the AMCC is subject to change through the headroom assessment (discussed above).

Option 2 – AMCC periodically determined and notified on EnergyCo website

An AMCC determined under the Access Scheme allows for the same benefits to developers as option 1, as a limit on the amount of capacity being allocated will be determined prior to any access allocation process. Additionally, option 2 allows for the AMCC to better reflect the assumed transfer capacity and technology mix of the REZ at the time of an Access Right allocation process, compared to option 1 which bases the AMCC off information available at the time of making the Access Scheme Declaration.

Have your say

9. What is your preferred option for the setting and adjustment of the AMCC? What are your reasons for this?

3.10 Sub-limits on the grant of Access Rights

3.10.1 Overview

The Infrastructure Planner can identify specific Network Elements within the Access Rights Network and apply sub-limits on aggregate capacity available to be allocated under Access Rights. Sub-limits may be adopted where some Network Elements forming part of the Access Rights Network have lower transfer capacity than other parts of the Access Rights Network or where, for policy reasons, the target curtailment on the Network Element should be lower than the overall TTCL for the Access Rights Network.[12]

Sub-limits can prevent potential over-subscription and higher curtailment for Projects connecting to the relevant Network Element by capping the amount of generation that can be awarded access to that Network Element. Sub-limits can be set using the two mechanisms described below.

Target Network Element Curtailment Level

A Target Network Element Curtailment Level (TNECL) can be set for a specified Network Element where necessary. A TNECL works similarly to the TTCL, however it applies to a specified Network Element. For example, in the South West REZ Access Scheme a TNECL was applied to connection to Buronga substation and the network up to, but not including, the Dinawan substation.

Network Element Maximum Capacity Cap

A Network Element Maximum Capacity Cap (NEMCC) can be used to set a limit on the amount of capacity available under Access Rights for Projects seeking access to a specific Network Element.

3.10.2 Approaches under consideration

EnergyCo is considering two options regarding the use of sub-limits on the grant of Access Rights.

Option 1 – Apply TNECLs and NEMCCs across the REZ

This option involves specifying some or all of the existing Transgrid lines located within the REZ geographical area (identified in Table 2) as individual Network Elements.

Each of the specified Network Elements will have a TNECL of 5.19% applied to it and a NEMCC (which will differ depending on the transfer capacity of the Network Element).

[12] For example, where a group of generators fund shared connection infrastructure, access to that infrastructure by other generators could be constrained by applying a sub-limit cap reflecting the capacity of the funding generators.

Applying sub-limits to Network Elements on the existing Transgrid network reflecting the transfer capacity of those Network Elements could provide greater curtailment certainty to Projects seeking to connect to that network.

Option 2 – Do not apply any sub-limits across the REZ

No Network Elements have a sub-limit applied and Access Right award is limited only by the TTCL and AMCC.

This approach has the potential to permit a greater capacity of generation to connect to the existing Transgrid network captured under an Access Rights Network than Option 1 but would provide less certainty to generators connected to lines with limited transfer capacity.

3.10.3 Impact of approaches under consideration

Applying sub-limits on the grant of Access Rights could increase the complexity of the Access Scheme, however it would provide developers with greater certainty on the amount of generation that will be permitted to connect to specified network infrastructure subject to the Access Scheme (section 3.5), which can support making more informed investment decisions.

Have your say

10. Do you think there should be flexibility under the Access Scheme to apply sub-limits to Network Elements? What are your reasons for this?

3.11 Maximum Capacity profiles

3.11.1 Overview

Maximum Capacity profile relates to the maximum generation (in GW) a Project is permitted to export across different periods of the day (capacity periods) under the conditions of their Access Right. For example, a Project may be granted an Access Right with a flat 24-hour day capacity profile, meaning that the Project can export to the maximum amount allowed under their Access Right at any point in a day. This flat 24-hour profile approach is the current approach taken in the Central-West Orana REZ and South West REZ Access Schemes. Alternatively, a Project may be granted an Access Right with a 'shaped' capacity profile with different Maximum Capacity amounts limiting how much generation a Project is allowed to export under the Access Scheme at different times of the day.

Maximum Capacity profiles give the Infrastructure Planner discretion to award Access Rights to Projects that could export in periods of the day where the Access Scheme Network is being underutilised.

It is important to note that any Project's Maximum Capacity profile does not limit AEMO's ability to call upon an Approved Project to dispatch above its Maximum Capacity profile when required to support system security and reliability, such as a direction to generate via a lack of reserve process.

3.11.2 Approach under consideration

If an Access Scheme is pursued in the New England REZ, it is proposed that Access Rights would initially be granted to Projects on the basis of a flat Maximum Capacity profile across a single (24-hour day) capacity period in the New England REZ, consistent with the current approach in each the Central-West Orana REZ and the South West REZ Access Schemes. However, the Infrastructure Planner may later elect to implement shaped Maximum Capacity profiles for future Access Right allocation processes if found to be appropriate. This decision would not impact the Maximum Capacity profile for existing Access Right Holders.

3.11.3 Impact of approach under consideration

For the approach under consideration, shaped Maximum Capacity profiles are not proposed to be introduced for Initial Allocations of access in the New England REZ. The option to do so in the future will remain, however existing Access Right Holders would retain their existing capacity profile.

Have your say

11. What are your views on the potential to introduce shaped Maximum Capacity profiles in the future?

3.12 Access Rights allocation approach under consideration

3.12.1 Overview

Allocating Access Rights involves seeking bids from Eligible Projects (refer to section 3), assessing applications against transparent criteria and awarding Access Rights to the most meritorious Projects. The allocation approach under consideration is intended to balance investor certainty with network readiness and capacity availability, while ensuring Projects that are awarded Access Rights are the most competitive and provide the greatest benefit to communities and NSW energy consumers.

3.12.2 Approach under consideration

EnergyCo is considering allocating Access Rights through a competitive tender run by either ASL or EnergyCo.

The allocation of Access Rights is intended to be aligned with the development stages of the New REZ Network Infrastructure. A phased approach will allow Access Rights to be allocated in tranches, aligned with the staging of network capacity delivery and timeline considerations.

EnergyCo is also considering options to open an Access Rights Tender soon after the declaration of an Access Scheme for Projects seeking connection to existing Transgrid network proposed to be covered by the Access Rights Regime. This would prevent excessive delays for Projects seeking to connect to the existing network that are not captured by the transitional arrangements.

A summary of the key steps involved for generation and storage Projects seeking Access Rights to connect to specified Access Rights Network is provided below in Figure 5 and explained in more detail in Table 4.

Figure 5: Process Steps for securing Access Rights, connections and operations

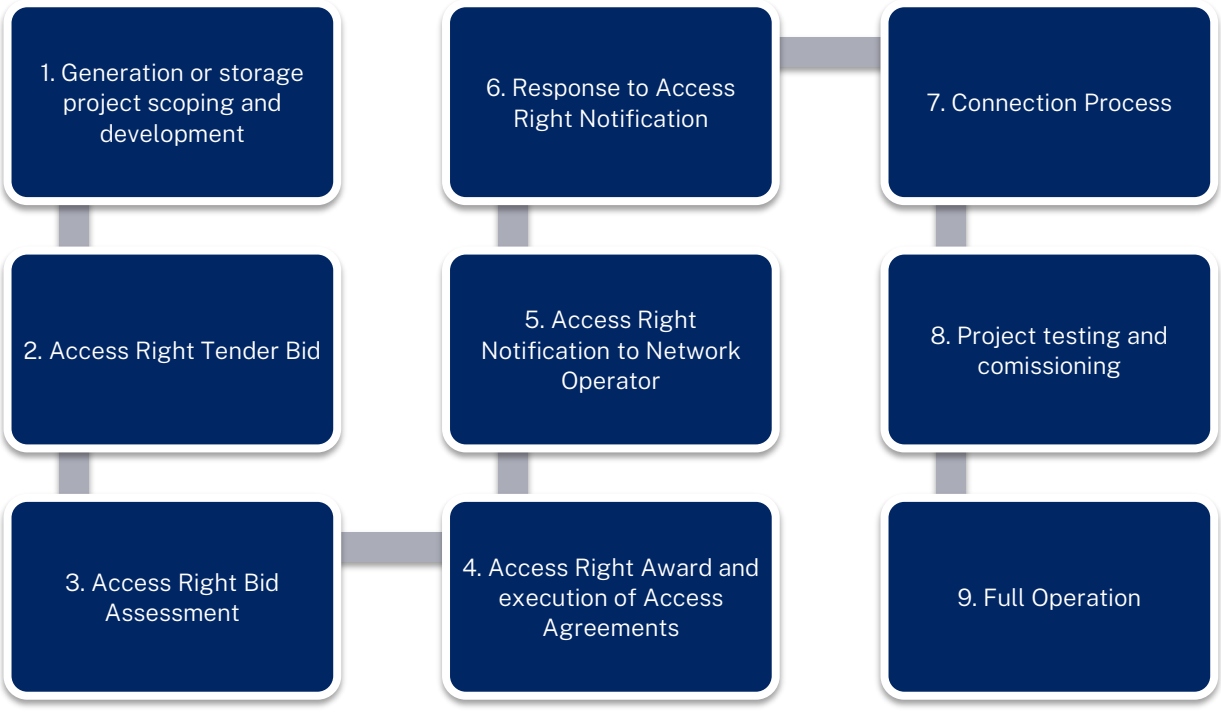


Table 4: Steps for securing Access Rights, connections and operations

Item	Description and responsibilities
1	Generation and storage proponents conduct initial scoping and development of their Projects
2	Generation and storage Projects seeking connection to the Access Rights Network apply for an Access Right
3	EnergyCo or ASL evaluate Access Rights bids against assessment criteria
4	Access Right awarded to successful bidders, which involves the Project proponent executing Access Right agreements with EnergyCo and the Scheme Financial Vehicle and the Access Right being recorded on the public Access Rights Register.
5	EnergyCo gives the relevant Network Operator an Access Right Notification that sets out the allocation of Access Rights and the type, magnitude and timing of the proposed connections to the Access Rights Network (including the Project characteristics of Access Right Holders).
6	The Network Operator provides Access Right Holders with a response to the Access Right Notification. This allows Access Right Holders to progress connection to the network in the same way that the connection enquiry response would occur under the NER Connection Process.
7	Access Right Holders progress connection with the Network Operator under the relevant Connection Process
8	Access Right Holders and Network Operator undertake testing and commissioning of Project (including hold point testing) to ensure it meets all relevant safety and performance requirements
9	After all relevant requirements of the commissioning plan are successfully completed, Access Right Holders can export electricity up to the Maximum Capacity as set out in the Access Rights Register.

