NSW transmission planning review

Interim Report

27 June 2025

farrierswier

Purpose and authors

This report has been prepared by the following Farrier Swier Consulting Pty Ltd (farrierswier) staff and sub-contractors who have each been appointed by the NSW Minister for Energy under section 21(2)(b) of the *Energy and Utilities Administration Act 1987* (NSW) to examine and report to the Minister on the inquiry into transmission planning:

- Richard Owens, review lead
- David Swift AM
- Claire Rozyn
- Geoff Swier
- Jess Hunt.

Disclaimer

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Glossary

Term	Definition
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AEMO Services	AEMO Services Limited, the Consumer Trustee under the EII Act
AER	Australian Energy Regulator
CBA	Cost-benefit analysis
CEC	Clean Energy Council
CEIG	Clean Energy Investor Group
CER	consumer energy resources
CIS	Capacity Investment Scheme
CNSP	Co-ordinating Network Service Provider
CWO	Central West Orana
DAPR	Distribution Annual Planning Report
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DNSP	Distribution Network Service Provider
ECA	Energy Consumers Australia
ECMC	Energy and Climate Change Ministerial Council
EII Act	Electricity Infrastructure Investment Act 2020 (NSW)
EII Regulation	Electricity Infrastructure Investment Regulation 2021 (NSW)
EnergyCo	Energy Corporation of New South Wales, the Infrastructure Planner under the EII Act
ESB	Energy Security Board
ESOO	Electricity Statement of Opportunities
EST	Energy Security Target
ESTM	Energy Security Target Monitor
EUAA	Energy Users Association of Australia
HCC	Hunter-Central Coast
IASR	Inputs Assumptions and Scenarios Report
IIO	Infrastructure Investment Objectives

IPART	Independent Pricing and Regulatory Tribunal
IPRR	Infrastructure Planner Recommendation Report
ISP	Integrated System Plan
JEC	Justice and Equity Centre
JPB	Jurisdictional Planning Body
LTESA	Long Term Energy Services Agreement
MCC	maximum capital cost
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
NIS	Network Infrastructure Strategy
NSCAS	Network Support and Control Ancillary Services
NSP	Network Service Provider
NSW	New South Wales
PTIP	priority transmission infrastructure project
PTNSP	Primary Transmission Network Service Provider
RAC	Roadmap Advisory Council
REZ	Renewable Energy Zone
RIT-T	Regulatory Investment Test for Transmission
RNIP	REZ network infrastructure project
Roadmap	Electricity Infrastructure Roadmap
SFV	Scheme Financial Vehicle
SSSP	System Strength Service Provider
TAMR	Transmission Asset Management Report
TAPR	Transmission Annual Planning Report
TNSP	Transmission Network Service Provider
WSB	Waratah Super Battery

Executive Summary

About this review

The NSW Minister for Energy has appointed an independent expert panel to undertake a review of electricity transmission planning arrangements in NSW. The purpose of the review is to propose the features of optimal transmission planning arrangements for NSW consistent with NSW legislated and policy objectives and targets and the review's objectives. In particular, the review is to consider options to reduce duplication and ensure coordination between entities involved in transmission planning in NSW.

This report sets out the review panel's draft recommendations for consultation.

Effective, timely and coordinated planning of new transmission projects is critical to achieving NSW's objectives for a clean, affordable, reliable power system and net zero targets and promoting the long-term interests of electricity customers. New transmission projects must also be planned and delivered in a way that manages concerns about the impacts on local communities and the affordability of electricity, with communities and consumers treated as trusted partners in the planning process. Planning must also look beyond traditional large transmission projects to consider the potential for alternatives including distribution and non-network options.

NSW implemented major reforms to transmission planning in 2020 with the introduction of the NSW Electricity Infrastructure Roadmap and *Electricity Infrastructure Investment Act 2020 (NSW)* (EII Act). The implementation of the Roadmap created significant opportunities to improve the efficient and timely planning and delivery of major transmission projects in NSW. It has already delivered some significant outcomes with four major transmission projects approved to enable the connection of new renewable generation and storage projects and maintain affordability, reliability and system security for customers as NSW's coal power stations retire.

During the extensive consultation we have undertaken for this review, stakeholders strongly supported the objectives and general approach of the Roadmap. Our draft recommendations seek to enhance the effectiveness of the Roadmap's implementation based on the benefits of almost five years' experience since it was implemented and the key issues identified through our analysis and consultation.

Our draft recommendations

The draft recommendations in this report address the key issues we identified with the current transmission planning arrangements in NSW and the features of optimal transmission planning arrangements that we consider need to be improved to meet the review's objectives and assessment criteria. These features are **clarity, coordination, timeliness and engagement**. We discuss each of these features briefly below before summarising our draft recommendations.

Greater clarity of the respective roles and responsibilities of the various parties involved in transmission planning in NSW is essential and was supported by all submissions to our consultation paper and options paper. The Roadmap introduced new planning bodies and planning reports, contestability for transmission projects and an alternative pathway for planning and approving projects under the NSW framework in the EII Act instead of the national framework in the National Electricity Rules (NER). This increases the complexity of the transmission planning arrangements in NSW and risks unclear accountabilities, duplication, delays and inefficient outcomes. We propose a series of targeted reforms to clarify roles and responsibilities.

Coordinated planning across NSW is key challenge under the current arrangements. Multiple different parties have responsibilities for planning different parts of the network, for example specific renewable energy zones (REZs) or individual transmission or distribution networks. No body has overall responsibility for coordinating the efficient and timely planning of the entire interconnected NSW system and interactions with the broader National Electricity Market (NEM). Transmission planning also needs to be seen as part of broader integrated planning of the power system, including transmission, distribution, generation and storage. We propose giving EnergyCo an expanded role to coordinate planning across all of NSW, while still leveraging the deep experience and technical expertise of each NSW transmission and distribution business. We also recommend specific measures to better coordinate planning in REZs with the planning of the rest of the NSW network and the NEM, improve joint planning between EnergyCo and transmission and distribution network operators, and better coordinate and integrate planning reports.

The Roadmap has introduced new mechanisms to accelerate transmission planning and improve the timeliness of the planning and delivery of major transmission projects in NSW. However, some barriers to timely delivery and planning remain. We recommend a series of targeted reforms that should be implemented as an immediate priority to accelerate planning and delivery of the New England REZ and other upcoming projects and reduce barriers to timely planning and delivery of critical distribution network projects.

Meaningful engagement with affected stakeholders including local communities and electricity consumers is essential for effective transmission planning and to ensure that plans can be implemented in a way that maintains social licence for the energy transition. While some instances of good engagement are occurring in practice, feedback from stakeholders on the effectiveness of engagement with local communities and consumers is mixed and the EII Act does not contain a clear framework for engagement and transparency of planning decisions. We recommend a package of reforms to implement best-practice engagement with consumers and local communities and transparency of decision making. We also recommend that the NSW government reviews EnergyCo's governance and funding arrangements to ensure they enable it to effectively perform its current functions and our recommended expanded functions.

Our draft recommendations are set out in three chapters in this report to address the following key issues we have identified with the current regulatory arrangements:

- **Clarifying, streamlining and coordinating responsibility for transmission planning in NSW** (chapter 2: recommendations A.1 to A.10).
- **Improving the consistency and effectiveness of transmission planning reports** (chapter 3: recommendations B.1 to B.4).
- **Enhancing engagement, transparency and governance of transmission planning decisions** (chapter 4: recommendations C.1 and C.2).

The current national and NSW arrangements for transmission planning are complex. We have not included a standalone chapter in this report with summary of the current arrangements. Instead, we considered that it was more useful to include an explanation of the relevant aspects of the current arrangements and our identified issues with the current arrangements at the start of each of the three chapters referred to above. More details on the current arrangements are also set out in the options paper and the various reference documents referred to in the relevant chapters of this report.

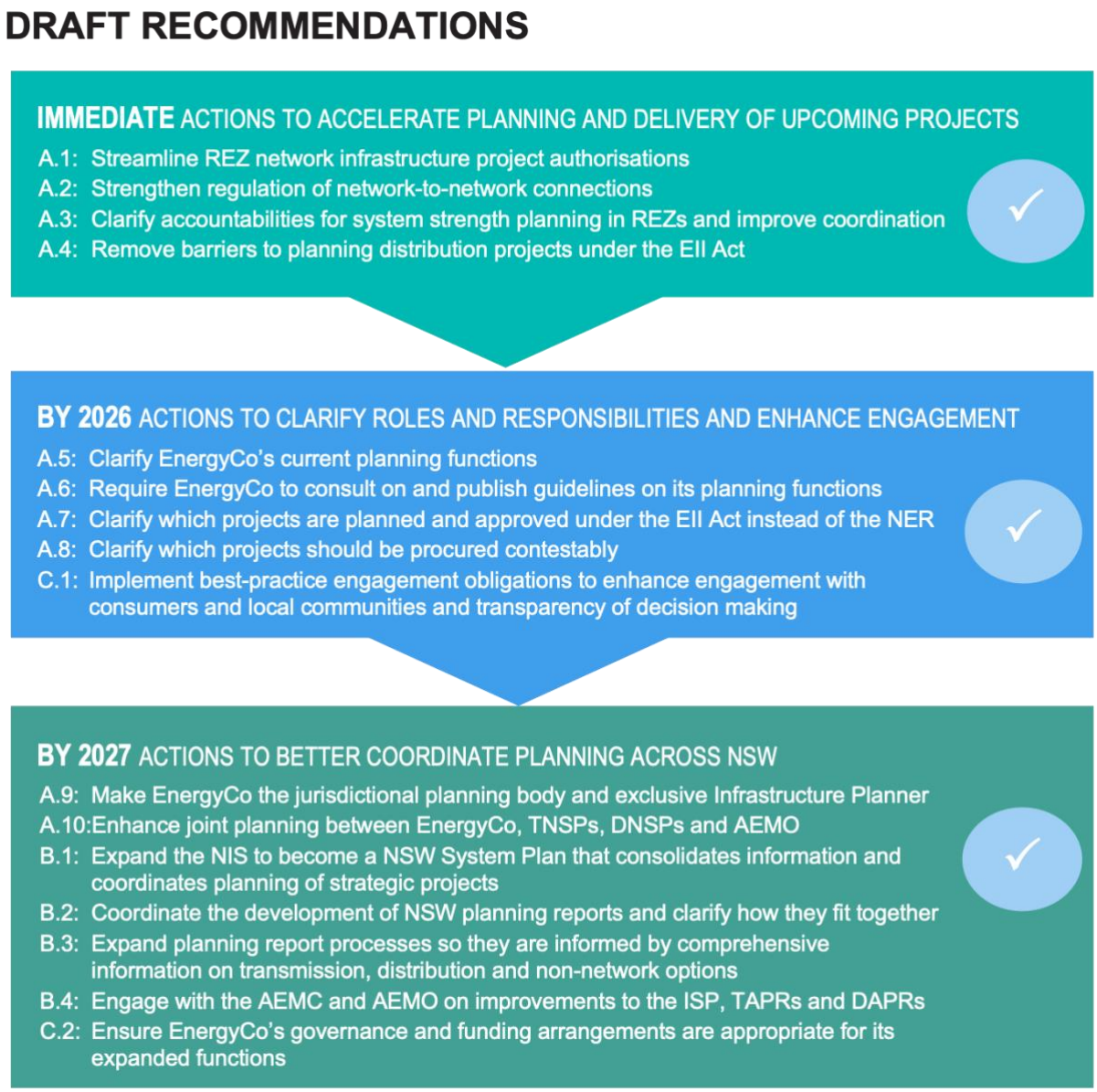
A full list of our draft recommendations is set out at the end of this executive summary. More details on each recommendation are contained in the relevant chapter of the report.

We have carefully considered how these draft recommendations should be prioritised and staged if they are accepted by the NSW Government. We consider that some of our recommendations are urgent to enable effective and timely planning of upcoming projects such as the New England REZ and we consider that they can be implemented relatively quickly. We recognise that other recommendations will take longer to implement,

with Government and the relevant Roadmap bodies requiring time to turn our recommendations into detailed drafting changes to the relevant regulatory instruments and develop and implement new guidelines, internal policies and engagement mechanisms. For some of our recommendations to be effective, EnergyCo will also need additional resources, staff and funding.

Our draft recommendations and our recommended approach to the timing of their implementation is summarised in the following diagram.

Figure ES.1: Summary of the draft recommendations and their recommended implementation timing



Our approach to developing our draft recommendations

The recommendations in this interim report build on the options we set out in our options paper in April and our extensive engagement with stakeholders over the past 5 months since our consultation paper in February.

The review team thanks all of the stakeholders who provided submissions or attended meetings or workshops on the consultation paper or options paper. We received 26 submissions to the consultation paper and 32

submissions to the options paper and have held more than 40 meetings or workshops with stakeholders. We have been very pleased with the high level of engagement in the review and the broad range of people and organisations who have provided input. Your views have been invaluable in informing our analysis and draft recommendations.

We assessed the options from the options paper and additional options proposed by stakeholders against the following assessment criteria:

- Promote timely planning and delivery of transmission projects
- Promote efficient planning and delivery of transmission projects
- Improve outcomes for NSW electricity consumers, local communities and taxpayers
- Provide clear and effective allocation and coordination of roles and responsibilities
- Effectively integrate with the NEM.

In the options paper, we consulted on a wide range of options that could be grouped on a spectrum from (1) targeted reforms to clarify current roles and responsibilities, and (2) more extensive reforms to better coordinate roles, responsibilities and planning reports, to (3) significant reforms to consolidate current roles by transferring several current planning roles to EnergyCo. Almost all stakeholders supported clarifying roles and responsibilities as a minimum. There were mixed views on how much further we should go in our recommendations and whether to focus on coordination or adopt more fundamental reforms to consolidate roles and responsibilities.

We consider that a focus on clarity and coordination better meets the review objectives and our assessment criteria rather than consolidating roles. As part of our recommendations, we have recommended that EnergyCo take on several new or expanded functions to enable it to coordinate planning across NSW, including undertaking the NSW Jurisdictional Planning Body role currently performed by Transgrid and developing a NSW System Plan. However, we recommend against more extensive consolidation of planning functions into an enlarged EnergyCo for three main reasons.

First, transmission planning is necessarily complex with input required from multiple parties and a limited supply of experienced planning staff with highly specialised skills. We consider that a single central planner cannot have all the skills and information required to plan the entire system in the NSW context where there are multiple transmission and distribution network operators and most planning roles have been performed by those network operators to date. Going forward, it will be important to continue to draw on the respective expertise of each of the Roadmap bodies, Transgrid, AEMO, the NSW DNSPs and other TNSPs. Rather than trying to remove some of the current planning roles allocated to those bodies and consolidate them into EnergyCo or a different central planner that would need considerable additional resources, skills and specialised staff, we consider it more effective to clarify each party's roles and responsibilities and empower EnergyCo to take an expanded role in coordinating network planning across the state.

Second, we are very conscious of the urgency of the energy transition in NSW as coal power stations close and new network, generation, storage and system strength projects are required to maintain affordability, reliability and system security. It is important that any reforms do not delay investment by creating uncertainty or disrupting current planning processes for critical projects. More substantive reforms to transfer and consolidate planning responsibilities would take time to implement and are unlikely to be in place in time to apply to key current or upcoming major projects, which would reduce their effectiveness. We have therefore developed a package of draft recommendations that we consider can be implemented in a staged manner to address the key issues with the current arrangements and deliver more effective and timely planning and delivery of projects.

Third, we have observed that the various bodies involved in planning in NSW have made significant progress in learning how to work together and apply what is still a relatively new framework. This collaborative

approach should be encouraged. While there remain some significant challenges that our draft recommendations seek to address, more comprehensive reforms to roles and responsibilities could undo the benefits of the valuable learning that have occurred in the 4-5 years since the Roadmap was established.

We consider that our recommendations will deliver on the review's objectives and improve outcomes for NSW electricity consumers, local communities and taxpayers.

Next steps

We welcome submissions and comments on this interim report. Written submissions can be made by 25 July 2025. We will also hold a public webinar on 22 July 2025 to enable stakeholders to ask questions and provide feedback. More details on how you can engage in the review are set out in section 1.5 below.

We will review submissions and prepare a final report with our final recommendations to the Minister. Our final report is to be provided to the NSW Minister for Energy by 11 September 2025.

Table ES.1: List of draft recommendations

Draft recommendation	Prioritisation
A. Clarifying, streamlining and coordinating responsibility for transmission planning in NSW	
Immediate actions to accelerate planning and delivery of the New England REZ and other upcoming projects	
A.1: Simplify and accelerate the process for authorising REZ network infrastructure projects	As soon as possible
A.2: Strengthen the regulation of network-to-network connections	As soon as possible
A.3: Reform the system strength regulatory arrangements to clarify accountability for system strength planning in REZs and improve coordination	As soon as possible
A.4: Remove barriers to planning efficient distribution network projects under the EII Act	As soon as possible
Medium term reforms to clarify roles and responsibilities	
A.5: Clarify EnergyCo's current planning functions in the EII Regulation	By mid-2026
A.6: Require EnergyCo to consult on and publish a guideline explaining its planning functions and how it will perform them	By the end of 2026
A.7: Clarify which projects should be planned and approved under the EII Act instead of the NER	By the end of 2026
A.8: Clarify which projects should be procured contestably	By the end of 2026
Medium to longer term reforms to better coordinate transmission planning across NSW	
A.9: Make EnergyCo the Jurisdictional Planning Body for NSW and exclusive Infrastructure Planner so it can coordinate planning across NSW	By 2027, before the first NSW System Plan is published
A.10: Extend the NER joint planning provisions to apply to EnergyCo and enhance joint planning between EnergyCo, TNSPs, DNSPs and AEMO	By 2027, before the first NSW System Plan is published

Draft recommendation	Prioritisation
B. Improving the consistency and effectiveness of transmission planning reports	
B.1: Expand the Network Infrastructure Strategy to become a NSW System Plan that consolidates information and coordinates planning of strategic projects across NSW	By 2027, with the first NSW System Plan published by the end of 2027
B.2: Coordinate the development of the various network planning reports in NSW and clarify how they fit together to deliver an integrated plan while ensuing each planning report is fit for purpose for meeting its objectives and relevant stakeholder needs	By 2027, prior to publication of the first NSW System Plan
B.3: Expand planning report processes so they are informed by comprehensive information on transmission, distribution and non-network options and can assess their relative benefits	By 2027, prior to publication of the 2027 IIO Report and NSW System Plan
B.4: Engage with the AEMC and AEMO on potential improvements to the ISP, TAPRs and DAPRs to clarify their interaction with state-based planning reports and review their contents and timing	By 2027
C. Enhancing engagement, transparency and governance of transmission planning decisions	
C.1: Implement best-practice engagement obligations to enhance engagement with consumers and local communities and transparency of decision making	By 2026
C.2: Ensure EnergyCo's governance and funding arrangements are appropriate for its current and expanded functions and enable it to attract and retain suitable staff	By 2027

1. Introduction and approach to the review

1.1 ESTABLISHMENT OF THE REVIEW AND TERMS OF REFERENCE

1.1.1 Review team and background

On 11 February 2025, the New South Wales (NSW) Minister for Energy (the Minister) appointed the following people to undertake an independent, expert review into transmission planning in NSW (the transmission planning review) and report to the Minister under section 21(2)(b) of the *Energy and Utilities Administration Act 1987* (NSW):

- Richard Owens, review lead
- David Swift AM
- Claire Rozyn
- Geoff Swier
- Jess Hunt.

The review team is undertaking this review in accordance with Terms of Reference attached to the Minister's instrument of authorisation for the review.[1]

The Terms of Reference state that the review will propose, with clear rationale, the features of optimal transmission planning arrangements for NSW, consistent with NSW legislated and policy objectives and targets, and aligned with the review objectives set out in section 1.3.1 below. In particular, the review is to consider options to reduce duplication and ensure coordination between entities involved in transmission planning in NSW.

The review was established by the Minister in response to the following recommendation in the Electricity Supply and Reliability Check Up conducted by Marsden Jacob Associates (the Check Up):[2]

> *18. Under s.21(2)(b) of the Energy and Utilities Administration Act 1987, the Minister should commission an expert review of current Transmission Planning arrangements in NSW to reduce duplication and advise on the best approach to ensuring coordination between the Roadmap bodies (Energy Co, Transgrid, AEMO, AEMO Services).*

The Terms of Reference include the following summary of the issues identified by the Check Up in relation to transmission planning in NSW:

> *The Check Up considered transmission planning in NSW to be overly complicated, with a tension created between the roles of a range of parties involved in transmission planning decisions. These were noted as the jurisdictional planner, Transgrid, the Renewable Energy Zone (REZ) planner, the Energy Corporation of NSW (EnergyCo), the Integrated System Plan (ISP) planner, the Australian Energy Market Operator (AEMO), and, through the REZ network project approval process, AEMO Services.*

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1 The Terms of Reference is available on the project website at www.energy.nsw.gov.au/nsw-plans-and-progress/regulation-and-policy/nsw-transmission-planning-review-2025.

2 Marsden Jacob Associates, *NSW Electricity Supply and Reliability Check Up*, 4 August 2023, p14.

The report noted the range of transmission planning publications issued by these entities, all of which cover many of the same projects. These include AEMO's biennial ISP, Transgrid's Transmission Annual Planning Report (TAPR), and Energy Co's recently issued Network Infrastructure Strategy (NIS). The report also noted that AEMO Services considers the timing of network infrastructure projects in developing its Infrastructure Investment Objectives (IIO) Report as the Consumer Trustee under the Roadmap legislation.

1.1.2 Terms of Reference

The Terms of Reference provide that the review will consider the following issues:

- The current roles, responsibilities, interactions of relevant parties under the *Electricity Infrastructure Investment Act 2020* (EII Act), the *Electricity Supply Act 1995*, National Electricity Law (NEL), National Electricity Rules and other relevant rules, regulations, legislative and licensing instruments, and binding requirements that apply to transmission planning.
- Existing administrative and contractual arrangements and functions for relevant parties that hold functions for transmission planning, including roles and responsibilities of renewable energy zone (REZ) network operators that are gazetted or proposed for gazettal and defined in licences and/or contract.
- How transmission planning and decision making occurs with regard to key inputs, including generation and storage project delivery and key transmission planning publications (including the Integrated System Plan (ISP), Transmission Annual Planning Report (TAPR), Infrastructure Investment Objectives (IIO) Report, and Network Infrastructure Strategy (NIS)).
- NSW transmission planning arrangements, including for provision of centralised system strength services and infrastructure, to facilitate the efficient and effective application of both contestable and non-contestable network infrastructure delivery models.
- Distribution network planning for the higher-voltage parts of the NSW electricity distribution network that may be suitable for the connection of grid scale generation and storage, having regard to the changing model for distribution networks.
- Consultation outcomes from all interested stakeholders of NSW electricity network planning, including Electricity Infrastructure Roadmap (Roadmap) entities, market bodies and regulators, distribution networks and planners, project developer representatives and industry groups, and consumer representatives.

The review relates to NSW transmission planning arrangements, which the Terms of Reference define as including:

- Transmission planning activities undertaken by the following bodies:
  - EnergyCo, including its role as Infrastructure Planner under the EII Act for the first five NSW REZs, and other functions of the Infrastructure Planner under the EII Act.
  - Transgrid, including its role as the NSW Jurisdictional Planning Body under the NER and its delivery of the TAPR.
  - AEMO, including its role as system planner for the NEM and its delivery of the ISP under the NER.
  - AEMO Services, including its role as the Consumer Trustee under the EII Act and its delivery of the IIO Report.
- Planning of the NSW transmission system including activities relevant to:
  - Identification of transmission network constraints and the forward planning for major transmission network augmentations and upgrades.
  - The interaction of generator connection processes with overall planning of the transmission network.
  - Planning for the integration of REZs and any third party owned and operated network infrastructure with the backbone shared transmission network.

- The timing and process for decision making relevant to determining the pathway, and providing all parties with clarity of responsibilities, for transmission infrastructure delivery under the National Electricity Market (NEM) or EII Act investment frameworks, including procurement approaches for the contestable delivery of transmission projects led by EnergyCo.
- Planning for system security services required to maintain the integrity of the grid, including inertia and system strength.

The Terms of Reference state that transmission planning is not intended to include project specific activities related to the planning and delivery of transmission infrastructure under the EII Act or NEM frameworks, such as detailed engineering and technical design, route alignment, environmental approvals, and construction of transmission projects.

The Terms of Reference state that the following issues are outside of the scope of the review:

- Recommendations on project delivery not directly related to future network planning, including procurement, financing, cost recovery, construction, ownership, operation or maintenance of transmission networks.
- Recommendations on arrangements related to the economic regulation of transmission networks by the Australian Energy Regulator (AER) under chapter 6A of the NER or section 38 of the EII Act.
- Recommendations on regulatory arrangements related to generator connections to the transmission network under chapter 5 of the NER, except to the extent that they materially impact transmission network planning issues.
- Issues related to environmental planning regulation under the *Environmental Planning and Assessment Act 1979* or other NSW or Commonwealth regulatory requirements.
- Removing the option for contestable procurement of transmission network projects in NSW under the *Electricity Infrastructure Investment Regulation 2021*.
- Recommendations to change contractually agreed, licensed and/or gazetted REZ network operator roles and responsibilities regarding network planning, including for system strength.

1.1.3 Integrated planning

In developing our interim recommendations to address the NSW transmission planning issues within the scope of the review, we are conscious that transmission planning is one component of a broader integrated energy system planning process.

Integrated planning recognises the interconnected nature of generation, storage, and transmission and distribution network infrastructure. The concept of integrated planning is summarised in a recent report from the Energy Systems Integration Group:[3]

> *Traditional electricity planning practices have often been siloed. Generation, transmission, distribution, and customer program/distributed energy resource (DER) planners all have their own planning teams, models, data inputs, and vocabularies. This siloed approach was sufficient when one-way power flow from a limited set of dispatchable generators allowed for either separate or sequential planning processes with limited feedback between them. However, that is not the power system of today. Ongoing transformations – including accelerating load growth, technology development, the growth of inverter-based resources, evolving extreme weather events, and the emerging need to consider integrations between coupled energy systems – are pushing planning processes toward a new integrated planning paradigm.*

[3] Energy Systems Integration Group (ESIG), *Foundations of Integrated Planning: Defining a Framework for Comprehensive Energy System Planning*, p vii, available at https://www.esig.energy/integrated-planning/

Effective transmission planning also requires understanding of environmental impacts, land use priorities, community acceptance and renewable resource potential to guide optimal site selection. A sequenced approach requires early and meaningful engagement with affected communities, including local Aboriginal communities, whose traditional knowledge and perspectives are essential considerations.

In recent years, most National Electricity Market (NEM) jurisdictions have developed transmission planning frameworks that extend beyond the National Electricity Rules (NER) requirements. While the NER primarily focuses on economic efficiency, reliability and system security, jurisdictional frameworks incorporate broader public policy objectives including regional economic development, environmental sustainability, First Nations partnerships and strategic land use priorities that reflect local values and concerns.

This move towards state-based planning makes close collaboration between states, Australian Energy Market Operator (AEMO), network operators and other stakeholders more critical than ever to ensure alignment of national and state planning processes. Such coordination is essential to deliver outcomes that balance diverse objectives while serving the best interests of all energy consumers.

1.2 PROCESS FOR THE REVIEW TO DATE

A consultation paper for the review was published on 14 February 2025.[4]

The consultation paper summarised the scope of the review and the process for undertaking the review and preparing our report to the Minister. It sought initial stakeholder feedback on issues with the current transmission planning arrangements in NSW and options for reforms to those arrangements. It also set out draft assessment criteria for stakeholder feedback.

We received 26 submissions to the consultation paper and held over 30 meetings or workshops with interested stakeholders.

An options paper for the review was published on 24 April 2025.[5]

The options paper set out and sought submissions on the following matters:

- Our final assessment criteria that we will use to assess options to each of the elements of the problem definition.
- The material issues we have identified with the current NSW transmission planning arrangements based on our own analysis, submissions and meetings with stakeholders.
- Options for addressing each element of the problem definition. We presented a range of options for feedback and did not identify preferred options.

We received 32 submissions to the options paper. We also held meetings and workshops with interested stakeholders, including meetings with the Energy Corporation of NSW (EnergyCo), Transgrid, AEMO and AEMO Services and workshops with distribution businesses, consumer groups and generators.

More details on the people who made submissions and attended meetings are set out in Appendix B.

The review team thanks all of the stakeholders who provided submissions or attended meetings or workshops. We have been very pleased with the high level of engagement in the review and the broad range of people and organisations who have provided input. Your views have been invaluable in informing our analysis and draft recommendations.

4 Available at www.energy.nsw.gov.au/nsw-plans-and-progress/regulation-and-policy/nsw-transmission-planning-review-2025

5 Available at www.energy.nsw.gov.au/nsw-plans-and-progress/regulation-and-policy/nsw-transmission-planning-review-2025

1.3 REVIEW OBJECTIVES AND ASSESSMENT CRITERIA

1.3.1 Review objectives

The Terms of Reference sets out the following objectives for the review.

Box 1: Review objectives

Aligned with the intent of Recommendation 18 of Check Up, the Review will consider transmission planning arrangements in NSW to reduce duplication and ensure coordination between relevant entities.

The Review will propose, with clear rationale, the features of optimal transmission planning arrangements for NSW, consistent with NSW legislated and policy objectives and targets, and aligned with the objectives below. The Review will identify the specific reforms (across relevant regulatory and policy instruments) and detailed steps to achieve an optimal structure for transmission planning in NSW.

- **Timely delivery:** deliver a transmission planning regime fit-for-purpose to support timely delivery of NSW's legislated objectives for a clean, affordable, reliable power system and net zero targets.
- **Public Interest alignment:** allocation of roles and responsibilities that are in the best interests of NSW energy consumers and communities hosting transmission infrastructure.
- **Effective & Efficient:** optimise the administrative simplicity, costs, and effectiveness of transmission planning in NSW, to serve the timely coordination of transmission development with renewable energy generation investment as the energy system transitions. This is to be done whilst taking into account the broader context and interaction with the NEM.
- **Clarity:** define clear responsibilities for transmission planning in NSW, identifying scope boundaries and quality criteria, specify best-placed entities to deliver them, clear pathways for interaction and coordination between them (including to minimise duplication), and oversight/governance arrangements.

1.3.2 Assessment criteria

In the consultation paper, we set out draft assessment criteria to guide our identification of issues with the current arrangements and our development and assessment of options. These draft criteria were informed by the review scope, review objectives, the objects of the EII Act and the national electricity objective. The consultation paper requested comments on these draft assessment criteria, which we used to develop the final assessment criteria that were set out in the options paper.

Our assessment criteria are set out in the following box. These criteria are unchanged from the options paper. We have used these assessment criteria to assess the options and develop our draft recommendations.