Have your say

12. What are your views on the proposed approach to the allocation of Access Rights?

3.13 Approach under consideration for approving access to the Access Control Network

If an Access Control Mechanism is introduced, assessment of a Project seeking to connect to the Access Control Network would be expected to include an assessment of its anticipated impact on the curtailment of Access Right Holders. Options for implementing this impact assessment, the materiality threshold to be applied, and the broader allocation process are still under consideration.

It is not currently envisaged that these Projects would be granted consent to connect through the same processes as Access Rights Network applicants, but an appropriate alternative application process is under consideration.

See further details of the Access Control Mechanism in section 3.4.2.

Have your say

13. If an Access Control Mechanism is introduced under the Access Scheme, what are your views on the process that should be used for the grant of consent to connect to the Access Control Network? Should consent be granted based on competitive assessment of Projects?

3.14 REZ Connection Process under consideration

3.14.1 Overview

The relevant Network Operator will manage the connection and commissioning processes for Projects seeking to connect to the Access Rights Network and Access Control Network.

The process for connecting a Project to an Access Rights Network differs to the standard connections framework under the NER. A REZ Connection Process may be established to drive time and cost efficiencies.

The key differences between the REZ Connection Process and the Connection Process under NER are:

- Access Right Holders may be required to meet a non-negotiable set of REZ Access Standards. REZ Access Standards specify a range of technical requirements for access and must be met by Access Right Holders (subject to limited exceptions). This contrasts with the process under the NER where generation and storage projects negotiate Generator Performance Standards with the relevant Network Operator; and

- Where REZ Access Standards are applied, the relevant Network Operator may process applications to connect made by Access Right Holders concurrently and conduct power system studies for multiple Projects at the same time, enabling the technical interactions between Projects connecting in similar locations and timeframes to be considered as part of one process. This contrasts with the process under the NER where each application to connect is processed on an individual basis and not all technical interactions between Projects may be identified in a timely manner.

REZ access standards will be developed from an extensive modelling process. In the meantime, to support network planning, EnergyCo is developing Indicative Technical Requirements. The purpose of the Indicative Technical Requirements is to guide the planning and design of the New REZ Network Infrastructure. The requirements relate to the key generator technical parameters which will materially affect network design metrics, and inform high level plant design for Projects.

Indicative Technical Requirements

EnergyCo will publicly consult on the Indicative Technical Requirements later in 2025. The requirements will be finalised before the next stage in the New Network Operator procurement process. Feedback from consultation on the Indicative Technical Requirements and further power system modelling will inform development of the REZ Access Standards.[13]

The approach under consideration is to:

- apply REZ Access Standards to Projects connecting to the Access Rights Network, subject to transitional arrangements, and
- allow relevant Network Operators to undertake concurrent processing of applications to connect from Projects to which REZ Access Standards apply (as described above).

EnergyCo is considering appropriate transitional arrangements for Projects that have started the process of negotiating access standards with Transgrid.

Projects seeking to connect to the New REZ Network Infrastructure

The relevant Network Operator will enter into a Connection Agreement (or equivalent) with each Project governing the terms and conditions of the connection of a Project to the New REZ Network Infrastructure. Terms may include specification of performance standards, interface points, hold points and compliance obligations, including the payment of any connection fees for the relevant transmission services.

[13] The EII Regulation (Schedule 1B, clauses 1 to 3) sets out the process to be followed by the Infrastructure Planner in developing the REZ Access Standards, including requirements for consultation and AEMO approval.

A performance regime will be developed so that the New Network Operator is incentivised under the Project Deed to support a timely connection and commission process for Projects connecting to New REZ Network infrastructure.

Projects connecting to the Transgrid network subject to an Access Right Regime

Transgrid will be responsible for managing the connection and commissioning processes for generation and storage projects located in the New England REZ that are seeking to connect to the Transgrid network. For Projects seeking to connect to an element of the Transgrid network subject to the Access Scheme, the connection enquiry stage of the NER Connection Process will be replaced by the Access Rights application or tender process. Developers of such projects should refer to the proposed transitional arrangements described in section 3.6 of this consultation paper.

Projects connecting to the Transgrid network subject to an Access Control Mechanism

EnergyCo is still considering the Connection Process that could apply as part of the design of the Access Control Mechanism. A preliminary approach under consideration is that Projects connecting would be subject to the NER Connection Process[14], rather than a REZ Connection Process.

Have your say

14. What are your views on the high-level REZ Connection Process under consideration?

[14] Noting that Projects connecting to the Access Control Network must receive consent from EnergyCo before making an application to connect.

Part II

Connection Assets Model and Landholder Payments

4 Connection Assets model

4.1 Overview of the Connection Assets model under consideration

This section summarises the model under consideration for the connection of Projects to the Access Rights Network in the New England REZ (**Connection Assets model**).

In this section, **Connection Assets** refer to the plant, equipment and ancillary infrastructure between the Project and the connection point on the Access Rights Network and may include transmission lines and switching stations.

4.1.1 Context

A significant amount of new infrastructure will be required in the New England REZ to connect Projects to the Access Rights Network. Due to the scale and connection configurations of Projects seeking connection to the Access Rights Network, EnergyCo must determine the most appropriate model for the planning, design, construction, operation and ownership of Connection Assets that supports the objectives of a potential New England REZ Access Scheme (see section 3.3) and delivers the best outcomes for communities and other key stakeholders. This includes assessing whether the existing NER model[15], where generators lead the procurement of their Connection Assets, would best facilitate meeting the objects of the EII Act and achieve the NSW Government's objectives for the New England REZ, or whether an alternative model should be adopted.

For the New Access Rights Network, EnergyCo is responsible for acquiring interests in land and obtaining major planning approvals required for the infrastructure. EnergyCo will pass the interests in land and rights under the planning approvals under contracts entered into with an authorised Network Operator[16]. This will enable the New Network Operator to access the land and construct and operate the New REZ Network Infrastructure.

4.1.2 Consideration of potential models

There are a number of models that could be considered for the delivery of Connection Assets between Projects and energy hubs in the New England REZ.

[15] See clause 5.2A.

[16] See EII Act, s 31 and 32 for authorisation powers.

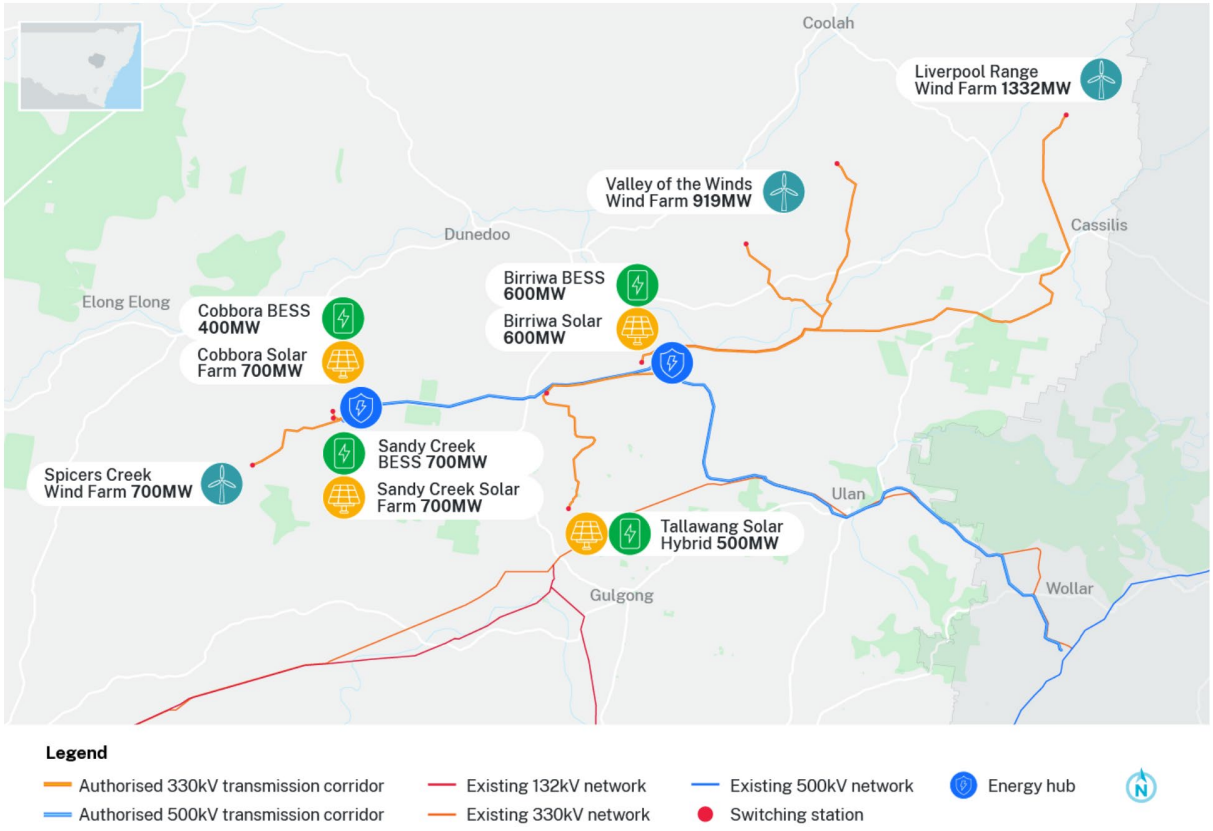
- The relevant Network Operator for the Access Rights Network could deliver the Connection Assets under a hub-to-project model similar to that adopted for the Central-West Orana REZ.
- Projects could deliver the Connection Assets under a generator-led model similar to that adopted for the South West REZ.
- Alternatively, a hybrid model which uses elements from both the Central-West Orana REZ and South West REZ models could be adopted.

The hub-to-Project Model

For the Central-West Orana REZ, EnergyCo's first REZ Network Infrastructure Project, the Consumer Trustee's authorisation of the network infrastructure included the Connection Assets required to connect generation and storage Projects to energy hubs (described as 'hub-to-project' infrastructure) in addition to the main backbone of network infrastructure[17]. In an area without existing large-scale transmission infrastructure, this allowed hub-to-project solutions to be built alongside the backbone network infrastructure, expediting the delivery of new renewable energy to consumers. It also enabled the costs for Central-West Orana REZ generator and storage Project Connection Assets to be recovered from those Projects through the payment of access fees to the Scheme Financial Vehicle. Figure 6 shows the 10 Projects that were allocated Access Rights in the Central-West Orana REZ with a total capacity of 7.15 GW across 13 connection points. A key feature of the Central-West Orana REZ Projects is the geographic separation of the Projects from the core 500 kV transmission lines requiring significant 330 kV assets to connect the Projects to the two (2) new energy hubs.

[17] 'Hub-to-project' infrastructure was developed for those generation and storage projects selected to participate as foundational generators in the Central-West Orana REZ.

Figure 6: Central-West Orana REZ Map of Projects



A downside feature of this approach was the requirement for Projects to make significant financial commitments ahead of their own final investment decision dates in order to align with the program for financial close of the Central-West Orana REZ Network Operator project. The approach also removed the ability for Projects to choose their own contractor or service provider for the delivery of Connection Assets which meant they were reliant on the Central-West Orana REZ Network Operator procurement process to deliver a commercially competitive outcome for all Projects.

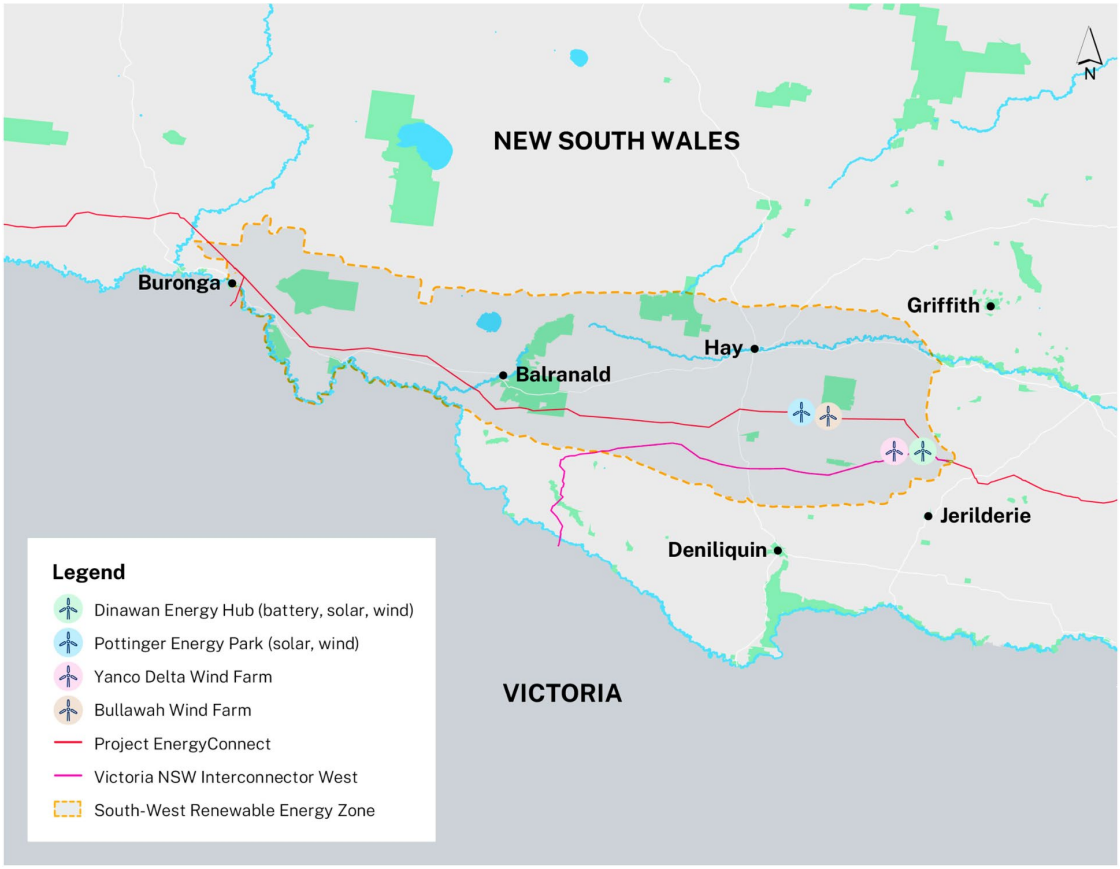
The Generator-Led Model

For the South West REZ, a generator-led approach is being taken to connection assets. As a result, Projects are required to manage the planning and development of their own connection assets (including acquiring land interests) without EnergyCo involvement. It was deemed appropriate for the Access Scheme to minimise interventions, particularly relating to hub-to-project infrastructure, in the context of the South West REZ where the network infrastructure is not being built under the EII Act and is already being delivered by Transgrid.[18] Ultimately, this approach made connection assets less complex for generators than for the Central-West Orana REZ. However, it also reduced

[18] This is in line with the rationale provided for not proceeding with hub to project in South West REZ, taken from the South West REZ Access Scheme: Supplementary Positions Paper

the ability for EnergyCo, as the Infrastructure Planner, to make decisions on the appropriate design of the network and efficiently coordinate connection assets to achieve the best outcomes for the REZ. Figure 7 shows the four (4) Projects that were allocated Access Rights in the South West REZ with a total capacity of 3.56 GW across 6 connection points. The location of Projects and their project footprints aligned to the transmission lines and/or energy hubs being developed in the area including VNI West (NSW) and Project EnergyConnect.

Figure 7: South West REZ Map of Projects



4.1.3 Key features, benefits and challenges of connection asset models

Table 5 summarises the division of responsibilities for different activities for connection assets under the hub-to-project and generator-led models described above. Table 6 compares the benefits and challenges for each model.

Table 5: Key features of connection asset models

Activity	Hub-to-Project	Generator-led
Route design	EnergyCo	Project
Planning and environmental approvals	EnergyCo	Project
Biodiversity offset costs	EnergyCo	Project
Easement Acquisition	EnergyCo	Project
Construction	New Network Operator	Project/Connection Service Provider
Operation and Maintenance	New Network Operator	Project/Connection Service Provider
Asset ownership	New Network Operator	Project/Connection Service Provider

Table 6: Benefits and challenges arising from connection asset models

Benefits/ Challenges	Hub-to-Project Model	Generator-led Model
Benefits	• connection assets included within the authorised scope of the core infrastructure project simplifying the delivery of the works. • EnergyCo coordination of connection assets design, specification, easement acquisition and planning and environmental approvals leading to consistent outcomes for landowners and communities. • Leveraging competition in the Network Operator procurement process for cost efficiency	• The market defines and develops its own pathway to connection including timing of financial commitments and selection of connection services providers. • Simplified REZ-wide access fees (not project-specific)
Challenges	• Requires early financial commitment from Project developers to align with Network Operator financial close. • Inability of Projects to select their own connection services provider to deliver connection assets to the Project's timescales. • Allocation of risks to consumers and associated limited flexibility arising from inclusion of hub-to-project connections within the authorisation. • Complexity in setting project-specific access fees.	• Limited incentives for generators to coordinate connection assets. • Potential challenges managing the interface with the core network. • Potential for inequitable land-owner outcomes through commercial negotiations with developers. • Increased interface risks, including safety, requiring coordination of multiple parties and associated interfaces. • Potential for Projects hosting or adjacent to hubs to block neighbouring Projects from accessing the hub leading to underutilisation of infrastructure.

4.1.4 Objectives and considerations for model selection

Consideration of the different Connection Assets models for the New England REZ has been undertaken with a view to ensure:

- the timely and reliable delivery of renewable energy supply from Projects is achieved as efficiently as possible to meet the transfer capacity targets for Stages 1 and 2;

- an efficient utilisation and layout of infrastructure that minimises the duplication of assets and reduces 'spaghetti junction' effects;
- the New REZ Network Infrastructure is future proofed for expansion beyond Stages 1 and 2 and the potential to unlock greater transfer capacity; and
- the impact on landowners and community associated with the construction and operation of network infrastructure and associated Connection Assets is coordinated and minimised.

EnergyCo's assessment of options for the different Connection Assets models for the New England REZ has considered the above objectives and the needs of Project developers, the community, electricity consumers, government, potential Network Operators, Transgrid and other key stakeholders.

The approach also reflects EnergyCo's consideration of the objects of the EUA Act and the EII Act.

4.1.5 The need for a new model

EnergyCo has identified over 20 GW of generation and storage potential seeking connection to the Access Rights Network in the New England REZ. Utilising the 6 GW network transfer capacity target to be unlocked by Stages 1 and 2, the New England REZ is likely to require a greater number of connections than either the Central-West Orana REZ or the South West REZ.