Box 2: Assessment criteria

***Note**: References in these assessment criteria to 'transmission projects' includes projects that can support, or be an alternative to, a transmission network project, including distribution network projects, non-network options, and system security services provided by transmission networks such as system strength and inertia.*

1. **Promote timely planning and delivery of transmission projects:** Do the NSW transmission planning arrangements promote timely planning and delivery of transmission network projects that support the achievement of NSW's legislated objectives for a clean, affordable, reliable power system and net zero targets?
2. **Promote efficient planning and delivery of transmission projects:** Do the NSW transmission planning arrangements incentivise efficient planning and delivery of transmission network projects, including:
    a. minimising inefficient costs
    b. recognising the specialist nature of transmission planning and the limited supply of appropriately skilled personnel
    c. incentivising innovative approaches to the planning, procurement and delivery of projects
    d. enabling coordinated planning across transmission, distribution, generation, load and consumer energy resources
    e. enabling flexibility to adapt to uncertainty and change?
3. **Improve outcomes for NSW electricity consumers, local communities and taxpayers:** Do the NSW transmission planning arrangements:
    a. support improved outcomes for NSW electricity customers in relation to the affordability, reliability, security and sustainability of electricity supply
    b. foster local community support for investment in transmission network projects and a sustainable energy transition
    c. facilitate effective consultation and engagement with affected stakeholders, including NSW electricity customers, local communities and Aboriginal and Torres Strait Islander people
    d. allocate risks efficiently between investors, electricity customers and government
    e. support the other objects of the EII Act?
4. **Provide clear and effective allocation and coordination of roles and responsibilities:** Do the NSW transmission planning arrangements:
    a. allocate transmission planning and related roles to the bodies that are best placed to perform those roles, have incentives to perform them effectively and do not have conflicts of interest
    b. provide clarity in the respective roles, responsibilities and objectives of the various bodies undertaking transmission planning and related functions
    c. support clear, transparent and robust planning and decision making
    d. minimise complexity and coordination challenges between different transmission planning bodies and functions and avoid overlaps or gaps that could lead to delayed or ineffective decision making

e. create appropriate mechanisms for effective cooperation and coordination between bodies and functions

f. provide appropriate oversight and governance of transmission planning bodies?

5. **Effectively integrate with the NEM:** Recognising that NSW is part of an interconnected electricity system, do the NSW transmission planning arrangements:

a. integrate effectively with national planning arrangements for the NEM and state-based planning arrangements in other NEM jurisdictions, including in relation to the planning of interconnectors and other transmission projects that affect multiple jurisdictions

b. allocate transmission planning and related roles between NSW-specific bodies and national bodies in a way that strikes an appropriate balance between (1) recognising NSW's specific circumstances and objectives and (2) leveraging the expertise of national bodies and the potential benefits of integrated system planning across the NEM?

1.4 PURPOSE AND STRUCTURE OF THIS REPORT

This interim report sets out our draft recommendations for stakeholder feedback.

The draft recommendations are informed by submissions to the consultation paper and options paper, our meetings and workshops with stakeholders and our own analysis of the issues with the current arrangements and potential reforms to address those issues.

The remainder of the report is structured around three main themes:

- Clarifying, streamlining and coordinating responsibility for transmission planning in NSW (chapter 2).
- Improving the consistency and effectiveness of transmission planning reports (chapter 3).
- Enhancing engagement, transparency and governance of transmission planning decisions (chapter 4).

Each chapter sets out:

- the relevant features of the current arrangements for transmission planning in NSW and the identified issues with those current arrangements based on submissions to the consultation paper and options paper and our analysis and experience
- the options to address these issues that were set out in the options paper for consultation, and the feedback that we received on those options in submissions to the options paper, and
- our draft recommendations to address the identified issues with the current arrangements.

Appendices to this report contain:

- a summary of the options from the options paper that that are not included in the draft recommendations and the reasons for not recommending them (Appendix A), and
- tables of stakeholders who make submissions to the consultation paper and options paper or attended meetings or workshops with the review team on the consultation paper or options paper (Appendix B).

The relevant chapters of the report also address our proposed approach to prioritisation, staging and sequencing of the implementation of the recommendations.

We have grouped the draft recommendations into three proposed priorities for implementation:

- Immediate actions to accelerate planning and delivery of the New England REZ and other upcoming projects: to be implemented as soon as possible.
- Medium term actions to clarify roles and responsibilities and enhance engagement and transparency: to be implemented by 2026.
- Longer term actions to better coordinate transmission planning across NSW and improve governance: to be implemented by 2027 recognising that these changes will require significant regulatory reforms and associated governance and funding changes.

1.5 REQUEST FOR SUBMISSIONS AND NEXT STEPS

The draft recommendations set out in this report represent our draft positions and are provided for feedback. We welcome comments on these draft recommendations and will consider submissions and other feedback from stakeholders before finalising our recommendations to the Minister in our final report.

Stakeholders can provide submissions on this options paper by 25 July 2025 by emailing them to transmissionplanningreview@dcceew.nsw.gov.au.

We will publish submissions to the interim report on the project website. If any information contained in a submission is confidential, the person making the submission should clearly identify the confidential information, provide reasons why it is confidential and (where possible) provide a public version with the confidential information omitted. Submitters should also note that this work is being undertaken on behalf of the NSW Government Department of Climate Change, Energy, the Environment and Water (the Department). The Department may need to release information by law, for example to comply with the *Government Information (Public Access) Act 2009*.

In addition to written submissions, we intend to consult on this interim report through a public webinar and a series of meetings and workshops with affected parties.

We intend to hold an online webinar on the interim report on 22 July 2025. This webinar will be open to the public to make comments or ask questions on the interim report. Further details on the webinar and how to register will be published on the review website shortly.

The process and current timing for the remaining stages of the review are summarised below.

Table 1.1: Review timetable

Stage	Indicative timing
Interim Report published for 4 weeks public consultation	27 June 2025
Engagement on the Interim Report	Public online webinar on 22 July 2025 Written submissions due by 25 July 2025
Final Report delivered to the Minister for Energy	By 11 September 2025 (within 7 months of establishment of the review)

2. Clarifying, streamlining and coordinating responsibility for transmission planning in NSW

2.1 ISSUES WITH THE CURRENT ARRANGEMENTS

This section sets out the main issues we have identified with the allocation of roles and responsibilities for transmission planning in NSW under the current regulatory arrangements in the EII Act and EII Regulation and the NEL and NER as they apply in NSW.

The issues with the current arrangements set out in this report should not be taken as a criticism of the Roadmap or any of the bodies involved in transmission planning in NSW. Based on our consultation, we consider that:

- The objectives and key features of the Roadmap have strong support. The issues raised by stakeholders seek to improve how the Roadmap is implemented in practice to achieve its objectives, rather than materially alter the key foundations of the Roadmap.
- The Roadmap and EII Act were developed quickly for such a major reform and it was inevitable that there would be some issues with their practical application. This review provides an opportunity to reconsider aspects of the regulatory arrangements with the benefits of more time to consult widely on the issues and learn lessons from the initial Roadmap projects and similar reforms that have since occurred in other states.
- The Roadmap bodies are doing their best in the circumstances and are each committed to performing their functions in a way that promotes the objects of the EII Act. They are seeking to work together constructively and cooperatively despite challenges due to unclear, evolving and overlapping roles and regulatory arrangements and new issues that have emerged since the Roadmap was developed in 2020.

The issues with the current arrangements should also be viewed in the context of the broader national transmission planning arrangements which continue to have their own fundamental issues and challenges as observed in the box below. These challenges with timely planning and approval of major transmission projects under the NER were a key reason for the introduction of the Roadmap and EII Act and most of these challenges remain today.

Box 3: NER transmission planning regime

The national electricity transmission planning framework has undergone significant review and reform over the past five years. A number of reviews by the Australian Energy Market Commission (AEMC), Energy Security Board (ESB), Energy and Climate Change Ministerial Council (ECMC) and other bodies have identified challenges in the current regulatory approach. Some of these reviews have resulted in changes such as in the AEMC's Transmission Planning and Investment Review and the ECMC's response to the review of the ISP, but other more substantive proposed reforms were not adopted such as the ESB's work on Transmission Access Reform.

The challenges that have been identified with the NER arrangements for planning and funding large transmission projects include:

- its reliance on incentive-based regulation of very large transmission projects that face risks that are different to smaller business-as-usual projects

- limited incentives for Transmission Network Service Providers (TNSPs) to undertake non-network projects and a potential bias towards capex over opex
- limited incentives for timely delivery of projects
- concerns that the regulatory investment test and the related NER approval processes may not enable investments to be delivered in a sufficiently timely and coordinated manner
- the absence of a framework for contestable delivery of shared transmission network projects (other than under AEMO's declared network functions as in Victoria), and
- significant delays and cost increases to recent major transmission projects.

These challenges are widely acknowledged to create risks of delayed or inefficient investment needed to support large-scale renewable energy connection and achieve emissions reduction targets. The NSW Roadmap was developed in response to these identified challenges.

More recently, several stakeholders have also raised similar issues with the NER arrangements for distribution projects. This has led to projects in NSW and other states to develop an informal 'distribution ISP' and a rule change request by Energy Consumers Australia (ECA) regarding integrated distribution system planning. NSW Distribution Network Service Providers (DNSPs) have also been proposing greater use of the EII Act for distribution network projects.

While our review aims to improve aspects of the Roadmap framework, the underlying issues in the national transmission planning approach remain present. It is acknowledged that there is an ongoing national work program on the NER framework to consider more holistic and substantive changes to ensure it is also fit for purpose for the energy transition. This work includes the AEMC's upcoming ISP review due to be completed in 2027, which represents a continued commitment to improving the overarching national transmission planning approach.

2.1.1 Multiple bodies share responsibility for planning and approving transmission projects with risks of unclear accountabilities, inefficient outcomes and delays

Multiple bodies are responsible for transmission planning in NSW

As shown in Table 2.1, transmission planning in NSW involves numerous bodies with distinct but interconnected functions. A key issue identified in the Check-Up Review and confirmed through our analysis and consultation is that this arrangement creates complexity in coordination and accountability.

Table 2.1: Summary of the bodies involved in transmission planning in NSW

Body	Key transmission planning functions
NSW Energy Minister	The Minister declares new REZs, declares access schemes, can direct or authorise REZ network infrastructure projects (RNIPs) or priority transmission infrastructure projects (PTIPs).
EnergyCo	EnergyCo has been appointed as the Infrastructure Planner for the initial 5 REZs and can be appointed as the Infrastructure Planner for other projects or functions. It has extensive planning roles including planning and procuring RNIPs and PTIPs and making recommendations related to them to AEMO Services or the Minister, contracting with network operators for the delivery of RNIPs and PTIPs, administering access schemes and publishing the Network Infrastructure Strategy.

Body	Key transmission planning functions
Other Infrastructure Planners	Any other person can be appointed by the Minister as an Infrastructure Planner for a particular REZ, project or function.
AEMO Services	AEMO Services has been appointed as the Consumer Trustee. Its relevant functions include authorising RNIPs, setting access fees, publishing the IIO Report and providing advice to the Minister and EnergyCo. It also has a range of important functions that are not directly related to transmission planning, including running the Australian Government's Capacity Investment Scheme (CIS) and NSW Long Term Energy Service Agreement (LTESA) tenders for generation and storage projects.
AEMO	AEMO has several transmission planning functions under the NER including publishing the ISP and Electricity Statement of Opportunities (ESOO) and planning documents related to system strength and inertia. It also has roles under the NSW regime where it must be consulted by EnergyCo on certain issues and provides modelling resources to assist AEMO Services.
Energy Security Target Monitor	The Energy Security Target Monitor (ESTM) is appointed by the Minister. This role was originally performed by AEMO but was transferred to the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) in 2025. Its key function is preparing the ESTM Report. The ESTM is relevant to transmission planning because a target breach identified in an ESTM report is one of the triggers for a PTIP. The ESTM also has functions that are unrelated to transmission planning, with a number of other actions that could be taken in response to a target breach.[6]
Transgrid	Transgrid has multiple relevant roles under the NER including as the Jurisdictional Planning Body for NSW, a TNSP, the Primary TNSP for NSW, the coordinating network service provider for NSW, the System Strength Service Provider and Inertia Service Provider NSW. As a TNSP under the NER, it is subject to the network planning and connections arrangements under chapter 5 of the NER, including connecting generators, customers or other networks that seek to connect to its network and publishing a TAPR. Transgrid is also a network operator for RNIPs and PTIPs under the EII Act. Transgrid holds a transmission operator licence under the *Electricity Supply Act 1995* (NSW).
Other NSW TNSPs	Transgrid is not the only TNSP in NSW. Any person who owns, operates or controls a transmission system must register with AEMO as a network service provider under the NER. Directlink Transmission Company (part of the APA Goup) is a TNSP and owns and operates Directlink.[7] Ausgrid owns and operates both transmission and distribution assets and is both a TNSP and a DNSP. Directlink and Ausgrid are responsible for planning their networks and must publish a TAPR in relation to their transmission networks (Ausgrid can combine its TAPR and DAPR). ACEREZ owns and operates the Central West Orana (CWO) REZ network infrastructure project and is both a TNSP under the NER and a network operator under the EII Act.
Contestable network operators	Contestable network operators can be appointed under the EII Act, for example ACEREZ is the network operator for the CWO RNIP. These network operators have responsibilities for planning, owning, constructing, operating and maintaining their networks under agreements with EnergyCo and the NER.

6 For more information on the ESTM, see https://www.energy.nsw.gov.au/nsw-plans-and-progress/major-state-projects/electricity-infrastructure-roadmap/entities-delivering/target-monitor

7 Directlink is a 63 km interconnector between NSW and Queensland but is located entirely within NSW. See https://www.apa.com.au/operations-and-projects/electricity-transmission/electricity-interconnectors/directlink

Body	Key transmission planning functions
Distribution Network Service Providers	Distribution Network Service Providers are responsible for planning their distribution networks under the NER and can also be network operators under the EII Act, eg Ausgrid is the preferred network operator for the Hunter-Central Coast (HCC) RNIP. They also engage in joint planning with Transgrid and EnergyCo to enable effective planning of transmission networks. The three NSW DNSPs are Ausgrid, Essential Energy and Endeavour Energy.
AER	The AER is a regulator under the NER and EII Act and is responsible for setting the revenues and charges recoverable by network operators and making contribution determinations to recover Roadmap costs from DNSPs.
Independent Pricing and Regulatory Tribunal (IPART)	IPART is also a regulator under the EII Act with functions including publishing annual reports on the exercise of functions by Roadmap entities, undertaking performance audits of Roadmap entities and reviewing and recommending the RES Board Plan to the Minister for approval. It is also responsible for administering the transmission licencing regime in NSW.

The coordination between bodies involved in transmission planning across NSW requires significant collaborative effort to ensure there is alignment in planning outcomes. For projects planned under the NER, Transgrid fulfills its joint planning obligations through extensive engagement with DNSPs during its annual planning review and TAPR preparation. Similarly, AEMO undertakes extensive consultation with Transgrid, DNSPs, and EnergyCo throughout the ISP development process. Joint planning and coordination is currently more limited and informal for projects and planning reports under the EII Act.

Key bodies lack clear guidance on roles and responsibilities

EnergyCo, AEMO, AEMO Services and Transgrid have sought to work together in practice and have developed various informal coordination mechanisms to support joint planning and information sharing between bodies. We have observed that they have made significant progress in learning how to work together and apply what is still a relatively new framework. This collaborative approach should be encouraged and we hope it continues going forward.