Like Projects located in the Central-West Orana REZ, many Projects in the New England REZ will require separate 330 kV transmission corridors to connect to the proposed new energy hubs. Like Projects in the South West REZ, some Projects are located adjacent to the proposed new energy hubs or existing transmission infrastructure which can accommodate direct connection to the Access Rights Network without 330 kV transmission corridors outside the footprint of the Projects.

Adopting a totally generator-led model for the New England REZ is likely to lead to an uncoordinated approach to Connection Assets with the risk of poor and inequitable outcomes for landowners and the community.

Coordination of Project connections to the Access Rights Network by EnergyCo is likely to result in efficiencies and reduce impacts on landowners, the environment and the community, as well as decrease overall project costs and risks of delay. Without efficient coordination of Connection Assets, there is a material risk that Projects in the New England REZ will not be able to connect or will be significantly delayed in achieving connection. This could jeopardise the timely delivery of the energy supply infrastructure needed to meet critical delivery dates and achieve best outcomes for communities and other key stakeholders.

As a consequence, and noting the need for 330 kV Connection Asset corridors in the New England REZ, adopting an entirely generator-led model is not considered appropriate.

As the Projects that will seek connection to the New REZ Network Infrastructure are generally in the early stages of their development lifecycle, adoption of the hub-to-project model is not considered appropriate as a more flexible model is required that allows Project connections to be considered and evolve over time as Projects become more certain.

For the New England REZ, EnergyCo is considering pursuing a hybrid model which preserves the benefits of route design coordination and certainty regarding planning approval and property requirements (similar to the approach in the Central-West Orana REZ), while providing flexibility for Projects to choose which party delivers their Connection Assets at a time that suits the Project's development timeline (similar to the approach in the South West REZ).

Sections 4.2 to 4.6 set out the key features of the proposed hybrid model for the New England REZ. EnergyCo would be interested in feedback on this approach.

4.2 Details of the proposed Connection Assets model

4.2.1 Overview

This section provides details of the proposed Connection Assets model for Projects seeking to connect to the Access Rights Network unless transitional arrangements apply (see section 3.6) applies to a Project. Under the proposed Connection Assets model:

- EnergyCo would undertake the route design, apply for relevant planning and environmental approvals and acquire easements for Connection Assets for Projects seeking to connect to the Access Rights Network in Stages 1 and 2 (refer to section 4.3 for details);
- EnergyCo would grant Projects a non-exclusive licence of the relevant easement areas for the construction, operation and maintenance of Connection Assets.
- EnergyCo would seek recovery of costs for planning and easement acquisition activities from Projects either as they are incurred or at a later date, such as when the Project reaches financial close.
- Projects would be responsible for the funding, design, construction, operation and maintenance costs of their Connection Assets, in accordance with the NER. Projects would have the flexibility to contract with third party connection services providers.
- The relevant Network Operator would not be responsible for any construction works or costs for Connection Assets under the REZ Network Infrastructure authorisation and revenue determination. However, Projects could engage the Network Operator to provide construction works for Connection Assets on a contestable basis, subject to compliance by the Network Operator with all relevant legal requirements and the transmission ring-fencing guidelines.

The Connection Assets model is summarised in Table 7.

Table 7: Summary of the Connection Assets model

Activity	Responsibility	Initial Funding	Costs Recovered From
Route design (see section 4.2.2)	EnergyCo	EnergyCo	Project
Planning and environmental approvals (see section 4.2.3)	EnergyCo	EnergyCo	Project
Biodiversity offset costs (see section 4.2.4)	EnergyCo	Project/Connection Service Provider	Project
Easement Acquisition (see section 4.2.5)	EnergyCo	EnergyCo	Project
Construction (see section 4.2.6)	Project/Connection Service Provider	Project/Connection Service Provider	Project
Operation and Maintenance (see section 4.2.6)	Project/Connection Service Provider	Project/Connection Service Provider	Project
Asset ownership (see section 4.2.7)	Project/Connection Service Provider	N/A	N/A

4.2.2 Route Design

EnergyCo is developing a Reference Design for the New REZ Network Infrastructure that will inform the planning and environmental approvals for the network infrastructure, as well as the New Network Operator procurement process. In parallel, EnergyCo is also developing potential designs for Connection Asset routes which accommodate known and potential future Projects connecting to the New REZ Access Rights Network. This is intended to inform ongoing coordination of planning, property and technical considerations.

EnergyCo would provide Projects seeking access and connection to the New Access Rights Network with available details of the proposed connection point location and route alignment for their Connection Assets prior to commencement of an Access Rights Tender. EnergyCo and Transgrid would confirm the connection point and route alignment (if required) for Connection Assets for Projects seeking to connect to the Transgrid Access Rights Network, prior to commencement of an Access Rights Tender.

4.2.3 Planning and Environmental Approvals

While the transmission lines connecting Projects to the existing electricity network form part of the broader Critical State Significant Infrastructure (CSSI) declaration for the New England REZ, these Connection Assets do not form part of the current New REZ Network Infrastructure project application. As such, Connection Assets would be subject to separate approvals when the scope of such connections is confirmed.

EnergyCo is considering options for efficiently progressing planning and environmental approvals for Connection Assets. To address the differing maturity of Projects in the REZ, EnergyCo is considering two main options, including:

- submitting multiple separate CSSI applications for construction of Connection Assets in tranches; or
- submitting a staged infrastructure application that seeks concept approval for all connections assets and construction approval for the first tranche of connections, with subsequent CSSI applications for construction of each further tranche of connections.

A framework or staging approach may be required to coordinate the post-approval requirements from multiple CSSI applications.

Project developers would remain responsible for any relevant State and Federal planning and environmental approvals for their Project footprint and other associated infrastructure.

Refer to section 4.4 and section 4.5 for details of the proposed contract structure and cost recovery arrangements for EnergyCo obtaining planning and environmental approvals for Connection Assets.

Have your say

15. What benefits or challenges would EnergyCo leading planning and environmental approvals for Connection Assets create?

4.2.4 Biodiversity Offset Costs

The planning approval(s) for Connection Assets would specify biodiversity offset obligations to be satisfied in accordance with the *Biodiversity Conservation Act 2016* (NSW). As proponent of the planning approval(s), EnergyCo would be responsible for delivering the offset obligations.

EnergyCo intends to satisfy the offset obligations for the New Access Rights Network by entering into a Strategic Offset Delivery Agreement (SODA) under clause 6.3A of the Biodiversity Conservation Regulation 2017 (NSW) (BC Regulation). Under a SODA, the Environment Agency Head of the NSW Department of Climate Change, Energy, the Environment and Water would deliver the

offset obligation set out in the planning approval for the New Access Rights Network in accordance with the BC Regulation, including consistency with the relevant conservation investment strategy for the New England REZ to be developed by DCCEEW.

EnergyCo intends to deliver the offset obligations under the planning approval(s) for the Connection Assets by entering into a separate SODA(s). EnergyCo would seek to recover from each Project the offset obligation costs under the SODA for the relevant Connection Assets corridor.

Refer to section 4.5.3 for further details on the proposed payment arrangements for biodiversity offset costs.

Project developers would remain responsible for the biodiversity offset costs for their Project footprint and other associated infrastructure.

4.2.5 Easement Acquisition

Under the Connection Assets model, EnergyCo would use its acquisition powers to acquire easements for Connection Assets along corridors between Projects and the nominated connection points on the Access Rights Network, including for Dedicated Connection Assets.

The acquisition of Connection Asset easements by EnergyCo would support coordination and facilitation of the efficient, timely and reliable supply of energy to network infrastructure and to consumers, and achieving the objectives informing the selection of the preferred model option listed at section 4.1.4.

Under section 15(1) of the EUA Act, EnergyCo has powers to acquire land, including an interest in land, by agreement or by compulsory process in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW) (Just Terms Act) for the purpose of the EUA Act or any other act administered by the Minister for Energy, including in its capacity as Infrastructure Planner for the New England REZ. EnergyCo would engage with landowners to reach agreement by negotiation and only use compulsory process where required.[19]

For each Connection Asset easement, EnergyCo would grant the Access Right Holder a non-exclusive licence of the easement area for the construction, operation and maintenance of the Connection Assets. Access Right Holders, or their relevant third-party connections service provider, would retain ownership of the constructed Connection Assets and EnergyCo would retain ownership of the connection asset easement.

Project developers would remain responsible for securing relevant interests in land required for their Project footprint and other associated infrastructure.

[19] For further information about how EnergyCo engages with landowners for land acquisition see here: Information for landowners | EnergyCo.

Refer to section 4.4 and section 4.5 for details of the proposed contract structure and cost recovery arrangements for EnergyCo acquiring easements for Connection Assets.

Have your say

16. What benefits or challenges would EnergyCo acquiring easements for Connection Assets create?

4.2.6 Construction, operation and maintenance of Connection Assets

Dedicated Connection Assets (DCAs)

Project developers would be responsible for funding all aspects of the design, construction, ownership, operation and maintenance of Dedicated Connection Assets (DCAs) in accordance with the NER to provide flexibility for developers to manage contractors and delivery schedules.

Developers may undertake these works directly or engage a contractor or connection service provider[20] to build, operate and maintain these assets under an agreement between the Project and the contractor or service provider (without EnergyCo's involvement). As noted in section 4.2.3, construction of Connection Assets would need to be carried out in accordance with the planning approval obtained by EnergyCo.

For Projects connecting to the New Access Rights Network only, EnergyCo is considering whether to include provisions in the Project Deed to require the New Network Operator to offer (and enter into) a separate connection delivery agreement for the construction of Connection Assets when requested by a developer. The New Network Operator would be required to establish a functionally separate business, in accordance with the transmission ring fencing guidelines, to offer contestable transmission services for DCAs.

The connection delivery agreement would comply with key terms prescribed within a term sheet to be included in the Project Deed. This is designed to provide developers confidence and certainty that commercial offers would be provided on competitive market terms.

Have your say

17. Do you believe there will be sufficient market capacity in the provision of contestable transmission services for developers to be able to procure Connection Assets under

[20] Subject to the compliance by the primary TNSP with the transmission ring-fencing guidelines, the connection services provider may be the Primary TNSP.

competitive terms, particularly during the delivery phase of the New REZ Network Infrastructure project?

18. Would you see value in the New Network Operator establishing a contestable works business to offer the construction of Connection Assets?
19. What commercial terms would developers expect to be included in a prescribed connection delivery agreement term sheet, to give developers confidence that the New Network Operator's commercial offers will be made on competitive market terms? For example, pricing, timing, bonding, etc.

Identified User Shared Assets (IUSAs)

For Projects seeking connection to the New Access Rights Network, EnergyCo would consider on a case-by-case basis the extent to which there may be elements of identified user shared assets (IUSAs) which could also be procured by the Project developer contestably. EnergyCo is considering whether the non-contestable elements of IUSAs would be delivered as an EII Act regulated transmission service or as a negotiated transmission service by the New Network Operator.[21]

For Projects connecting to the Transgrid Access Rights Network, the identification of contestable components of IUSAs would be undertaken in accordance with the NER.

Designated Network Assets (DNAs)

EnergyCo understands developers may consider a Designated Network Asset (DNA) arrangement for their Connection Assets. EnergyCo would like to understand whether developers would be willing to establish a DNA and associated access policy with neighbouring project developers who are not related entities of the developer and how they would propose to address projects connecting to the DNA connection at different times.[22]

Have your say

[21] See NER, Chapter 9A that defines 'EII regulated transmission service' and modifies the NER Framework for IUSAs connecting to Access Rights Network, available here: NSW Government Gazette No 476 of 06 December 2024

[22] See NER, Chapter 9A that modifies the NER framework for DNAs for connections to Access Rights Network under Chapter 9A, available here: NSW Government Gazette No 476 of 06 December 2024

20. What are the key barriers to you coordinating a Designated Network Assets (DNA) with another entity? What role could EnergyCo play in helping to overcome barriers to DNA Connection Assets?

Connection Asset Ownership

Under the Connection Assets model, ownership of Connection Assets would be in accordance with Chapter 5 of the NER which could be a combination of the Access Right Holder, its connections service provider and/or the Primary TNSP for the relevant part of the Access Rights Network (depending on the approach chosen by the relevant Project).

4.2.7 Connection Process

Refer to section 3.14 for details on the proposed REZ Connection Process.

4.3 Application of the Connection Assets model

One option under consideration is for the Connection Assets model to apply to all generation and storage Projects seeking access and connection to the Access Rights Network, including Projects seeking connection to the Transgrid Access Rights Network, except Projects captured under scenarios in Table 8.

An alternative option under consideration is for the Connection Assets model to apply to all generation and storage Projects seeking access and connection to the New Access Rights Network only (and not the Transgrid Access Rights Network), except Projects captured under scenarios in Table 8. EnergyCo is seeking feedback on whether the connections model under consideration should (or should not) apply to Projects connecting to the Transgrid Access Rights Network.

Unless a scenario set out in Table 8 applies to a Project, a Project would be subject to the Connection Assets model and be unable to opt-out and seek to obtain planning and environmental approvals and/or acquire easements separately. The obligations on Projects to which the Connection Assets model applies would be set out in the various agreements described in section 4.4.

Table 8: Scenarios that do not permit participation

Ref.	Scenarios that do not permit participation
1.	Projects that are not subject to the Access Rights Regime, including any Projects captured by the Transitional Arrangements.

Ref.	Scenarios that do not permit participation
2.	Projects where the Project developer already owns the land required to host the Connection Assets freehold.
3.	Projects where all of the easement required for the Connection Assets sits within the land required to host the Project.
4.	Projects that have negotiated options with all landowners to lease or licence the entire connection easement between their Project boundary and the connection point on the Access Rights Network as nominated by Transgrid or EnergyCo.
5.	Projects that have submitted an Environmental Impact Statement for the connection easement between their Project boundary and the connection point on the relevant transmission network as nominated by Transgrid or EnergyCo.

EnergyCo may make an initial assessment of whether the scenarios in Table 8 apply to Projects following the declaration of an Access Scheme. Subsequent assessments may be made at EnergyCo's discretion including prior to the commencement of an Access Rights Tender.

Projects that are unable to participate in the Connection Assets model would be responsible for obtaining the planning and environmental approvals and acquiring easements (where required) for their Connection Assets. If such a Project is seeking to connect to the Access Rights Network and is not captured by the Transitional Arrangements, it would still need to apply for and obtain an Access Right. EnergyCo and/or Transgrid would still confirm the proposed connection point for such Projects prior to the commencement of an Access Rights Tender.

4.3.1 Activity commencement milestones

Table 9 sets out the draft project milestones that would need to be satisfied for each Eligible Project prior to EnergyCo commencing activities under the Connection Assets model. These milestones are designed to limit the costs incurred by EnergyCo prior to commitments from Projects that they will proceed, and may be amended following consultation. EnergyCo may suspend activities and incurring costs until Projects successfully satisfy each chronological milestone.

Table 9: Activity commencement milestones

Item	Project Milestone	EnergyCo Activity
Planning and Environmental Approvals Activities		
1.	At the date of the Access Scheme Declaration, the Project: • has submitted the scoping report and received Secretary's Environmental Assessment Requirements (SEARs); and • is listed on AEMO's Generation Information spreadsheet with a "Commitment Status" of at least "Publicly Announced".	Scoping Report preparation (First Connection Assets EIS)
2.	At a date nominated by EnergyCo, the Project: • has submitted the scoping report and received Secretary's Environmental Assessment Requirements (SEARs); and • is listed on AEMO's Generation Information spreadsheet with a "Commitment Status" of at least "Publicly Announced".	Scoping Report preparation (Subsequent Connection Assets EISs)
3.	• EnergyCo has submitted a scoping report and received SEARs for the Connection Assets for the Project. • The Project has participated in an Access Rights process or tender and has passed the eligibility stage. • The Project has provided an initial payment or provided the required securities (refer to section 4.5 for further details).	Biodiversity studies and drafting EIS reports
Easement Acquisition Activities		
4.	• EnergyCo has submitted a scoping report and received SEARs for the Connection Assets for the Project. • The Project has participated in an Access Rights allocation process and has passed the eligibility stage. • The Project has demonstrated to EnergyCo that it has acquired or is reasonably likely to acquire the necessary land interests required to construct and operate the proposed generation or storage project. • The Project has provided an initial payment or provided the required securities (refer to section 4.5 for further details).	Issue opening letters and commence negotiations phase
5.	The Project has been allocated an Access Right.	If required, issue proposed acquisition notices and commence a compulsory acquisition process.

EnergyCo acknowledges that each Project will have its own development program and whilst some Projects may be ready to participate in an early Access Right tender, other Projects may target participation in later tenders. EnergyCo would work with Projects to further understand their intended development and delivery programs and the likely dates when Projects may achieve the milestones described in Table 9 and the associated timing of EnergyCo undertaking the activities described in section 4.3.

4.3.2 Connection Assets model duration

It is proposed that EnergyCo would continue to undertake the activities described in sections 4.2.1 to 4.2.5 for Projects that had been allocated an Access Right prior to the earlier of:

a. end 2032; or
b. a date when EnergyCo does not reasonably expect that significant further Access Rights may be granted based on the Stage 2 REZ Transfer Capacity.

EnergyCo may, in consultation with relevant stakeholders, extend the Connection Assets model to a later point in time and/or apply the model to future stages of the New England REZ.

Have your say

21. What are your views on the proposed scenarios set out in Table 8 and should EnergyCo consider other scenarios when considering whether the model should or should not apply to a Project?
22. What are your views on the proposed activity commencement milestones for Eligible Projects set out in Table 9 and should EnergyCo consider other milestones?
23. What are your views on whether the connections model under consideration should (or should not) apply to Projects connecting to the Transgrid Access Rights Network as well as to Projects connecting to the New Access Rights Network?
24. What are your views on the proposed duration of the Connection Assets model?