There is some guidance material available for stakeholders to explain the respective roles of the various bodies and how they will perform their functions, but there is not a clear explanation of each party's role. For example:

- DCCEEW (or its predecessors) published several policy papers in 2020-2022 when the regulatory arrangements for the Roadmap were being developed,[8] but there are no comprehensive and up-to-date explanations of the current regulatory arrangements under the EII Act and EII Regulation.
- AEMO Services has published a Network Authorisation Process and Approach Paper that sets out the processes and approach it will adopt in performing its authorisation functions.[9]
- The AER has published guidelines that set out how it will exercise its revenue determination functions for contestable and non-contestable EII Act network projects.[10]

8 See www.energy.nsw.gov.au/nsw-plans-and-progress/major-state-projects/electricity-infrastructure-roadmap

9 Available at aemoservices.com.au/-/media/services/files/publications/authorisation-function/241203-december-network-authorisation-process-and-approach-paper.pdf?la=en

10 Available at www.aer.gov.au/about/strategic-initiatives/renewable-energy-zones/guidelines-nsw-rez

- EnergyCo published a draft version of Network Authorisation Guidelines in May 2022 that described at a very high-level the process EnergyCo will undertake in developing recommendations about RNIPs,[11] but a final version responding to issues raised in submissions was never published.
- IPART also prepares an annual report to the Minister. IPART's report for the 2021-22 financial year included a comprehensive overview of the Roadmap and the functions of the various entities. It noted that its report 'assembles dispersed materials including policy documents and information currently available on the NSW Government and various entities' websites to provide an overview of how the Roadmap is intended to work.'[12]

Overlapping roles create accountability gaps

The following examples illustrate areas where the boundaries between different parties' planning-related roles under the NER and EII Act are particularly challenging with a lack of clarity, overlaps or split accountability:

- **Multiple Infrastructure Planners |** Although EnergyCo has been appointed as Infrastructure Planner for the initial 5 REZs (Central West Orana (CWO), Hunter-Central Coast (HCC), New England, South West and Illawarra), the EII Act allows the Minister to appoint any person to be the Infrastructure Planner for other REZs, PTIPs or other functions.
- **Boundaries between the Infrastructure Planner's role and Transgrid's various roles |** The boundaries between Transgrid's roles and the Infrastructure Planner's roles are often unclear and can lead to overlap, gaps, inefficient outcomes and delays. Examples of areas of risks of overlap, gaps or uncertainty include responsibility for system strength planning in REZs, responsibility for planning projects that could become either an actionable ISP project or an RNIP or PTIP, network-to-network connection arrangements, preparation of planning reports, joint planning with DNSPs and coordination with other jurisdictions.
- **The complex process for planning and approving RNIPs |** Approval of a network operator for a RNIP requires decisions by the Minister (to declare the REZ and its intended network capacity), EnergyCo as Infrastructure Planner (to recommend the RNIP and network operator), AEMO Services as Consumer Trustee (to authorise the network operator to carry out the RNIP) and the AER as regulator (to make a revenue determination). Other approvals outside of the EII Act are also needed, for example decisions by IPART and the Minister if a new transmission licence is needed and environmental planning approvals. Different arrangements and approvals also apply depending on whether the project is authorised by AEMO Services or authorised or directed by the Minister. This can lead to delays and duplication or confusion regarding the respective roles of each party.
- **Boundaries between the Infrastructure Planner's roles and the Consumer Trustee's authorisation function|** An issue with the current process for planning and approving RNIPs is the timing and scope of AEMO Services' authorisation function and the interaction with the roles of EnergyCo and the AER. AEMO Services' authorisation provides a valuable check that a project is in the long-term financial interests of NSW electricity customers. This check is particularly important where a project recommended by EnergyCo has materially increased in size and/or cost since the benefits of the project were last assessed in the ISP or IIO Report. However, AEMO Services is currently required to undertake its authorisation decision at the very end of the planning process when it is too late for EnergyCo to make changes without creating major delays and significant sunk costs have already been incurred.

  The EII Act and EII Regulation also require AEMO Services to consider a broad range of issues in its authorisation decision, including a prescriptive approach to undertaking a cost-benefit assessment. Some of the legislative requirements for the authorisation process add important checks and balances, for example, assessing whether a project has net benefits for consumers. However, others risk duplicating work by

11 Available at www.energyco.nsw.gov.au/sites/default/files/2022-09/draft-guidelines-network-authorisation.pdf

12 Available at Annual-Report-Electricity-Infrastructure-Investment-Act--to-Minister-for-Energy-October-2022.PDF

EnergyCo, for example assessing whether to impose authorisation conditions related to Renewable Energy Sector (RES) Board Plan or First Nations Guideline requirements.

Stakeholder feedback on planning responsibilities

Stakeholder submissions highlighted significant concerns regarding the potential consequences of unclear roles and responsibilities among Roadmap entities.

Submissions to the consultation paper included:

- The Energy Users Association of Australia (EUAA) stated that 'the NSW Government has created the most confusing and overly complicated jurisdictional planning processes in the NEM.' It considered that the equivalent planning framework was much clearer with greater transparency in Queensland and that would also be the case once AEMO's current functions were transferred to VicGrid as is proposed in Victoria. It stated that in NSW 'the planning and coordination of multiple entities involved in the transition is difficult to engage with. Many stakeholders find it confusing to understand which entity is responsible and therefore accountable for each of the required tasks. Based on our extensive experience, the planning and coordination aspect of the roadmap is well below what we would consider to be best practice. As such, the NSW transition is costing more than it should with near zero transparency for consumers on the potential impacts on their electricity bills, creating an unknown tsunami of future network related costs that consumers are ill-prepared for.'
- Ausgrid stated that there is overlap between entities with transmission planning functions in NSW, creating tension and project delays.
- The Clean Energy Investor Group (CEIG) stated that the current NSW transmission planning framework involves multiple entities – Transgrid, EnergyCo, AEMO and AEMO Services – each with overlapping responsibilities, leading to inefficiencies and duplication of effort.
- Tilt Renewables highlighted the importance of defining the division of responsibilities between Roadmap entities to ensure accountability for transmission delivery. It observed that without a clear delineation of responsibility and accountability, uncertainty around delivery timelines could affect the grid, project connections, and ultimately investment certainty.
- Origin expressed similar concerns, pointing out that none of the new Roadmap entities is focused on delivering all relevant Roadmap activities, which has created uncertainty for project proponents.
- Nexa Advisory attributed transmission delays to the complex governance arrangements and allocation of responsibilities between Infrastructure Planner, Consumer Trustee and network operator functions – specifically by failing to adequately allocate responsibility and create positive obligations and accountability for on-time and on-budget delivery for transmission delivery proponents.

Almost all submissions to the options paper agreed that the current roles and responsibilities for planning in NSW were overly complex and confusing and should be clarified. For example:

- Essential Energy considered that 'the current allocation of transmission planning responsibilities across multiple entities, can lead to duplication, confusion and inefficiencies' and that '[g]reater clarity around each entity's scope and accountabilities in planning the NSW electricity system is needed to support timely and effective decision making to facilitate investment.'
- Transgrid acknowledged the need to clarify the roles and responsibilities of the parties involved in transmission planning and stated that '[e]ach of the current participants plays a significant role, but there is a clear opportunity to streamline overlapping responsibilities and remove unnecessary duplication, which imposes cost burdens on consumers.'
- AEMO stated that 'A key priority for AEMO in this consultation is the opportunity to clarify roles and responsibilities, thereby enhancing the efficiency of AEMO's engagement with the NSW framework.'

- Verta Energy stated that 'There is tension between the roles of the respective parties which is causing inevitable duplication and inconsistencies across the various planning bodies and the reports they produce. The differing objectives, obligations and timeframes across regulatory frameworks are likely to lead to different recommendations and outcomes. Additionally, the complexity of planning processes creates confusion and could lead to inefficient expenditure across the industry.'
- The CEIG stated that the current framework where transmission planning is dispersed across 4 entities results in 'an overly complex landscape that investors must navigate to determine whether, when and how their projects can connect to the grid. This confusion erodes investor confidence and can delay or deter investment in renewable generation.'
- The Clean Energy Council (CEC) agreed with the underlying problem definition that the NSW transmission planning frameworks are overly complex and considered that 'the key risk arising from this complexity is the potential for delay in the development of critical new network infrastructure, which will in turn delay the connection and energisation of new generation and energy storage.'
- Rainforest Reserves Australia stated that there is currently a 'fragmented governance structure, enabling regulatory duplication, blurred accountability and jurisdictional arbitrage.'

2.1.2 The introduction of contestability further complicates planning arrangements and creates potential conflicts of interest

Contestability creates benefits but adds regulatory complexity

The EII Act and EII Regulation have introduced the option of contestable procurement of ownership, operation and maintenance of transmission projects in NSW. The review's Terms of Reference expressly excludes from our scope consideration of whether contestability should be removed as an option in NSW. However, as explained below, contestability further complicates transmission planning arrangements in NSW and raises questions about whether the current allocation of some roles and responsibilities remains appropriate.

Contestability can play a valuable role in the energy transition, particularly considering the substantial network investment required in NSW over the next decade to achieve the government's emissions, renewable generation, storage, emissions reduction and reliability targets. These issues mean that NSW requires unprecedented levels of network investment and a single transmission network provider is unlikely to be able to deliver it all in the required timeframes. Transgrid is currently delivering some extremely large projects, including Energy Connect and HumeLink, which some stakeholders consider means it is difficult to get Transgrid to prioritise other smaller but critical projects. Several stakeholders also considered that Transgrid's private ownership, objectives and incentives may not be aligned with the broader public interest objectives of the Roadmap.

Although it may have benefits, the introduction of contestability significantly complicates the allocation of responsibilities and the regulatory arrangements that are required to effectively plan and operate the transmission system, connect generators, customers and other networks to it, and maintain a reliable, safe and secure electricity system.

Transgrid performs multiple roles, some of which overlap with EnergyCo's functions

Transgrid currently performs multiple roles under the NER and EII Act as explained in the table below. These roles were allocated to Transgrid prior to the introduction of contestability, and many of them were originally allocated to Transgrid when it was a NSW State Owned Corporation prior to privatisation in 2015. Most importantly for this review, Transgrid is the Jurisdictional Planning Body for NSW under the NER. Any new contestable networks also need to connect to Transgrid's existing transmission network. Transgrid is also

responsible for undertaking regulatory investment test for transmission (RIT-T) for transmission network projects under the NER, including assessing and procuring non-network options where they are a more efficient alternative. Transgrid is also the System Strength Service Provider (SSSP) and Inertia Service Provider for NSW. Transgrid's TAPR is a key planning document that drives transmission planning in NSW.

Table 2.2: Transgrid's planning-related roles under the NER

Jurisdictional role	Key responsibilities	Transgrid's role in NSW
Jurisdictional Planning Body (JPB)	A JPB performs several specific functions under the NER. It must provide information and assist AEMO with the preparation of its ESOO reports, undertake preparatory activities for REZ design reports where required by the ISP and cooperate with AEMO for joint planning purposes. Representatives of the JPB must also consult with AEMO on proposed new or modified transmission lines or certain other matters that may have a material inter-network impact.	The relevant Minister administering energy laws in a participating jurisdiction nominates the JPB for the participating jurisdiction under the NER. Transgrid has been appointed by the NSW Minister as the JPB for NSW.
System Strength Service Provider (SSSP)	A SSSP must procure, register, and make system strength services available to AEMO in accordance with applicable specifications, provide information and updates relating to those services, and comply immediately with AEMO's instructions. SSSPs recover system strength charges from users, publish information to enable potential providers of system strength services to develop non-network options and report proposed system strength related activities and investments in their TAPRs.	Transgrid is the SSSP for the NSW NEM region under the NER because it is the JPB and Co-ordinating Network Service Provider for NSW.
Inertia Service Provider	Inertia Service Providers must make inertia network services available to AEMO in accordance with applicable specifications, provide information and updates relating to those services, and comply with AEMO's instructions. Inertia Service Providers must report activities and investments in their TAPRs.	Transgrid is the Inertia Service Provider for the NSW inertia sub-network under the NER because it is the JPB for NSW.
Co-ordinating Network Service Provider (CNSP)	The CNSP allocates the aggregate annual revenue requirement for regional transmission services, calculates and publishes modified load export charges (including issuing bills to recover those charges from other CNSPs in other jurisdictions, and TNSPs within the relevant jurisdiction), pays modified load export charges payable to other CNSPs, recovers negative settlements residue from TNSPs within the region, and sets system strength unit prices for the SSSP. CNSPs also determine annual financial transfers between TNSPs for prescribed transmission services collected on behalf of other TNSPs within NSW.	Transgrid has been appointed as the CNSP in NSW.

Jurisdictional role	Key responsibilities	Transgrid's role in NSW
Primary Transmission Network Service Provider (PTNSP)	The PTNSP provides non-contestable transmission services related to connections to transmission networks, including the preparation the functional specifications for identified user shared assets (IUSA) or designated network assets (DNA) identified as part of the connection enquiry process, and enters into network operating agreements for the control, operation and maintenance of IUSAs and DNAs. The PTNSP is registered as the TNSP in respect of any DNA it operates and controls, and functions to calculate, distribute or recover settlement residues that accrue on DNAs.	Transgrid is the PTNSP in NSW as the TNSP that operates the largest transmission network in the region.
System operator functions	The System Operator functions include communicating and co-ordinating activities such as outages, fault identification, switching activities relating to high voltage networks that could affect the transmission network, implementing load shedding and system restart processes with distribution system operators connected to its transmission. Where there is a communications breakdown between AEMO and control centres, the system operator is able to issue instructions and directions as necessary to restore or maintain power system security in the transmission network.	AEMO has appointed Transgrid as the System Operator in NSW under clause 4.3.3 of the NER to perform certain delegated functions in accordance with a delegation instrument.

Several of these roles overlap with EnergyCo's role as the Infrastructure Planner under the EII Act. There is also a risk of overlap, gaps or confusion in relation to the boundaries of the roles of Transgrid under the NER and contestable network operators and EnergyCo under the EII Act. For example, as Jurisdictional Planning Body, SSSP and Inertia Service Provider, Transgrid is responsible under the NER for planning transmission network projects, system strength and inertia across the entire NSW state or NEM region. However, in practice, EnergyCo planned and procured network and system strength infrastructure for the CWO REZ outside of the NER planning framework in its role as Infrastructure Planner for the CWO REZ under the EII Act.

Several stakeholders have also raised concerns that Transgrid faces a conflict of interest in relation to some of these roles due to the introduction of contestability. Stakeholders have also said that Transgrid's control over critical information such as operating procedures and technical standards that are not currently published is also an impediment to competition. It is important to note, however, that the RIT-T process and ring-fencing rules under the NER are designed to mitigate the risk of a TNSP such as Transgrid having a conflict of interest due to contestability or a potential bias towards its own network solutions over third party network or non-network options. The RIT-T requires Transgrid to consider all credible network options, including non-network options. The AER's Ring Fencing Guidelines require Transgrid to provide any contestable services through a ring-fenced subsidiary (Lumea).

While the RIT-T and ring-fencing requirements may be effective in ensuring all credible options are considered and assessed on a level playing field and stakeholders are consulted, the RIT-T involves a very lengthy process. NSW requires unprecedented levels of transmission investment and many stakeholders consider that there is a need to accelerate the planning and delivery of strategic projects. It will be more challenging to accelerate key planning decisions where they are made by a privately owned business that is also competing to provide the projects. There is likely to be greater scope to accelerate planning decisions where they are made by an

independent planner that stakeholders have confidence is free from conflicts of interest or inefficient incentives.

Some changes have been made to address contestability challenges

The EII Regulation and the new chapter 9A of the NER address some of the planning challenges introduced by contestability. These changes were necessary to address the awarding of the CWO RNIP to ACEREZ as a new contestable TNSP in NSW that will be responsible for connecting generators to its network, providing system strength services and undertaking certain system control and planning functions within its network. For example, chapter 9A makes significant amendments to the generator connection process and the scope of contestable network operator's planning reports and extends joint planning arrangements to include EnergyCo.

Victoria provides an alternative model for contestable transmission

The only other jurisdiction in the NEM with contestability for transmission projects is Victoria. In Victoria, the Jurisdictional Planning Body role has always been undertaken by an independent organisation since the introduction of privatisation and contestability in the 1990s. AEMO currently undertakes this role and the roles of SSSP and Inertia Service Provider in Victoria, with these roles expected to be transferred to VicGrid soon.[13] AEMO does not own or operate transmission network assets, but acts as an independent planner and procurer for the Victorian transmission network. Other TNSPs in Victoria have narrower roles that are more focussed on owning, operating and maintaining their networks and undertaking minor augmentations or projects that are not able to be separated from their existing networks.