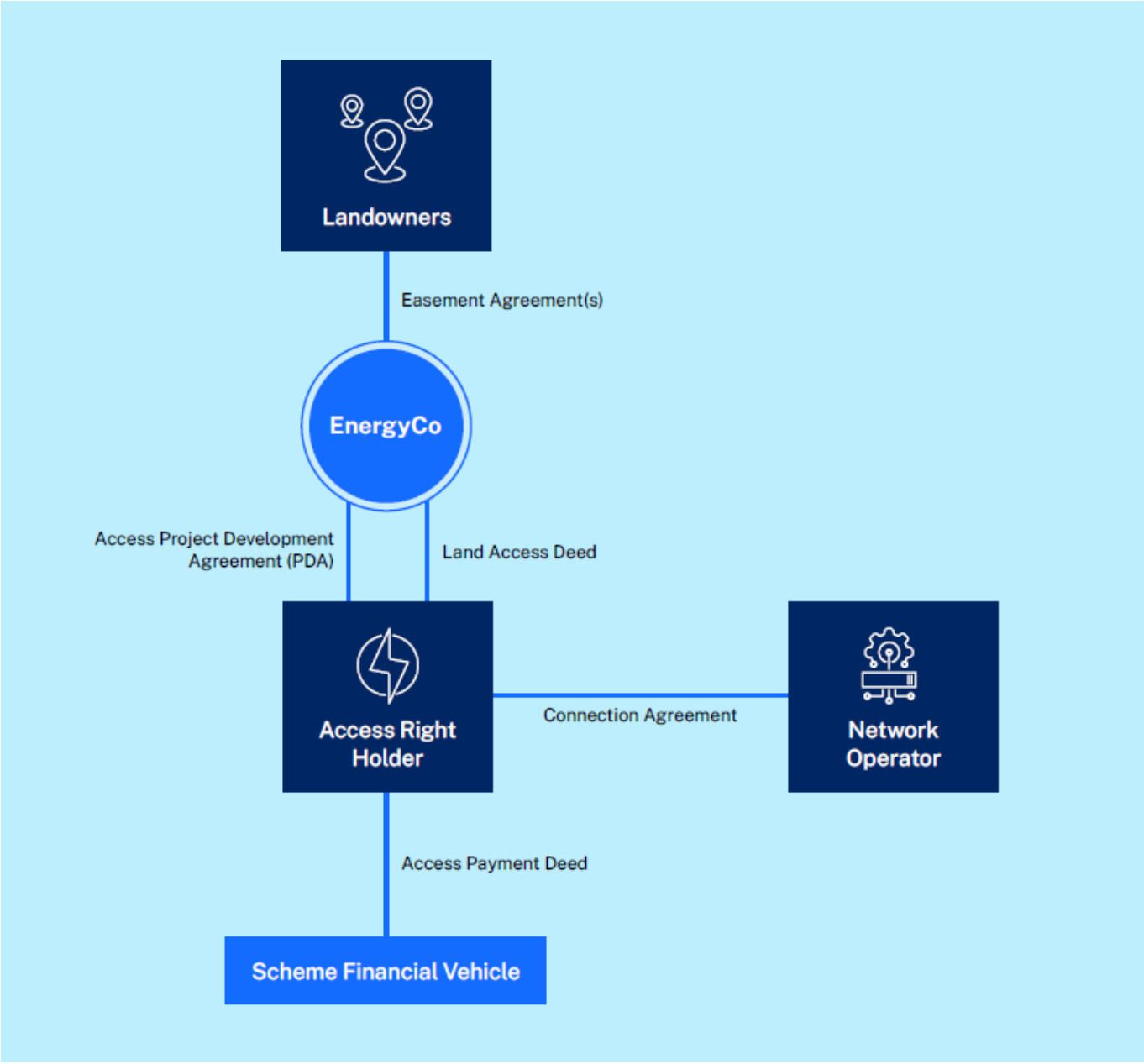
4.4 Proposed contract structure

The proposed contract structure for a Project connecting to the Access Rights Network under the Connection Assets model is illustrated in Figure 8 and consists of the following agreements:

- Access Project Development Agreement between EnergyCo and the Access Right Holder;

- Access Payment Deed between the Scheme Financial Vehicle (SFV) and the Access Right Holder;
- Easement Agreement(s) between EnergyCo and relevant landowner(s);
- Land Access Deed between EnergyCo and the Access Right Holder; and
- Connection Agreement with the Network Operator.

Figure 8: Proposed contract structure



Access PDA: The contract between the Access Right Holder and EnergyCo, placing obligations on the Access Right Holder related to the development, construction and operation of its Project, compliance with its social licence commitments and reporting obligations.

The obligations on EnergyCo and the Access Right Holder and the processes required to obtain planning and environmental approvals and acquire easements for Connection Assets would also be set out in the Access PDA. This includes obligations and activities between award of an Access Right and the Project reaching its financial close, as well as obligations to undertake, comply with and report on social licence commitments.

The Access PDA would include a template Land Access Deed (see details below).

Access Payment Deed: The contract between the Applicant and the SFV which would include the obligations of the Access Right Holder to pay Access Fees and provide security. The Access Payment Deed would also set out the termination amounts payable where the contract is terminated in certain circumstances.

Easement Agreement: The contract between EnergyCo and a landowner granting easement rights to use and access part of the land for the design, construction, operation and maintenance of Connection Assets.

Land Access Deed: The contract between the Access Right Holder and EnergyCo under which EnergyCo would provide the Access Right Holder with a non-exclusive licence to construct, operate and maintain the Connection Assets. The executed Land Access Deed for each Project would contain:

- the conditions for access to the easement;
- costs payable to EnergyCo to recover planning and development costs and costs of acquiring the easement (see section 4.5 for details);
- the planning and environmental approval conditions applicable to the relevant Connection Asset; and
- the biodiversity offset liabilities and costs payable to EnergyCo to discharge these liabilities under the proposed SODA (see section 4.2.4 and section 4.5 for further details).

Connection Agreement: The contract between the Access Right Holder and the Network Operator regarding the connection of the Project to the relevant network infrastructure which the parties are required to enter under the NER.

4.5 Proposed cost recovery structures

4.5.1 Recovery of EnergyCo development costs

EnergyCo is considering appropriate mechanisms to recover EnergyCo's development costs incurred under the proposed Connection Assets model, including for:

- planning and environmental approvals and costs incurred in preparing applications and reports, conducting the required surveys, responding to submissions and consulting with the Department of Planning, Housing and Infrastructure and other stakeholders; and
- easement acquisitions and costs for EnergyCo's property team, valuers and legal advisors.

Repayment of EnergyCo's actual development costs would be made under contract and could either occur when incurred by EnergyCo or at a later date, such as after execution of the Land Access Deed or at Project financial close. Noting that in the absence of the Connection Assets model, these costs are for activities that developers would have otherwise incurred, EnergyCo may require developers to make initial payments as early as at the time of submitting an Access Rights application or tender and upon executing access agreements. It is not intended that EnergyCo's development costs would be recovered through access fees paid to the scheme financial vehicle.

Developers would need to have sufficient development funding available to repay EnergyCo for its development costs, which may occur prior to the Project reaching final investment decision / financial close.

In scenarios where EnergyCo does not recover its development costs as they are incurred, EnergyCo would require Access Right Holders to provide security to mitigate the risk of sunk costs in the event that the Access Right Holder does not execute a Land Access Deed or the Project does not proceed. The timing and magnitude of any securities required would be based on EnergyCo estimates of the project-specific development costs at the time of Access Right award.

4.5.2 Recovery of easement acquisition costs

Payments to landowners for easements are proposed to be made by EnergyCo at the time that the interest passes to EnergyCo as set out below:

- 100% of the market value for the temporary construction easement and all disturbance costs (including legal and valuation fees), paid at the time the interest in the construction easement passes to EnergyCo.
- 80% of the market value of the permanent easement, including injurious affection paid at the time interest in the temporary construction easement passes to EnergyCo.
- 20% of the market value of the permanent easement, including injurious affection, paid after completion of construction and registration of the easement, supported by a survey that shows the final easement on a deposited plan.

Repayment of actual Project-specific easement acquisition costs by Projects would be made under contract and could either occur when incurred by EnergyCo or at a later date, such as after execution of the Land Access Deed or at Project financial close. It is not intended that easement acquisition costs would be recovered through access fees paid to the scheme financial vehicle.

As with EnergyCo's development costs, developers would need to have sufficient development funding available to repay EnergyCo for the cost of acquiring easements which may occur prior to the Project reaching final investment decision / financial close.

In scenarios where EnergyCo does not recover the easement acquisition costs as they are incurred, EnergyCo would require Access Right Holders to provide security to mitigate the risk of sunk costs in the event that the Access Right Holder does not execute a Land Access Deed or the Project does not proceed. The timing and magnitude of any securities required would be based on EnergyCo estimates of the Project-specific easement acquisition costs at the time of Access Right award.

4.5.3 Payment of biodiversity offset costs

EnergyCo would also seek payments from Access Right Holders for the portion of the SODA (or other offsets delivery mechanism) for their Connection Assets. The exact magnitude and timing of payments from Access Right Holders to EnergyCo to meet the SODA obligations would be set out in the Land Access Deed and payable no later than the start of construction of the Connection Assets, or other timing as may be determined in the SODA and/or planning approval.

Access Right Holders should plan the timing of their financial investment decision and financial close activities to ensure they are able to fund their biodiversity offset costs when they fall due for payment.

Have your say

25. At which of the following points in time would developers be able to make payments to EnergyCo to recover costs incurred under the Connection Assets model:
    a. Initial payments at the start of an Access Rights tender process;
    b. Further payments under the Access PDA based on initial estimates;
    c. Further payments at execution of the Land Access Deed based on updated estimates; and/or;
    d. Actual payments under the Land Access Deed, following financial close of the Project?
26. In any scenario where EnergyCo's costs are not recovered as they are incurred, what potential challenges would developers face in providing security to EnergyCo at any of the following points in time:
    a. Upon execution of tender process deed;
    b. Upon execution of an Access PDA; and/or
    c. Upon execution of a Land Access Deed?

4.6 Other models considered

Beyond the Connection Asset model currently being considered for adoption in New England REZ, there are other potential models which have also been considered, each with their own benefits and challenges. One model is where the New Network Operator would be required to deliver the Connection Assets under a contract between an Access Right Holder and the New Network Operator.

The other model considered in this section would **only apply** to Projects seeking to connect to the New Access Rights Network and would **not apply** to Projects seeking to connect to the Transgrid Access Rights Network.

Under the model where the New Network Operator delivered the Connection Assets, pricing for the development of the Connection Assets would be provided under a framework where, through the contestable procurement process, the successful New Network Operator has made commitments on the pricing principles that would apply to preparing Project-specific connections proposals. This would provide Projects with transparency and certainty on the commercial arrangements for Connection Assets.

The New Network Operator-led Connection Assets model was considered in response to some of these trade-offs. The primary benefits of the New Network Operator-led Connection Assets model would be:

- that a single party (the New Network Operator) would be responsible for delivery of each Connection Asset under the relevant planning approval, which would simplify management and satisfaction of post-approval planning matters with potential time and cost savings; and
- the Projects have a transparent process for pricing of the Connection Assets, and other than funding the works (as described above), are otherwise not required to deliver or operate the Connection Asset.

One of the factors in support of a New Network Operator-led Connection Assets model is that the model described in section 4.2 (where a developer can choose their pathway for developing the Connection Assets) would result in EnergyCo being the Proponent for the Connection Assets under the relevant planning approvals. This means that EnergyCo would be ultimately liable for satisfaction of the conditions of the planning approval. This liability becomes more complex in scenarios where:

- there are multiple Projects in the same vicinity, where EnergyCo would be required to manage compliance with conditions through multiple Access Rights Holders and their contractors/ service providers and the cumulative impacts in an area;

- a Project's Connection Assets are located in an easement in the vicinity of or parallel to an easement procured for the New Network Operator to construct the New REZ Network Infrastructure;
- a Project has an EPC contractor delivering works under both the planning approval for the Project and the Connection Assets' EIS; or
- multiple contractors delivering different transmission lines under the one Infrastructure Approval and conditions requiring separate or staged management plans.

It is likely therefore that EnergyCo would take a conservative and prescriptive approach to any connection asset works being performed to appropriately manage and discharge its obligations under the planning approvals and environmental laws more broadly. This is particularly important in areas where cumulative impacts need to be managed to ensure community impacts are minimised. However, this may lead to limited flexibility for developers and their contractors. For example, this may involve using template documents to fulfil post-approval planning requirements or complying with a pre-determined staging report or process to reduce the complexity of multiple contractors operating under the one approval.

EnergyCo notes that previous feedback from developers confirmed a desire for developers to have flexibility to select who they wanted to deliver the Connection Assets rather than relying solely on the New Network Operator. However, in light of the above, this may require a trade off in terms of how subsequent planning obligations are met to reduce complexity and the time involved in meeting post-approval requirements under a planning approval. Accordingly, under the Connection Assets model, providing flexibility on who delivers the connection works is likely to result in less flexible arrangements under the planning approvals, as described above.

Have your say

27. Would developers see value in the alternative model and if so, what risks would the developers be concerned about?

5 Payments to landowners hosting Connection Assets

Landowners who host transmission infrastructure play an essential role in the renewable energy transition.

The Strategic Benefit Payments (SBP) Scheme ensures eligible landowners share in the benefits of the significant economic investment in new transmission infrastructure. Payments under the SBP Scheme are equivalent to $200,000 (in real 2022 dollars) per kilometre of transmission infrastructure hosted, paid annually by the network operator over a 20-year period in accordance with the Strategic Benefit Payment Guidelines (SBP Guidelines)[23]. These payments are made in addition to and would not reduce any compensation paid to landowners for transmission easements in accordance with the Just Terms Act.[24]

Appendix A of the SBP Guidelines[25] sets out the Eligible Projects under the SBP Scheme and in section A.7 sets out the Eligible Infrastructure for the New REZ Network Infrastructure project including 500 kV and 330 kV transmission lines to be delivered by the New Network Operator.

The SBP Scheme does not include Connection Assets as Eligible Infrastructure.

In order to create an equitable outcome between landowners hosting 500 kV or 330 kV transmission lines delivered as part of the New REZ Network Infrastructure project and landowners hosting 500 kV or 330 kV Connection Assets, EnergyCo is considering options for establishing a framework for payments to be made to landowners hosting 500 kV or 330 kV Connection Assets constructed and operated by Project developers in the New England REZ.

These payments are separate to the planning and easement acquisition costs payable to EnergyCo (see section 4.5.2) and Access Right Holders may be required to make landowner benefits payments as a condition of their Access Right.

EnergyCo may require Access Right Holders to provide securities for landowner benefits payments over the period from the start of construction to the end of the proposed 20-year payment term.

[23] See https://www.energyco.nsw.gov.au/publications/strategic-benefit-payments-scheme-guidelines

[24] See EUA Act), s 15(4) and *Electricity Supply Act 1995* (NSW), s 44(4).

[25] See page 7 of NSW Government Gazette No 241 of 20 June 2025. SBP Guidelines should be read alongside cl 6 of sch 2 of the Electricity Supply Act 1995.

Have your say

28. What are your views on Project developers making payments to landowners for hosting 330 kV and 500 kV Connection Assets, including on the timing of payments?
29. What challenges would developers face in providing security to EnergyCo under the Access PDA to cover a period from the start of construction to the end of the 20-year payment period?

Part III

Proposed System Strength Model

6 Approaches to System Strength

6.1 Description

System strength refers to the ability of the power system to maintain and control a stable voltage waveform, both during normal operation and following a disturbance. The New England REZ will require robust system strength capabilities to maintain power system security and enable generators to operate stably and export electricity.

6.2 System strength approaches under consideration

6.2.1 Background

EnergyCo is considering how to efficiently manage the provision of system strength in the New England REZ to deliver beneficial outcomes for generators and consumers. The ongoing Transmission Planning Review[26] has made several draft recommendations in relation to the provision of system strength in REZs. The approach under consideration is consistent with these recommendations.

In the approach under consideration, Transgrid as system strength service provider and/or the Infrastructure Planner will be responsible for meeting requirements for system strength in the New England REZ. This includes requirements for a minimum level of system strength for power system security and any system strength required to support the stable operation of generating plant (including generation, storage and hybrid Projects).

EnergyCo is seeking to optimise the level of centralised system strength provided in the New England REZ based on joint planning with Transgrid and having regard to technology developments, expected generator demand for system strength and the approaches being taken to system strength mitigation in the NER context.

Grid forming inverter technology is rapidly evolving. EnergyCo understands that under the NER framework, many generators and integrated resource providers are choosing plant technology that allows them to fully or partially mitigate their system strength impact. Many of these projects are opting to pay the NER system strength charge but can then reduce that charge to zero or near zero by demonstrating full or partial mitigation of their system strength impact (e.g., the charge will be

[26] NSW Transmission Planning Review 2025 | NSW Climate and Energy Action

reduced to zero if the connection applicant can demonstrate a withstand Short Circuit Ratio (SCR) of 1.2).[27]

Given this context, and the current levels of interest in grid-forming BESS plant (both standalone and co-located wind or solar generation behind the connection point to locate in the New England REZ), EnergyCo is seeking feedback on a proposed approach that would minimise the need for the central provision of capital assets (e.g., synchronous condensers) to meet generator system strength demand in the New England REZ.

6.2.2 Overview of approach under consideration

The approach under consideration would require Access Right Holders to:

- meet or exceed the minimum withstand SCR requirement in the REZ access standards, and
- reduce their system strength quantity to zero on a basis which is consistent with the NER framework.[28]

Under this approach, Access Right Holders would not be required to pay any central charge for system strength through access fees or any other charging framework. Any system strength provided by the system strength service provider or the Infrastructure Planner would be funded by consumers under either a NER or EII Act revenue determination. This position is aligned with the NER approach under which generators who opt to mitigate their system strength impact by paying the NER system strength charge rather than self-remediate have a zero charge if their system strength demand is zero and consumers fund any system strength provided to meet minimum level of system strength for power system security. However, compared to NER arrangements, the proposed approach would provide Access Right Holders with additional mechanisms to reduce their system strength demand to zero (see below).

6.2.3 Minimum withstand SCR at the connection point

As noted in section 3.14, EnergyCo will consult on Indicative Technical Requirements later in 2025. The Indicative Technical Requirements will include a proposed minimum withstand SCR for Projects for consultation, currently proposed to be 1.8.

[27] Under the System Strength Impact Assessment Guidelines (SSIAG) made by AEMO under the NER, if plant can withstand SCR 1.2 then it is taken to have a system strength quantity of zero (SSIAG, section 6.2.4). Under the NER, if plant has a system strength quantity of zero, its system strength charge will be zero (NER, clause 6A.23.5).

[28] See footnote 25.

6.2.4 Mechanisms to reduce system strength demand to zero

Access Right Holders would have two options (currently under consideration) to reduce their system strength demand to zero:

Option 1 – System strength quantity of zero at the connection point (SCR=1.2)

Under this option, an Access Right Holder would need to meet or exceed the withstand SCR 1.2 requirement at its connection point. For example, a wind generator might install a BESS with a grid forming inverter behind the same connection point, enabling the integrated resource system to meet a withstand SCR of 1.2.

Option 2 – System strength quantity deemed to be zero

Under this option, an Access Right Holder would need to put in place arrangements 'in front of' the connection point that are deemed by the Network Operator [following consultation with AEMO] to have reduced their system strength quantity to zero by providing the required capacity of system strength remediation (required capacity). These arrangements could be:

- providing a source of system strength (e.g. grid-forming BESS, synchronous condenser etc.) of the required capacity elsewhere in the network, or
- contracting with a third-party source of system strength (grid-forming BESS or synchronous condenser) for the required capacity.

The required capacity needed for the deemed reduction would be determined through a formula set out in modifications to the NER (or in procedures made under the NER) made under the EII Act.

If the source of system strength used for the deeming mechanism is a grid-forming BESS, it will need to pass tests to verify that it is providing (rather than absorbing) system strength, and to quantify this system strength provision. These tests will likely be set out in procedures made under the NER (e.g. in a revision to the AEMO System Strength Impact Assessment Guidelines).

6.2.5 Potential last resort provider of system strength

EnergyCo is also considering whether the Network Operator should be required to act as a last resort source of the required system strength quantity for a generator if a generator is unable to use option 1 or 2 above. Under this mechanism, if requested by a generator, the Network Operator would be required to provide that generator with system strength services that will reduce the system strength quantity for that generator to zero. This service would be a negotiated transmission service (similar to system strength connection works under the existing NER) and the relevant generator would pay the Network Operator directly for the relevant service.

6.2.6 Implementation

To implement this model, modifications may be required to the NER and/or procedures made under the NER, for example to:

- 'turn off' the standard processes for generators to mitigate system strength demand under the NER (i.e., the option to self-remediate or pay the NER system strength charge), and
- require Access Right Holders to reduce their system strength demand to zero as described above.