NSW lacks clear criteria for contestability decisions

The EII Act and the AER's revenue determination guidelines permit three different regulatory pathways for RNIPs and PTIPs under the EII Act:

- **Contestable:** The entire project is contestable, with a contestable network operator appointed who is responsible for asset design and build, financing, operations and maintenance. The AER sets the network operator's allowed revenues based on the outcomes of the contestable procurement process, provided it is satisfied that there was a genuine and competitive assessment process. The CWO RNIP is an example of this approach, where ACEREZ was appointed as the network operator.
- **Non-contestable:** The network operator is appointed by the Infrastructure Planner following a non-contestable procurement process. The AER sets the network operator's allowed revenues based on the standard NER Chapter 6A rules with minor modifications. A non-contestable process can also apply where there is a limited form of competition between the relevant incumbent network operators in the area. For example, Ausgrid was appointed as the preferred network operator for the HCC RNIP on a non-contestable basis following proposals from Ausgrid and Transgrid.
- **Non-contestable with contestable elements:** The network operator is appointed by the Infrastructure Planner following a non-contestable procurement process but some elements of the project are procured by the Infrastructure Planner or network operator under the contestable regulatory framework. The Hunter Transmission Project and Waratah Super Battery (WSB) PTIPs are examples of this hybrid approach – see Box 12 later in this report for a summary of the WSB project.

Unlike in Victoria and several overseas jurisdictions where contestability has been introduced, the EII Act and EII Regulation also do not include any tests or criteria for what projects should be planned and procured on a

[13] The Victorian government introduced the *National Electricity (Victoria) Amendment (Stage 2 VicGrid) Bill 2025* on 19 June 2025. If enacted, this Bill will transfer AEMO's current Victorian transmission network planning responsibilities from AEMO to VicGrid. See https://www.premier.vic.gov.au/victoria-delivers-certainty-and-fairness-renewables and the Bill for more information.

contestable or non-contestable basis (or the hybrid non-contestable approach with contestable elements). The Victorian arrangements set out clear tests for which projects are contestable.[14]

EnergyCo published draft contestability criteria as set out in the box below, but these were never finalised.

Box 4: EnergyCo's draft contestability criteria

EnergyCo published draft Network Authorisation Guidelines but never published a final version of these guidelines. The draft guidelines stated:[15]

Assessment and recommendation of Network Operator procurement is likely to include whether a contestable process is feasible and, if not, how the incumbent Network Operator will be recommended. The Infrastructure Planner may also separate REZ network infrastructure into projects with both contestably procured and incumbent Network Operators.

The Infrastructure Planner may conduct market sounding, Expression of Interest processes or similar tests for the feasibility of contestable Network Operator selection. This may also occur at multiple stages of network design as the scope and interest of providers is refined.

Infrastructure Planner consideration of contestable process feasibility will include:

- *whether the required network infrastructure is readily separable from the existing transmission system, distribution systems or other REZ network infrastructure projects;*
- *whether there is a sufficient market of appropriately qualified and resourced potential providers, for example, to create the competitive tension required to drive efficient bids;*
- *whether the incumbent Network Service Provider can deliver the REZ network infrastructure project within the required timeframe and within reasonable cost estimates;*
- *the cost of the network infrastructure project relative to the cost of running a contestable procurement process (particularly in the case of relatively low value projects); and*
- *any timing constraints that a contestable process may place on project delivery timeframes.*

Stakeholder feedback on transmission contestability in NSW

Submissions to the consultation paper and options paper on the impact of the introduction of contestability on the planning framework included:

- The Justice and Equite Centre's (JEC) submission to the consultation paper recommended identifying instances where Transgrid may be the only provider of a service and developing strategies to reduce its capacity to leverage these situations to the detriment of NSW consumers. JEC suggested substantially expanding contestability in the transmission space.

[14] See clause 8.11.6 of the NER, noting that the appropriate contestability tests in Victoria are currently being reviewed by the Victorian government.

[15] See EnergyCo, *draft Network Authorisation Guidelines*, May 2022, p 14, available at www.energyco.nsw.gov.au/sites/default/files/2022-09/draft-guidelines-network-authorisation.pdf

- Nexa Advisory's submissions to the consultation paper and options paper considered that monopoly TNSPs have weak incentives to minimise capital costs, ensure timely energisation, and maximise opportunities for innovation and the adoption of new technologies and methods. It expressed support for making all transmission projects in NSW contestable and open to market competition to better manage risk and align incentives for timely infrastructure delivery.
- Ausgrid's submission to the consultation paper stated that jurisdictional planning functions should not sit with a commercial entity due to the conflicts of interest it creates.
- Endeavour Energy's submission to the options paper stated 'We agree with the main conclusion that the creation of transmission contestability via the Electricity Infrastructure Investment Act and Regulation (EII Act and EII Regulation) alongside the National Electricity Law and Rules (NER and NER) has created complexity and potential conflicts of interest in existing transmission planning roles and responsibilities. We consider that the scale of new investment is too great for one party to undertake, and that contestability has the potential to deliver major projects faster and at a reduced cost for NSW customers. However, we agree that the respective roles and responsibilities of the multiple bodies involved in the planning pathway could be clarified, the process streamlined and greater transparency and independence in decision making established.'
- BlueScope Steel considered that Transgrid faces a conflict of interest and an absence of sufficiently robust regulatory obligations in relation to some of its roles due to the introduction of contestability, and considered that if TransGrid wishes to expand its network and participate in delivery of new projects then further consideration should be given to whether it should retain a planning role.
- The EUAA stated that it agreed with the options paper's description that contestability may seem attractive, but it could dramatically increase complexity, and the EUAA had concerns that there are no clear principles to decide which projects should be contestable, the absence of which makes it difficult to form an objective opinion on the potential benefits of contestability.
- ACEN's submission to the options paper stated that it strongly supported contestability but considered that '[o]ne aspect of the contestability framework that could be improved is in providing greater clarity on when it should be applied… with guidance on which transmission projects should be delivered through a contestable procurement process and which are better delivered by the incumbent TNSP.'

2.1.3 Planning for system strength services is complex with a lack of clarity of responsibilities within contestable REZs and coordination challenges outside of REZs

Multiple frameworks create coordination challenges for system strength planning

The arrangements for planning traditional transmission network projects in NSW are complex, with accountabilities spread across multiple parties as described above. This complexity increases for system security services such as system strength or inertia.

These services can currently be planned and procured by Transgrid as the SSSP and Inertia Service Provider for NSW under the NER, or by the Infrastructure Planner as a PTIP or part of an RNIP under the EII Act. There are no tests or criteria for when each arrangement should apply. In the absence of strong coordination between the relevant planning bodies under each regime, including EnergyCo, Transgrid and AEMO, there is a risk of increased costs or system security risks.

Box 5: Essential system services frameworks in the NER

Essential system services planning under the NER

Under the essential system services frameworks in the NER, AEMO conducts an annual assessment of inertia and system strength requirements for each NEM jurisdiction, publishing the outcomes in annual System Strength and Inertia Reports.

AEMO also publishes various planning guidelines and methodologies for these services, including System Strength Impact Assessment Guidelines, System Strength Requirements Methodology, and Inertia Requirements Methodology.

TNSPs designated as System Strength Service Providers or Inertia Service Providers (defined below) in each region have three years from AEMO's publication of requirements to deliver and maintain any forecast inertia or system strength services.

Like other network standards, obligations to deliver these services are integrated into existing TNSP annual planning processes, which includes TAPRs. Where applicable, TNSPs will apply the RIT-T to decide which investment should be pursued.

If requirements change within this three-year period, AEMO can declare and procure shortfall services through its Network Support and Control Ancillary Services (NSCAS) last resort functions. This ensures that minimum levels specified in the System Strength and Inertia Reports can be met in the near term. To implement this process, system strength and inertia shortfalls are also declared in AEMO's annual NSCAS Report.

The NER system security planning framework integrates with the ISP framework. The ISP must plan to achieve power system security needs as determined under the NER system security planning framework. System security reports serve as inputs to the ISP and are included among the deliverables the ISP model aims to achieve. However, since system security requirements can be urgent, the framework allows projects to proceed without waiting for the ISP to catch up. If AEMO includes a system strength project in the ISP as an actionable ISP project, a shortened RIT-T process applies.

Essential system service providers under the NER

The NER defines a **System Strength Service Provider** for a region as the TNSP for the region or, if there is more than one TNSP, the Jurisdictional Planning Body for the region if that entity is also a TNSP, or otherwise, the CNSP for the region.[16]

The NER defines an **Inertia Service Provider** as the TNSP for the relevant inertia sub-network or, if there is more than one TNSP for the inertia sub-network, the Jurisdictional Planning Body for the participating jurisdiction in which the inertia sub-network is located.[17]

Transgrid performs both these roles in NSW.

REZs have adopted inconsistent approaches to system strength provision

Different approaches have been adopted in the three REZs that have so far been planned under the EII Act.

For the SW REZ and HCC REZ, system strength services will be provided under the NER. This means that generators can elect to self-remediate their system strength impact, or use system strength services provided by

16 Where there is more than one TNSP within a region, a CNSP is appointed by the multiple TNSPs under the NER to undertake a number of functions associated with TNSP cost recovery.

17 AEMO determines the boundaries of the inertia sub-networks under the NER. They currently match the NEM regions.

Transgrid as the SSSP and pay Transgrid's system strength charges under the NER. System strength services are planned by AEMO and Transgrid under the NER. AEMO's roles include declaring system strength nodes and publishing system strength requirements and methodologies. Transgrid plans and procures system strength services consistently with AEMO's requirements. As part of this process, Transgrid is required to undertake a RIT-T to assess the most efficient way of providing system strength services, including considering non-network options.

For the CWO REZ, EnergyCo decided to include the provision of centralised system strength services as part of the contestable CWO RNIP. The network operator of the CWO RNIP, ACEREZ, will provide system strength services to every generator connected to its network. Generators cannot self-remediate their system strength impact or use system strength services provided by Transgrid outside the REZ. AEMO is unable to declare system strength nodes in ACEREZ's network and has no formal role in setting system strength requirements or methodologies, although it was consulted by EnergyCo. AEMO Services' authorisation of the CWO RNIP sets out the amount of system strength that is required to be provided by ACEREZ, as recommended by EnergyCo. EnergyCo and ACEREZ undertook procurement of synchronous condensers to provide those services. Non-network alternatives were not used. Generators do not pay the NER system strength charge and instead system strength costs are recovered from connecting generators through access fees. These arrangements are made even more complex by the fact that ACEREZ is only required to provide a set initial amount of system strength, and any additional system strength that is required in the future is intended to be provided by Transgrid as the SSSP.

Current frameworks create gaps in contestable REZ system strength planning

The use of the EII Act regime to provide system strength services and the introduction of contestable provision of system strength services has created a number of regulatory gaps and barriers to efficient system strength planning as set out in Box 6 below.

Box 6: Issues with the application of the current NER system strength regime to REZs

- AEMO has a range of functions under the NER system strength regime. However, its functions and powers only apply to the SSSP's network, ie Transgrid's network. AEMO cannot undertake its NER system strength roles in contestable REZs. For example, it cannot:
  - declare system strength nodes and determine system strength requirements for a network other than the SSSP's network, eg contestable RNIPs or any other network that is not part of Transgrid's transmission network (non-SSSP networks)
  - set minimum and efficient levels of system strength on a non-SSSP network
  - require system strength providers to provide information and obtain AEMO's approval in relation to relevant matters, for example technical specifications, performance standards and arrangements for enabling system strength services
  - enable system strength services provided by RNIP network operators.
- The NER obligations to plan, design and operate a transmission network to meet the minimum and efficient levels of system strength only apply to Transgrid as the SSSP. There are no equivalent obligations under the NER or EII Act to plan, procure or provide system strength that apply to any other person or network, eg in contestable RNIPs.
- EnergyCo has planned and procured system strength services in contestable REZs such as the CWO REZ, but has needed to do so as part of the EII Act's RNIP provisions and entirely outside of the NER framework. There is no mechanism under the EII Act for the Minister or EnergyCo to assign an appropriate party equivalent responsibilities to the SSSP within a non-SSSP

network and as noted above, AEMO has no powers in relation to such networks. As a result, within a non-SSSP network such as a contestable RNIP there is:

  - no regulatory standard for how minimum and efficient levels of system strength are set and planned
  - no regulatory obligations on any person to plan, procure or provide system strength services
  - no formal role for AEMO in system strength planning other than a general obligation on EnergyCo to consult with AEMO when developing its RNIP recommendations
  - no obligation to make system strength services available to AEMO
  - no mechanism for AEMO to enable system strength services
  - no clear mechanism for AEMO to recover its costs
  - no clear mechanism for any party who is responsible for providing system strength to recover its costs, unless that party is an RNIP or PTIP network operator and recovers its costs via its AER revenue determination for the project.
- There is no clarity on how AEMO and Transgrid should account for system strength provided by a contestable network operator in a REZ when setting the minimum and efficient levels of system strength for the overall NSW NEM region. Without some mechanism to do so, Transgrid would be required to provide more system strength services outside REZs than is necessary, which would lead to increased costs to consumers. In practice, Transgrid has adjusted the amount of system strength it plans to procure for the rest of NSW to account for the synchronous condensers provided by ACEREZ in the CWO REZ, which is a sensible approach but there does not appear to be a clear basis under the NER for making such an adjustment.
- There are insufficient mechanisms for coordination between all the relevant parties to avoid risks of gaps or overlaps, including AEMO, EnergyCo as Infrastructure Planner, Transgrid as SSSP for NSW, and contestable network operators.

Distribution networks face barriers to providing system strength solutions

The NER system strength regime is also largely based around system strength requirements being provided on transmission networks. For example, system strength nodes can only be declared on the SSSP's network. The NSW DNSPs consider that this limits their ability to provide system strength solutions using their distribution networks where it may be more efficient than a transmission network solution.

Lengthy processes and procurement challenges risk delaying system strength delivery

The process for planning system strength under the NER has also taken considerable time. Transgrid's RIT-T process for meeting the initial system strength requirements in NSW[18] is progressing at a similar or faster speed to other NEM TNSPs but the overall planning and procurement process will take several years to complete. Key milestones are:

- October 2021: The AEMC makes new rules requiring SSSPs to plan and provide system strength services. The rules require each SSSP to use reasonable endeavours to plan, design, maintain and operate its network to meet the meet the system strength standards by 2 December 2025.

[18] See https://www.transgrid.com.au/projects-innovation/meeting-system-strength-requirements-in-nsw/

- December 2022: AEMO publishes its 2022 System Strength Report identifying a forecast shortfall in system strength from 1 July 2025 on due to the expected closure of Eraring Power Station.
- December 2022: Transgrid publishes its RIT-T Project Specification Consultation Report (PSCR).
- June 2024: Transgrid publishes its RIT-T Project Assessment Draft Report (PADR) and a supplementary report in October 2024.
- Expected July 2025, TBC: Transgrid is yet to complete the RIT-T process by publishing its Project Assessment Conclusions Report and has indicated that this report is expected to be published in July 2025.
- Expected Q1 2026 Transgrid is yet to make a contingent project application (CPA) to the AER for funding for the provision of these system strength services. This cannot occur until the RIT-T process is completed. Transgrid expects the CPA to be submitted in quarter 1 2026. As discussed below, the procurement, delivery and commissioning process for system strength services usually does not commence until after the CPA is approved by the AER.

These lengthy planning and regulatory processes can be particularly problematic when they involve procurement of long-lead time items. Synchronous condensers are in very high demand internationally and there can be a lead time of years from when an order is placed to when they are commissioned. This can create significant challenges for planning and delivering these projects under both the NER and the EII Act, particularly because both regimes generally only provide funding to the network operator once all relevant regulatory approvals are obtained. If a TNSP waits for the planning and approval of the entire project before placing orders for long-lead time equipment, the delivery of the project is likely to be materially delayed.