Have your say

30. What would be the implications on Projects being required to meet a withstand SCR of 1.2?
31. What options would Projects have to meet a withstand SCR of 1.2 at their connection point with 'front of meter' solutions? What issues do you see with 'front of meter' solutions to meet the withstand SCR requirement?
32. Do you see value in centralised system strength being provided to meet generator demand for system strength? If so, should use of centralised system strength be mandatory or optional?
33. What are your views on how charges for centralised system strength should be structured, including whether the charges are fixed or adjustable to reflect costs of providing system strength over time?

7 Next Steps

Feedback

EnergyCo will continue to work with industry, local communities and other stakeholders to develop approaches for generation and storage for the New England REZ. Your feedback is highly valued and will be carefully considered as we refine approaches and progress further design work. We thank you for your participation in the process.

You are invited to provide feedback on the New England REZ Generation and Storage Paper using the New England REZ Generation and Storage Paper Submission Form or via free form submission. Please submit your response to newengland.access@energyco.nsw.gov.au with **'Your Name – New England REZ Generation and Storage Consultation Paper'** in the subject line.

Submissions will be accepted until **12 September 2025**.

Probity, confidentiality and caveats

This paper and any feedback processes associated with it, are not part of, nor a pre–requirement to, any procurement, competitive tender or application process.

Participation by any entity in this stakeholder engagement process is entirely voluntary. Participation, or non-participation, in feedback will not provide any participant any advantage or disadvantage in any future procurement, competitive tender or application process. No information provided by submission will be used in any future evaluation of offers or bids.

Industry information gained from feedback may be used in the further scoping and development of generation and storage approaches for the New England REZ. NSW Government staff and advisers – who are subject to confidentiality requirements – will have access to submissions in full, including submitter details. Provisions of the *Government Information (Public Access) Act 2009* (NSW) may apply to any documents submitted (and information should be submitted on that basis) and any summary report compiling key information and feedback.

This paper has been developed as a market engagement tool to ensure that, as far as is practical, equal information and information access will be provided to all interested parties. Any participation in this engagement process or any reliance on this document shall be entirely at a person's or entity's risk.

This document sets out current information and options regarding generation and storage approaches for the New England REZ and has been prepared in good faith and with reasonable

efforts. It is issued without prejudice and is subject to change at any time (including as a result of this consultation process). Nothing in this document is, or should be relied upon as, a promise or representation by the NSW Government that any project will subsequently proceed.

EnergyCo reserves the right to alter or amend any process, stated or implied within this document, at any time. By participating in the option to provide a written submission, you or your organisation agrees to the following conditions:

- participation in this feedback process does not imply any registration, pre-qualification or any other preferred status in respect of any project
- any person or organisation which does not participate will not be prejudiced in any way in respect of any subsequent procurement, competitive tender or application process in relation to this, or any other project
- in the event of the commencement of any formal procurement, competitive tender or application process, participants will not rely on any information supplied or communicated as part of this paper
- participants are discouraged from providing unsolicited offers or any marketing material on the capabilities of their organisation – this information will not be considered.

8 Glossary

Key terms used in this paper are defined below. Terms used but not defined in the document have their meaning given under the National Electricity Rules (NER).

Term/phrase	Acronym/Definition
Access Control Mechanism	A mechanism that can be introduced as part of an Access Scheme that governs the access of persons to a specified part of the Access Scheme Network other than the Access Rights Network. Where this term is used in this paper it should be read as under consideration only.
Access Control Network	Specified network infrastructure identified that is subject to an Access Control Mechanism, as defined in an Access Scheme Declaration. Where this term is used in this paper it should be read as under consideration only.
Access Right	Authorises the holder to submit an application to connect to the Access Rights Network and send out generation from its Project into the Access Rights Network
Access Right Holder	A Project which holds an Access Right to the Access Rights Network granted under an Access Scheme Declaration
Access Rights Network	Specified network infrastructure identified as subject to an Access Rights Regime, as defined in an Access Scheme Declaration
Access Rights Regime	A mechanism which can be introduced as part of an Access Scheme that requires Projects seeking access to specified Access Rights Network to hold Access Rights. Terms and conditions of the regime are included in an Access Scheme Declaration. Where this term is used in this paper it should be read as under consideration only.
Access Rights Tender	A process run by the Infrastructure Planner or the Consumer Trustee to award Access Rights
Access Scheme	An Access Scheme declared by the Minister under section 24 to apply in a REZ or part of a REZ, covered in section 3
Access Scheme Declaration	An Order made by the Minister declaring an Access Scheme in accordance with the EII Act, s24(1)

Term/phrase	Acronym/Definition
Access Scheme Network	The proposed network infrastructure that may be captured under the scope of the Access Scheme. This includes network infrastructure to which an Access Rights Regime or an Access Control Mechanism applies. Where this term is used in this paper it should be read as under consideration only.
AEMO	Australian Energy Market Operator Limited
Aggregate Maximum Capacity Cap (AMCC)	The cap on the aggregate Maximum Capacity of Approved Projects during any capacity period
Approved Project	An Eligible Project that has been awarded an Access Right
ASL	AusEnergy Services Limited
BC Regulation	*Biodiversity Conservation Regulation 2017* (NSW)
Connection Agreement	An agreement between an Access Right Holder or an Access Control Project and a Network Operator regarding the connection of a Project to the Access Rights Network or the Access Control Network (as relevant)
Connection Assets	The plant, equipment, and ancillary infrastructure between the Project and the connection point on the Access Rights Network
Connection Process	The process that Projects will be required to follow to connect their Project to the Access Scheme Network
Consumer Trustee	ASL in its capacity as Consumer Trustee under the EII Act
Dedicated Connection Asset (DCA)	Dedicated Connection Asset (as defined in the NER)
Designated Network Asset (DNA)	Designated Network Asset (as defined in the NER)
EII Act	*Electricity Infrastructure Investment Act 2020* (NSW)

Term/phrase	Acronym/Definition
EII Regulation	Electricity Infrastructure Investment Regulation 2021 (NSW)
Eligible Project	A Project that is eligible to apply for an Access Right under the Access Scheme Declaration
EnergyCo	Energy Corporation of New South Wales
EUA Act	*Energy and Utilities Administration Act 1987* (NSW)
Existing Network Operator	The Transmission Network Service Provider that owns, operates, and controls the existing portions of the Access Scheme Network and will own, operate, and control the non-contestable portions of the New REZ Network Infrastructure. This is Transgrid.
Forecast Curtailment	The Forecast Curtailment on the Access Rights Network or a Network Element comprising part of the Access Rights Network, determined by the Infrastructure Planner in accordance with the relevant Access Scheme Declaration
Indicative Technical Requirements	Indicative generator performance requirements for key generator technical parameters which will affect network design metrics for the purposes of Network Operator procurement and inform high level plant design for Projects. See section 3.14.
Infrastructure Planner	A person authorised to exercise the functions of an Infrastructure Planner under section 63 of the EII Act. EnergyCo has been appointed as the Infrastructure Planner for the New England REZ. EnergyCo has been appointed the Infrastructure Planner for the New England REZ.
Initial Allocation	The Maximum Capacity available for allocation in the initial grant of Access Rights under the Access Scheme
IUSAs	Identified User Shared Assets (as defined in the NER)
Maximum Capacity	The maximum generation in Megawatts (MW) that an Approved Project is authorised to send out under the conditions of its Access Right
Minister	New South Wales Minister for Energy

Term/phrase	Acronym/Definition
NER	The National Electricity Rules, as defined in the National Electricity (NSW) Law, as it applies in NSW
NER Connection Process	The Connection Process as defined in Chapter 5 of the NER
Network Element	An identifiable major component of a transmission system or distribution system comprising part of the Access Rights Network
Network Element Maximum Capacity Cap (NEMCC)	For a Network Element, the cap on the aggregate Maximum Capacity of Approved Projects connected to the relevant Network Element during any capacity period
New Access Rights Network	The contestable portions of the New REZ Network Infrastructure that will be designed, financed, constructed, owned, operated, maintained and controlled by the New Network Operator
New Network Operator	The Transmission Network Service Provider that will be authorised under the EII Act to construct, operate and maintain the contestable portions of the New REZ Network Infrastructure.
New REZ Network Infrastructure	The proposed new network infrastructure in New England REZ that forms part of the Access Rights Network and, subject to authorisation under the EII Act, will support the delivery of the intended REZ capacity of 8 GW
Project	A generation and/or storage project seeking to connect to the Access Scheme Network
Project Deed	The project deed to be executed between EnergyCo and the New Network Operator for the development, construction and operation of the New Access Rights Network
REZ	Renewable Energy Zone
REZ Connection Process	The Connection Process that may apply in the New England REZ, as described in section 3.14

Term/phrase	Acronym/Definition
REZ Declaration	A declaration of a geographical area of NSW and specified infrastructure made by the Minister under section 19 of the EII Act
REZ Transfer Capacity	The network capacity (in GW) for transfer of electricity between the Access Rights Network and any other transmission network to which the Access Rights Network is connected
Roadmap	NSW Electricity Infrastructure Roadmap
SCR	Short Circuit Ratio (as defined in the NER)
SFV	Scheme Financial Vehicle
Target Network Element Curtailment Level (TNECL)	For a Network Element, the target limit on Forecast Curtailment for generation connected to the Network Element due to the transmission capacity of that element
Target Transmission Curtailment Level (TTCL)	The target limit on Forecast Curtailment for generation connected to the Access Rights Network due to the transmission capacity of that network
Transgrid Access Rights Network	The existing portions of the Access Scheme Network and the non-contestable portions of the New REZ Network Infrastructure that will be designed, owned, operated, maintained and controlled by the Existing Network Operator