Transgrid's PADR states that the earliest that the planned synchronous condensers can be commissioned is 2028/29 if progressed under the NER, ie well after the 2 December 2025 commencement date of the new system strength standards. Transgrid intends to rely on non-network options in the interim. The PADR states that the synchronous condensers could potentially be accelerated to 2027/28 if procurement commenced prior to the conclusion of the RIT-T and CPA processes.[19]

In 2024, the NSW Government introduced amendments to the EII Act to expand the PTIP provisions to cover system security services, including system strength. In February 2025, Transgrid stated publicly that it is working with the NSW Government on an accelerated procurement of synchronous condensers.

Recent changes have been made to the NER to attempt to partly address the challenges with long-lead time items through the introduction of a process for approval of early works, including staged RIT-Ts and AER contingent project approvals for actionable ISP projects. Amendments to the NER at the time the actionable ISP was implemented also streamlined the RIT-T process for actionable ISP projects by removing the PSCR stage for those projects. However, the current NSW system strength projects are not actionable ISP projects so are not subject to these rules and need to comply with the standard RIT-T and AER approval processes.

Similar 'early works' arrangements have not been used to date under the EII Act and a similar approach may not be possible under the current regulatory arrangements. There is some scope for EnergyCo or government to fund some of these activities outside of the EII Act through financial mechanisms such as the NSW government's Transmission Acceleration Facility or the Commonwealth government's Rewiring the Nation fund.

Stakeholder feedback on system strength

Numerous submissions to the options paper agreed with our comments in the consultation paper that the current planning arrangements for system strength were highly complex and could be improved, including submissions from Essential Energy, Verta Energy, the Australian Energy Council, Snowy Hydro, Akaysha

[19] See www.transgrid.com.au/media/fo0maqsh/2406-transgrid_meeting-system-strength-requirements-in-nsw-padr.pdf

Energy, Iberdrola Australia, Origin Energy, the CEIG, Nexa Advisory, the CEC and ACEN. While views differed on the appropriate solutions, almost all submitters who addressed this issue considered that the current arrangements should be reviewed to improve clarity and increase coordination between the NER and EII Act planning frameworks and the various parties involved in planning for system strength.

2.1.4 There is insufficient clarity on how the NSW and national transmission planning regimes work together to deliver optimal outcomes for consumers

Dual planning regimes create complexity and potential inefficiencies

The EII Act created an alternative pathway for planning and approving transmission projects in NSW. Projects can continue to be planned, approved and delivered under the national regulatory regime in the NEL and NER as was the case prior to the introduction of the Roadmap. Alternatively, projects can be planned, approved and delivered under the EII Act if they meet the tests to be a RNIP or PTIP under the EII Act.

Table 2.3: NSW actionable ISP projects, PTIPs and RNIPs

Project	Status
Energy Connect	Actionable ISP project in 2020 ISP. Being delivered by Transgrid and ElectraNet under NER
VNI West	Actionable ISP project in 2022 ISP, confirmed in 2024 ISP. Being delivered by AEMO and Transgrid under NER
HumeLink	Actionable ISP project in 2022 ISP, confirmed in 2024 ISP. Being delivered by Transgrid under NER
Waratah Super Battery	Planned by EnergyCo as a PTIP under EII Act. The Minister has directed Transgrid to carry out the project as a PTIP
Hunter Transmission Project	Originally an actionable ISP project in 2022 ISP (Sydney Ring North), changed to NSW project in 2024 ISP. Being planned by EnergyCo as a PTIP, with input from Transgrid. Commitment Deed signed with Transgrid as network operator
CWO REZ	Originally an actionable ISP project in 2020 ISP, changed to a NSW project in 2022 ISP. Being planned by EnergyCo as an RNIP. Project Deed signed with ACEREZ as network operator and authorised by AEMO Services as an RNIP
Hunter Central-Coast REZ	NSW project in 2024 ISP. Being planned by EnergyCo as an RNIP. Commitment Deed signed with Ausgrid as network operator and authorised by AEMO Services as an RNIP
Sydney Ring South	Actionable ISP project in 2022 ISP, confirmed in 2024 ISP. Currently being planned by Transgrid under NER, but the 2023 NIS states that the project may be delivered under the NER or the EII Act.
New England REZ	NSW project in 2022 and 2024 ISP. Being planned by EnergyCo as an RNIP
QNI Connect	Future ISP project in 2022, actionable ISP project in 2024 ISP. Being planned by Transgrid and Powerlink under NER

Project	Status
Illawarra REZ	No RNIPs, PTIPs or ISP projects are currently being planned. The NSW government and EnergyCo recently announced plans to develop an 'urban renewable energy zone' involving distribution network, battery and CER solutions.[20]

This creates two very different regimes for planning transmission projects in NSW. Each regime has materially different arrangements in relation to how the projects are planned, procured and approved. Different planning reports also apply under each regime.

The process for planning and approving network projects is further complicated by different regulatory requirements and approval processes applying to different types of projects. For example, different planning and approval requirements apply to actionable ISP projects under the NER, RNIPs under the EII Act, PTIPs under the EII Act, other transmission network projects under the NER, system security projects progressed under the NER, and distribution projects that could be an alternative to transmission projects and could be approved under either the EII Act or NER. The EII Act further complicates these arrangements by having different processes and approval arrangements for RNIPs and PTIPs depending on whether they are authorised by AEMO Services, authorised by the Minister or directed by the Minister.

Cost recovery arrangements vary significantly between planning frameworks

The choice of applicable regime has significant implications for the form and level of regulatory oversight and which customers pay for the costs of the project. This creates a risk of confusion, inconsistency, duplication of work, forum shopping and inefficient outcomes.

Box 7: Cost recovery arrangements under the NER and EII Act

The costs of transmission projects that are planned and delivered under the NER are recovered by Transgrid through transmission use of system charges. These charges are payable by transmission-connected customers and distributors, and passed on to distribution-connected customers through distribution and retail charges. As a result, all electricity customers in NSW and the ACT pay a portion of these charges. The NER regulates the structure of transmission charges to create a degree of cost-reflectivity and locational signals. Where augmentations to the shared transmission network are required to enable a generator to connect, the costs are generally recovered from the relevant generator rather than customers.

The costs of projects that are planned and delivered under the EII Act are recovered via the Scheme Financial Vehicle (SFV) from NSW distributors and passed on to NSW distribution-connected customers by their retailers. Transmission-connected customers, ACT customers and certain exempted large customers do not pay any charges for EII Act projects. Costs can only be recovered from generators if the project is in a REZ, the Minister has declared an access scheme and the Consumer Trustee has required generators to pay a portion of the costs through access fees.

Different cost recovery arrangements also apply if distribution network projects proceed under the NER (where only the customers of the relevant DNSP pay for the project) or the EII Act (where customers of all three NSW DNSPs pay).

For system strength projects, the structure of charges and the allocation of costs between generators and customers varies under the NER and EII Act.

[20] See https://www.energyco.nsw.gov.au/news/government-engages-community-plan-illawarra-renewable-energy-zone

While changes to cost recovery arrangements are not within the scope of this review, these differences inform the problem definition and the need for clear tests or principles to determine which projects should be planned under each framework given the significant impact that decision can have on some customers. We are also mindful of the inefficient and inequitable outcomes that can arise from the current cost recovery arrangements due to the disproportionate share of the costs that are recovered from small customers and the impact this can have on social licence for the entire Roadmap and energy transition as noted in the Justice and Equity Centre's submission.

Current frameworks lack clear criteria for pathway selection

There is currently not a clear test or criteria for which projects should be planned under each regime. All projects could be planned under the NER. Alternatively, projects can proceed under the EII Act if they meet the EII Act's definition for an RNIP or PTIP and have been recommended by EnergyCo and authorised or directed by AEMO Services or the Minister. The scope of the RNIP and PTIP tests is relatively broad and has grown since the Roadmap was first introduced. There is significant discretion for the Minister and EnergyCo to determine which projects become RNIPs or PTIPs through the scope of the REZ Declarations and the Infrastructure Planner's decisions regarding which projects to recommend.

Box 8: REZ network infrastructure projects and priority transmission infrastructure projects

REZ network infrastructure projects (RNIPs) are defined in the EII Act as network infrastructure that:

- forms part of a renewable energy zone, and
- consists of network infrastructure prescribed by regulations.[21]

The EII Act defines renewable energy zones as the geographical area of the State and the infrastructure specified in a declaration by the Minister under section 19 of the EII Act.

A REZ declaration made by the Minister sets out the intended network capacity (size), geographical area (location) and infrastructure that will make up the REZ. This enables and sets the scope of key legislative functions under the Act, including access schemes and REZ network options.

The Minister may make a declaration of a REZ on the Minister's own initiative, or on the application of the Consumer Trustee or another person. The Minister can also amend declarations during planning and development to adjust network capacity and specified infrastructure.

Five REZs have been declared to date: Central West Orana, New England, Hunter-Central Coast, South West, and Illawarra.

Priority transmission infrastructure projects (PTIPs) are defined in the EII Act as transmission infrastructure projects located in New South Wales and which are identified in (or form part of

[21] Under section 17 of the EII Regulations, classes of network infrastructure include transmission and distribution assets within the meaning of the NER, network infrastructure not owned by a network operator but used to provide network services within the meaning of the NER, or infrastructure that enables continuous and safe power system operation within the meaning of the NER.

a project identified in) the most recent ISP or a RIT-T project assessment consultation report or draft report (PACR/PADR) under the NER.

To qualify as a PTIP and receive ministerial authorisation or direction, a project must also represent an appropriate response to either:

- a breach of the NSW Energy Security Target identified in an EST Monitor Report, or
- a forecast system security service shortfall identified in the most recent ISP.

In this sense, PTIPs are primarily reliability or system security-driven projects. Once identified as a PTIP, a project can proceed under the NSW regulatory framework and will typically be included in EnergyCo's Network Infrastructure Strategy.

Amendments to the EII Act expanded the scope of PTIPs since the Act's commencement.

The definitions in the above box also demonstrate that some of the EII Act tests only cover transmission network options and exclude distribution or non-network alternatives. The RNIP test covers distribution network projects, and Ausgrid has been selected as the preferred network operator for the HCC REZ using a distribution network option. However, the PTIP test currently only applies to 'transmission infrastructure' projects.

Inter-jurisdictional coordination becomes increasingly critical

As discussed in more detail in section 3.1.1, there is also an increasing need for clearer coordination between the relevant planning bodies in each NEM jurisdiction given that several NEM jurisdictions have recently developed their own state-based transmission planning arrangements, including NSW, Victoria, Queensland and Tasmania. It is not possible to efficiently plan the NSW transmission system without close coordination with other states and territories.

While the details of each jurisdictional planning regime will be different, there appear to be opportunities to improve consistency and coordination. This can reduce costs and minimise system security and reliability risks by better coordinating how each region's transmission networks are planned and operated. More consistent arrangements for planning and procuring major contestable transmission projects in Victoria and NSW can also reduce barriers for new entrant network operators and improve the effectiveness of contestability.

2.2 OPTIONS CONSIDERED TO ADDRESS THESE ISSUES

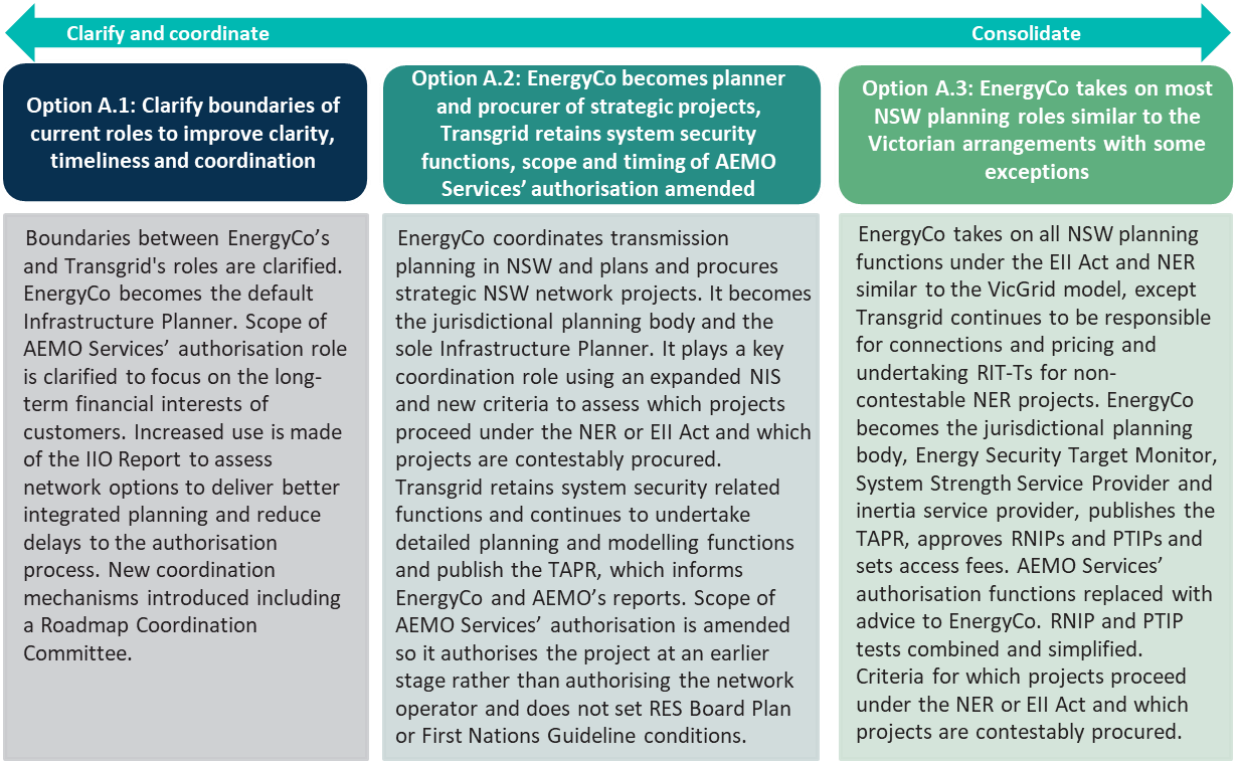
2.2.1 Options paper

Roles and responsibilities

The options paper set out three high-level options for reforms to roles and responsibilities for transmission planning in NSW as shown in Figure 2.1 below.

More details on the potential allocation of roles and responsibilities under each option were set out in Table 4.2 of the options paper. The options paper also noted that our recommendations may ultimately be based on a combination or hybrid of these options.

Figure 2.1: Roles and responsibilities – overview of options



Other chapters of the options paper also included the following recommendations that are relevant to roles and responsibilities:

- Clarify or expand the scope of the RNIP and PTIP tests to include distribution network options or non-network options that may be a preferable alternative to meet the infrastructure investment objectives or an identified reliability or system security need.
- Make changes to EnergyCo's governance and funding arrangements to improve its ability to attract and retain suitable staff and perform any new functions
- Require EnergyCo to consult on, develop and publish a process and approach paper explaining how it will perform its key functions, including recommending RNIPs and PTIPs.

Contestability

The options paper set out two additional options to address the impact of the introduction of contestability.

One option would involve introducing a test or criteria that would be applied by EnergyCo as the Infrastructure Planner to determine which projects will be planned and procured contestably. EnergyCo could be required to consult on the criteria and include them in a guideline, or alternatively the criteria could be included in the EII Act or EII Regulation.

The other option related to network-to-network connections, which will become more important and contentious following the introduction of contestability. This option would involve amending regulatory obligations to:

- introduce more prescriptive obligations, processes and timeframes for connecting new contestable networks to the existing transmission network
- introduce additional mechanisms to resolve disputes related to network-to-network connections

- require Transgrid to publish template agreements and technical requirements for network-to-network connections, as it currently does for generator connections, and/or
- provide for EnergyCo to have a role in network-to-network connection processes.

System strength

The options paper set out several options related to planning for system strength and other system security services.

To address the introduction of contestability and ensure clear and coordinated planning of system strength in contestable REZs and across NSW, the options paper proposed either:

- **Making EnergyCo the SSSP and Inertia Service Provider for NSW:** EnergyCo would become responsible for planning and procuring system strength and inertia services. EnergyCo could procure those services from Transgrid or any other suitable network operator or non-network provider. The options paper noted that this option is likely to be complex to implement as it would either require EnergyCo to become subject to significant parts of chapters 5 and 6 of the NER that are relevant to planning, procuring and charging for system strength services in a similar way to how those provisions apply to AEMO in Victoria, or alternatively require significant regulatory changes to enable a modified version of the NER system strength provisions to apply to EnergyCo.
- **Amending the NER planning arrangements for system strength to account for contestable network operators in NSW**: Under this option, Transgrid would remain the SSSP and Inertia Service Provider for NSW but amendments would be made to the NER as it applies in NSW to address the introduction of contestable network operators and system strength providers, for example to:
  - extend AEMO's system strength powers to include networks owned and operated by a person other than the SSSP
  - clarify how Transgrid's SSSP functions are performed in relation to contestable networks, or impose additional obligations on EnergyCo or contestable network operators where system strength is provided as part of an RNIP or PTIP
  - clarify how system strength services provided in contestable networks are accounted for when setting the amount of system strength the SSSP must provide
  - clarify or extend joint planning obligations in relation to system strength.

The options paper sought feedback on whether there would be value in also implementing one of more of the following options:

- Clarify the test or principles for when system security services should be planned and delivered under the NER or the EII Act.
- Expand obligations on EnergyCo when developing recommendations for an RNIP or PTIP to consult with AEMO on the approach to delivering system strength and inertia services and on system security issues more generally.
- Introduce other mechanisms to improve coordination between AEMO, EnergyCo, Transgrid and contestable network operators who provide system security services.

Interaction between the NSW and national frameworks

The options paper proposed the following options for clarifying which projects should be planned and approved under the NSW or national frameworks and improving joint planning and cooperation between jurisdictions:

- Introduce a test or criteria to determine which projects should be planned and approved under the EII Act instead of the NER.
- Expand obligations on EnergyCo to consult and engage in joint planning with AEMO on relevant issues.
- Expand joint planning with jurisdictional planning bodies in other jurisdictions.
- EnergyCo to consult with VicGrid to identify opportunities to improve consistency between contestable procurement processes in NSW and Victoria
- NSW government to engage with the ACT government to implement mechanisms to ensure effective planning across the NSW region of the NEM, noting that several of Transgrid's current planning roles relate to the NSW region of the NEM, which includes the ACT.

2.2.2 Submissions to the options paper

Roles and responsibilities

As noted above, most submissions to the options paper agreed that the current roles and responsibilities were overly complex and unclear and resulted in risks of overlap and inefficient outcomes and delays. Almost all submissions agreed that roles and responsibilities should be clarified as a minimum. However, there were a range of views on whether more significant changes to roles and responsibilities were appropriate, as shown in the table below.

Table 2.4: Submissions to the options paper on options A.1-A.3 on roles and responsibilities

	A.1 Clarify boundaries of current rules	A.2 EnergyCo becomes planner and procurer of strategic projects	A.3: EnergyCo takes on most NSW planning roles	Other approaches
Stakeholders who supported the option in submissions	Verta Energy, Origin (A.1 with some elements of A.2), CEC (A.1 or A.2), Transgrid (A.1 or A.2)	Ausgrid, CEC (A.1 or A.2), Transgrid (A.1 or A.2)	Akaysha Energy, EUAA, JEC, CEIG, ZEN Energy, Windlab, Nexa Advisory, Iberdrola Australia, Essential Energy (A.2 or A.3)	ACEN,[22] Endeavour Energy,[23] AusNet,[24] Transgrid[25], Hydrostor[26]

22 ACEN recommended option A.3 with even more extensive changes to give EnergyCo additional roles including undertaking the RIT-T for all transmission projects.

23 Endeavour Energy recommended option A.1 initially with a transition to option A.3 over time.

24 AusNet proposed an alternative approach to adopting a single jurisdictional planning body holding responsibility for major augmentations and system security whilst retaining a role for the primary asset owner.

25 Transgrid supported option A.1 or A.2 or an alternative version of option A.2 that involves a new Independent Planning Authority as discussed below.

26 Hydrostor recommended centralising transmission planning in NSW in either EnergyCo or AEMO, noting AEMO's experience in performing similar functions in Victoria.

Comments in support of option A.1 or A.2 included:

- Transgrid acknowledged the need to clarify the roles and responsibilities of the parties involved in transmission planning. It considered that '[e]ach of the current participants plays a significant role, but there is a clear opportunity to streamline overlapping responsibilities and remove unnecessary duplication, which imposes cost burdens on consumers.' It supported either option A.1 or A.2, subject to further clarity on the detailed allocation of roles under option A.2. It also proposed an alternative option as discussed below. It considered that option A.3 'may bring clarity to some aspects of joint planning through centralisation, it would also introduce a prolonged transition period, reduce operational efficiency, and risk a loss of key talent—all of which could lead to increased delivery costs.'
- Ausgrid supported EnergyCo taking on a coordinating role for identifying what strategic network projects are required in NSW, including evaluating a range of network options and coordinating them into a state-wide plan that best achieves NSW Government objectives and coordinating the input of these projects into AEMO's ISP. Ausgrid noted that jurisdictional planning is resource intensive and requires a deep level of technical expertise, with a finite pool of resources with the skills and experience to perform many of these functions which, in NSW, is largely embedded within Transgrid. It considered that any abrupt immediate handover could significantly exacerbate the issues in our planning framework, causing project delays.
- The CEC considered there is a strong argument for codifying and streamlining planning responsibilities and relationships between parties in NSW. However, it considered that the benefits of streamlining and simplification must be carefully weighed against the potential pitfalls of excessive centralisation of planning functions.
- Origin considered that 'an incremental approach that clarifies existing roles and directly improves coordination between the relevant entities involved in implementation would be most effective at delivering the NSW Roadmap objectives.'
- Mal Park[27] agreed with our comment in the consultation paper that transmission planning is very specialised and there is a limited supply of appropriately skilled personnel. He considered that Transgrid's planners have a very long experience in planning the NSW power system, with no other organisation having this background, and that the skilled planners in Transgrid must continue to have the key role in future system planning in NSW.

Submissions that supported more significant changes to roles and responsibilities such as option A.3 included:

- The JEC considered that this option 'removes the inherent conflicts of interest Transgrid faces by being both the planner and provider'. It considered that responsibility and accountability for rigorous assessment of investment options and the selection of only those that return a net benefit for consumers best lies with EnergyCo.
- CEIG encouraged 'bold reforms to reduce duplication and improve accountability'. It considered that '[t]he scale of investment required between now and 2035 cannot be achieved within a system that lacks clear lines of accountability. The planning system must be reformed to support a more integrated, transparent, and timely approach to decision making and delivery. The reform process should result in the consolidation of strategic transmission planning under an expanded and independent EnergyCo. EnergyCo is well-placed to take on this role, given its statutory mandate and focus on system-wide infrastructure needs. Consolidation under a single entity will improve coherence, remove duplication, and enable a streamlined interface with investors, developers, and national bodies such as AEMO.'
- Iberdrola Australia supported EnergyCo becoming a centralised independent system operator planning body under option A.3. It considered that the benefits would create a body that was free from conflicts of interest, with objectives that are better aligned with broader public interests including environmental and community

[27] Mal Park is a highly experienced former planner at Transgrid and its predecessor organisations and is now retired. Mr Park made a submission in his personal capacity and provided useful insights to the panel in meetings.

concerns. It considered that reducing the current complex allocation of roles and responsibilities would lead to improved governance, clarity of purpose, accountability, efficiency and speedier delivery of the state's objectives.

- BlueScope Steel considered that a single party with overarching responsibility is critical. It stated that a single planning entity could ensure better coordination across different regions and stakeholders, leading to more integrated and efficient transmission solutions. Streamlining arrangements in this way should reduce duplication of efforts, increase accountability and potentially lower costs associated with transmission projects. It considered that with one planning entity in charge decision-making processes would likely be faster and less complex, have better system oversight and facilitate quicker implementation of necessary infrastructure.

Some stakeholders that supported option A.3 noted that it would be a complex reform that would require significant legislative changes and additional resourcing for EnergyCo.

Several submissions commented that there is a tension between the potential benefits of more substantial reforms to roles and responsibilities and the risks that such reforms would be complex and time-consuming and as a result could unintentionally increase uncertainty and delay investment at a time when significant new investment is needed. Some stakeholders considered that this trade-off meant that we should be cautious in recommending major reforms that might have benefits in principle but that could jeopardise the significant amount of investment that was needed at this critical point of the energy transition in NSW. The following quotes illustrate this perspective:

> **Verta Energy:** *Verta Energy agrees that current NSW planning arrangements are not fit for purpose. There is tension between the roles of the respective parties which is causing inevitable duplication and inconsistencies across the various planning bodies and the reports they produce. The differing objectives, obligations and timeframes across regulatory frameworks are likely to lead to different recommendations and outcomes. Additionally, the complexity of planning processes creates confusion and could lead to inefficient expenditure across the industry. Therefore, it is vital to eliminate inefficiencies to ensure the effective planning of the NSW transmission system.*
>
> *That said, it is important that any reforms do not slow down the progress made in bringing new generation online to meet NSW's emissions reduction targets. A significant and abrupt change in the transmission planning framework at this stage could create substantial uncertainty in the energy market, potentially stifling private investment. Implementing a well-structured reform of the transmission planning framework could take several years due to the extensive range of required adjustments, including regulatory and legislative changes, economic considerations, and policy integration. These factors combined may slow the development and integration of renewable energy projects in NSW, increasing the likelihood of further extensions to the closure of coal-fired power stations, such as Eraring.*[28]
>
> **Snowy Hydro:** *In considering options that involve significant change to the current regulatory arrangements and the roles and responsibilities of the planning bodies, the Panel should be mindful of the short term costs and associated delays that could arise in transmission planning, system strength roles, and overall clarity of roles. With so much change occurring in the energy transition over the next 5 years any disruption should be minimised. However, this needs to be balanced against long term benefits from the proposed options.*[29]

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28 Verta Energy submission to the options paper.

29 Snowy Hydro submission to the options paper.

Origin Energy: *Option A.3 would lead to a step change in EnergyCo's existing role, which would require significant resourcing and institutional changes to the organisation, including responsibilities beyond the immediate deliverables of the NSW Roadmap. It may also have an unintended short-term consequence of complicating, rather than clarifying, roles and responsibilities for stakeholders by introducing further substantial changes to current arrangements. Given the need for timely investment and the already complex nature of the national and state planning frameworks, we do not consider that A.3 would be consistent with meeting the NSW Roadmap's minimum 2030 objectives at this point in the transition.*[30]

Ausgrid*: the Review has presented a range of options that may require significant changes to the current regulatory arrangements, and the roles and responsibilities of the bodies involved in network planning in NSW. Many of the options may also require significant legislative and regulatory change. Ausgrid encourages the Review not to shy away from these reforms. The material issues identified in the Options Paper justify an ambitious reset of the NSW network planning system.*

However, both the NSW and Federal Governments have ambitious 2030 targets that are critical components of Australia's energy transition. Market bodies, network service providers (NSPs) and Government must be allowed to focus on the timely delivery of projects critical to meeting these. Ausgrid therefore encourages the Review to also recommend a number of targeted, transitional reforms that – while not offering perfect solutions to the identified material problems – represent improvement and can be delivered in the short-to-medium term.

EnergyCo's submission included a table comparing the Jurisdictional Planning Body functions with EnergyCo's current roles and resources, which is summarised in the table below (system strength and inertia functions are not included in Table 2.5 and are instead addressed in the system strength section below).

Table 2.5: EnergyCo's submission comments on Jurisdictional Planning Body functions

JPB function	EnergyCo's comments on its current roles and resources
REZ design reports and joint REZ planning	EnergyCo currently undertakes similar functions for REZs in place of REZ Design Reports, primarily through preparing and publishing REZ Infrastructure Planner Recommendation Reports. Additional resourcing would be needed to undertake this role for non-EII Act REZs.
Assisting AEMO with NTP functions	EnergyCo currently has a Technical Advisory Services division delivering a NIS that provides similar prioritisation and forward planning detail for REZ and PTIP projects. The scope of ISP is broader than REZs and PTIPs and additional resourcing may be required to undertake this function.
Develop input's for AEMO's ESOO	EnergyCo prepares similar inputs for the IIO Report. Additional resourcing and NEM information (eg through regulations or as a market participant) would be needed to fulfil an expanded role for EnergyCo to develop these inputs.
Inter-network power system tests and impact assessments	No capability for this function exists within EnergyCo and it would need to expand its resourcing to undertake this role.

30 Origin Energy submission to the options paper.

EnergyCo's submission did not explicitly express a preference for any of the options, but noted that:

- EnergyCo undertakes many functions for REZs, PTIPs and network planning that are complementary to new planning roles considered under options A.2 and A.3 and there are feasible pathways to strengthen EnergyCo's resourcing, governance and regulatory framework to undertake additional planning roles if recommended by the review.
- 'The current split of planning arrangements requires complex coordination with associated resourcing, cost and delay risks for all entities involved to navigate varying and occasionally conflicting levels of authority.' EnergyCo considered that maintaining this approach under option A.1 may be difficult and the review 'should consider if the effort to strengthen EnergyCo to take on expanded planning roles NSW is more efficient, effective and likely to meet Review objectives than the effort needed to reform, administer and manage the ongoing coordination of existing planning roles and responsibilities' under option A.1.
- If options A.2 or A.3 are recommended, clarifying current roles under option A.1 would be valuable in the transition period while more significant reforms were implemented.
- Implementation considerations identified by EnergyCo for option A.2 or A.3 included reforms to:
  - enable EnergyCo to recover its additional planning costs
  - amend how the RIT-T would apply to system strength and inertia if EnergyCo became the SSSP and Inertia Service Provider
  - establish EnergyCo's functions needed to enable jurisdictional planning, system strength and Inertia Service Provider roles
  - enable EnergyCo to access NEM information required to undertake new functions
  - review Transgrid's licence conditions and NER requirements to reflect changed planning roles and responsibilities
  - enhance joint planning
  - expand EnergyCo's internal technical function to enable delivery of planning, system strength and inertia service functions, and
  - update internal EnergyCo protocols, procedures and cyber security.

In the options paper we stated that we did not consider that establishing a new planning body was a suitable option. However, in its submission Transgrid proposed an alternative option involving a new Independent Planning Authority as explained in the following quote:

> *Specifically, this would involve the establishment of a new, independent electricity planning authority to take on the strategic planning functions currently proposed for EnergyCo. While the Options Paper favours EnergyCo as the central body, Transgrid believes that a new entity, purpose-built for this role, may deliver benefits.*
>
> *The role of this planning authority would include coordination of joint planning processes, facilitating early investment in strategic projects, and streamlining regulatory approvals. Its functions would include identifying NSW's strategic network needs (taking into account NSP inputs), reviewing planning options and selecting preferred solutions, and determining the appropriate regulatory and delivery pathways (under either the National Electricity Rules (NER) or NSW EII Act frameworks, including whether a project should be contestable or non-contestable).*
>
> *Transgrid believes that this refined approach to Option A.2 could accelerate the delivery of strategic projects by providing clearer approval pathways and funding certainty. The authority*

would also be well-placed to manage approval of projects that offer market-wide benefits but might otherwise face delays under the NER framework.[31]

Only a small number of stakeholders made comments on the options for changes to AEMO Services authorisation role under options A.1-A.3:

- AEMO Services stated that it sees benefit in the authorisation aspects of option A.2. It considered that this option could enable more flexibility around the timing of the authorisation decision by allowing AEMO Services to authorise a network project rather than a network operator to carry out an RNIP. It considered that this change would give AEMO Services and EnergyCo greater discretion to decide the appropriate timing to recommend and authorise a project depending on the characteristics of individual project. It also supported reducing the scope of matters considered as part of the authorisation process, including removing consideration of RES Board Plan and First Nations Guideline matters and commercial arrangements the network operator must enter into.
- Endeavour Energy supported amending the authorisation role so that it occurs at an earlier stage.
- Ausgrid considered that clarifying the scope and process of EnergyCo's role as Infrastructure Planner would mean that the Consumer Trustee's authorisation role is not needed. It considered that the authorisation process largely duplicates EnergyCo's and the AER's functions and removing it would significantly reduce administrative burden.
- Origin Energy considered that to promote timely delivery of projects, AEMO Services should be allowed to approve network projects earlier than under current arrangements as proposed under Option A.2.
- Essential Energy stated that AEMO Services' role is currently primarily exercised as a 'gatekeeper' at the authorisation stage, rather than being formally integrated into earlier phases of project development. It considered that it is critical that EnergyCo delivers a robust Infrastructure Planner Recommendation Report that integrates project planning and aligns with AEMO Services' methodologies and expectations, enabling project approvals to proceed efficiently. Essential Energy considered that there may be merit in shifting towards a more consultative role for AEMO Services earlier in the planning process, which would provide alignment well in advance of the network operator's authorisation for the project.

Contestability

Submissions to the options paper supported introducing a test or criteria that would be applied by EnergyCo as the Infrastructure Planner to determine which projects will be planned and procured contestably. This option was supported by ACEN, AusNet, JEC, EUAA, EnergyCo, Nexa Advisory, CEIG and Verta Energy. It was not opposed in any submissions. There were a range of views on the appropriate criteria.

Strengthening the network-to-network connections process was also supported by all stakeholders who commented on this issue, being EnergyCo, Essential Energy, EUAA, CEIG, Nexa Advisory, Iberdrola Australia and Verta Energy.

EnergyCo commented that in addition to network-to-network connections there are similar interactions between new entrants and existing network service providers that would also benefit from an enhanced framework to facilitate contestability and guide relationships. This includes various issues related to upgrades to existing infrastructure by existing network service providers that are required to facilitate a new contestable network, such as line crossings and relocations, access to existing easements, operation of third party owned or constructed assets where required, and access to operating and technical standards.

31 Transgrid options paper submission.

System strength

Views on system strength issues were similar to those on the overarching roles and responsibilities options discussed above. There were a range of views on the extent of reforms to the system strength planning arrangements that were justified and whether EnergyCo should become the SSSP for NSW so that it could be an independent planner and procurer of system strength services across NSW.

The option of making EnergyCo the SSSP and Inertia Service Provider for NSW (Option D.1 in the options paper) was supported by Akaysha Energy, ACEN, AEC, Ausgrid, Essential Energy, CEIG, JEC, Nexa Advisory, Iberdrola Australia, Snowy Hydro and Tesla.

Making EnergyCo the SSSP was opposed by Transgrid, Origin Energy, Verta Energy and Windlab.

Several stakeholders who supported this option recognised its complexity, as illustrated by the following quotes:

> ***Tesla**: Tesla supports further exploring the proposed Option D.1 to make EnergyCo the SSSP and Inertia Service Provider for NSW, although acknowledges the complexity that this may lead to in the short-term regarding cost recovery and potential modifications to the NER system strength provisions. In particular, Tesla encourages further work to understand how the SSSP and Inertia Service Provider may operate among the multiple REZs in NSW.*[32]
>
> ***AEC:** Given the issues identified, the AEC thinks it is worthwhile further exploring Option D.1 outlined in the Options Paper, making EnergyCo the SSSP and Inertia Service Provider for NSW. While this Option could be complex to implement, with transitional arrangements likely to be necessary, it offers the clearest delineation in roles and responsibilities. If further analysis demonstrates that the time and complexity to implement D.1 is problematic, the AEC is open to Option D.2 as a pragmatic path forward.*
>
> ***Nexa Advisory**: To address this, we support Option D.1, which would transfer responsibility for the strategic planning and procurement of system strength and inertia services to EnergyCo, while allowing Transgrid to continue delivering services via contestable arrangements.*
>
> *We acknowledge, however, that this would require significant capability uplift of EnergyCo, enabling it to act as the SSSP and inertia coordinator under the NER. As such, we suggest a phased handover approach could be appropriate.*[33]

Some stakeholders also recognised that the potential benefits of this option will depend on how quickly it could be implemented and that its benefits may be reduced by the fact that Transgrid is already well advanced in its current system strength procurement processes under the NER. This risk was best explained by the following quote from Akaysha Energy's submission:

> *While Akaysha sees the potential for benefits in EnergyCo. taking over the procurement of system security services if these issues can be addressed, it will also depend on timing. The current Transgrid led System Strength RIT-T process needs to be completed by December-2025. This will lock in the forward plan, and the recommended solutions to meet New South Wales future system strength needs. The current proposal for 12 new build synchronous condensers will likely meet the future inertia needs for New South Wales as well.*

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32 Tesla options paper submission

33 Nexa Advisory options paper submission

A key component of this Review should consider whether shifting the responsibility for procurement of system security services to EnergyCo. will result in any potential changes to the forward-looking solutions proposed for NSW. If the Transgrid proposed solutions finalised this year are embedded as the forward-looking plan for NSW then there will be limited scope, and benefit, in EnergyCo. taking over the procurement work. If EnergyCo. is given the flexibility to consider whether future proposed synchronous condensers can be replaced with grid-forming inverter resources, this will provide a much greater benefit.

The benefits gained from EnergyCo. being able to drive greater jurisdictional alignment on service specifications will also be time dependent. These specifications will need to be developed soon to enable services to be provided as early as next year. In short there will be limited benefit to EnergyCo. taking on system security services procurement if all future solutions for NSW and relevant specifications are locked in before they do so.[34]

The JEC noted that its support for making EnergyCo the SSSP and Inertia Service Provider is contingent upon cost recovery for these services continuing to occur via transmission use of system charges under the NER, rather than being rolled into the Roadmap cost recovery mechanism. It considered that it is not appropriate for households and small users to subsidise the system strength and inertia services consumed by large exempted and transmission-connected customers.

The alternative option of amending the planning arrangements for system strength to account for contestable network operators in NSW (Option D.2) was supported by Endeavour Energy, CEC, Origin Energy, Verta Energy and Windlab. EnergyCo also considered that this option would be useful to clarify how system strength delivered by contestable network operators is considered by Transgrid.

EnergyCo did not express a view on whether it should become the SSSP and Inertia Service Provider, but noted:

- EnergyCo has experience in planning and procuring system strength in REZs. This option could address issues with inconsistency between REZs and the broader network.
- However, planning system strength and inertia services across the wider system will require a broader set of capabilities, including full system modelling capabilities. If additional system strength and/or Inertia Service Provider roles are recommended for EnergyCo, implementation will be complex and needs careful consideration.
- If EnergyCo is recommended as a NSW system strength, inertia and strategic network planner across the whole NSW network, EnergyCo would need additional resourcing, including to deliver or contract power systems modelling expertise.
- Currently an SSSP must be a TNSP as the system strength framework includes cost recovery and transmission charging frameworks that apply only to TNSPs, and TNSPs manage connections and have related roles to manage system services such as inertia and voltage control. The Review should consider if a split is warranted between SSSP roles as some roles may be better suited to remain with TNSPs, for example making the JPB responsible for planning and procurement and the TNSP responsible for delivery of system security assets and services and cost recovery for those assets and services.
- Considerations for implementation should include cost recovery arrangements, regulatory investment tests, interaction with related obligations still held by TNSPs under Chapter 5 of the NER and interactions with connections processes. Other required reforms would include access to NEM information to facilitate the whole of system modelling that would be required and appropriate governance arrangements.

34 Akaysha Energy options paper submission

- The option of amending the planning arrangements for system strength to account for contestable network operators in NSW could be useful as a transitional arrangement.

Ausgrid considered that amendments should also be made to the NER to enable DNSPs to deliver system strength and inertia services on their networks rather than all services being provided on the SSSP's transmission network. It recommended that the NSW Government submit a rule change request to the AEMC on this issue, which we note is a broader national issue and not NSW specific.

Ausgrid also recommended amendments to the PTIP definition to enable it to cover distribution projects, including allowing DNSPs to deliver system strength projects as PTIPs as a transitional measure until any NER amendments were made. Endeavour Energy also proposed amendments to the PTIP definition to enable it to be used for distribution projects more broadly.

Interaction between the NSW and national frameworks

Submissions supported clarifying the interaction between the NSW and national framework and improving joint planning and cooperation between jurisdictions:

- Introducing a test or criteria to determine which projects should be planned and approved under the EII Act instead of the NER were supported by ACEN, Ausgrid, EnergyCo, Endeavour Energy, Essential Energy, Transgrid, Hydrostor, CEIG, Nexa Advisory, Iberdrola Australia, JEC, Verta Energy and Windlab.
- The options to improve joint planning and cooperation between jurisdictions were supported by Ausgrid, Endeavour Energy, Essential Energy, CEIG, JEC, Verta Energy and Windlab.
- Hydrostor recommended the introduction of 'escalation thresholds' for projects initially planned under the NER but which later need to be transferred to the EII Act due to their complexity or significance.
- Verta Energy noted that options to improve joint planning and cooperation between jurisdictions should not duplicate existing joint planning requirements, eg existing TNSP obligations to undertake joint planning with AEMO and other TNSPs.
- Similarly, EnergyCo recommended that the review consider using existing processes or potential enhancements to existing processes before progressing potentially duplicative options. It noted that existing arrangements include legislated requirements on EnergyCo to consult with AEMO, EnergyCo's current participation in the Joint Planning Committee, regular Chief Executive level meetings between EnergyCo and VicGrid, and regular interjurisdictional engagement through EnergyCo's recently introduced Strategy & Relationships branch.
- AEMO noted that any options to improve joint planning with AEMO should apply to any person who is appointed by the Infrastructure Planner, not just EnergyCo.
- AEMO also noted that any changes to the regulatory framework should seek to reduce regulatory divergence from the NER and minimise additional complexities for AEMO in the exercise of its statutory functions. It also noted that AEMO concurrence is required for certain regulations under the EII Act that affect AEMO in the exercise of its functions. AEMO stated that similar concurrence requirements should apply if the NSW framework is amended in ways that would affect AEMO's functions, to ensure AEMO's continued ability to manage the reliable and secure operation of the NSW electricity system and the NEM more generally.
- No stakeholders expressly opposed any of the options in this area that were set out in the options paper.

2.3 DRAFT RECOMMENDATIONS: IMMEDIATE ACTIONS TO ACCELERATE PLANNING AND DELIVERY OF THE NEW ENGLAND REZ AND OTHER UPCOMING PROJECTS

Our draft recommendations to clarify, streamline and coordinate responsibility for transmission planning in NSW are set out in sections 2.3 to 2.5.

We recommend progressing our draft recommendations in stages. This approach recognises that our recommended changes will require additional work to draft, consult on and enact the required regulatory changes, for example changes to the EII Act, EII Regulation, NSW modifications to the NER and potentially other related changes such as to licence conditions. Some of our recommendations also involve increased responsibilities for EnergyCo, which should be accompanied by a review of EnergyCo's governance and funding arrangements to account for those new functions as recommended in draft recommendation C.2 in section 4.3.2. However, other recommendations can be implemented more quickly and are more urgent, so should be prioritised and not delayed until the other more complex recommendations are implemented.

We have grouped our draft recommendations related to roles and responsibilities into three stages:

- **Immediate actions to accelerate planning and delivery of the New England REZ and other upcoming projects**: These draft recommendations should be implemented as soon as possible. They require targeted amendments to the EII Act so their exact timing will depend on legislative processes, but they should be progressed as a priority so the changes are enacted before a preferred network operator is appointed for the New England REZ.
- **Medium term reforms to clarify roles and responsibilities**: These recommendations require amendments to the EII Regulation and the development of a new EnergyCo guideline and should be implemented by the end of 2026, or sooner if possible.
- **Medium to longer term reforms to better coordinate transmission planning across NSW:** These recommendations require amendments to the EII Act and other regulatory changes and should ideally be implemented in time for EnergyCo's inaugural NSW System Plan in late 2027 (see draft recommendation B.1 in section 3.3.1).

Our draft recommendations for immediate actions are summarised in the table below.

Table 2.6: Draft recommendations for immediate actions to accelerate planning and delivery

Draft recommendation	Prioritisation
A. Clarifying, streamlining and coordinating responsibility for transmission planning in NSW	
Immediate actions to accelerate planning and delivery of the New England REZ and other upcoming projects	
A.1: Simplify and accelerate the process for authorising REZ network infrastructure projects	As soon as possible
A.2: Strengthen the regulation of network-to-network connections	As soon as possible
A.3: Reform the system strength regulatory arrangements to clarify accountability for system strength planning in REZs and improve coordination	As soon as possible
A.4: Remove barriers to planning efficient distribution network projects under the EII Act	As soon as possible

2.3.1 A.1: Simplify and accelerate the process for authorising REZ network infrastructure projects

Overview of the draft recommendations

We recommend streamlining the process for recommending and authorising REZ network infrastructure projects (RNIPs). The aim of this recommendation is to reduce costs, clarify responsibilities and reduce the risks of delays in planning, approving and delivering projects.

We consider that requiring an RNIP to be authorised by AEMO Services as Consumer Trustee or directed by the Minister is an important part of the regulatory framework and a valuable protection for electricity consumers who fund the costs of the project.

However, we consider that authorisation currently occurs too late in the planning process, which reduces its value and risks delays. We also consider that the matters that AEMO Services is required to consider as part of the authorisation process are too broad and duplicate issues for which other parties are responsible, for example assessing the suitability of the network operator and assessing whether to impose authorisation conditions related to Renewable Energy Sector (RES) Board Plan or First Nations Guideline requirements.

The main change under this option would be to amend the authorisation requirements so that AEMO Services authorises a project rather than authorising a network operator to carry out the project. Changes would also be made to other provisions of the EII Act and EII Regulation to implement this intent and address other issues that currently risk duplication and delays in the recommendation and authorisation process.

We recommend that the following changes are made to implement this recommendation:

- **Nature of authorisation** (EII Act section 31): Amend the EII Act so the Consumer Trustee authorises a REZ network infrastructure project, rather than authorising a network operator to carry out a REZ network infrastructure project. In practice, AEMO Services currently relies on EnergyCo's procurement process to assess the suitability of the network operator so this requirement is unnecessary. EnergyCo's procurement process and IPART's licensing process are more appropriate mechanisms for assessing the suitability of the network operator.
- **RES Board Plan and First Nations Guideline considerations and conditions** (EII Act sections 4 and 9): Remove the power of the Consumer Trustee to impose RES Board Plan and First Nations Guidelines conditions in an authorisation and amend the requirement on the Consumer Trustee to take the RES Board Plan into account so it does not apply to the Consumer Trustee authorisation functions. These provisions could be amended to require the Infrastructure Planner to take the RES Board Plan and First Nations Guidelines into account when exercising its functions. We consider that EnergyCo's procurement process is better placed than the authorisation process to assess compliance with the RES Board Plan and First Nations Guidelines. We agree with the comment in AEMO Services' Network Authorisation Process paper that it is more effective from an enforcement and monitoring perspective for the commitments made by a network operator to give effect to these documents to be negotiated and enforced by EnergyCo through contractual arrangements rather than AEMO Services through authorisation conditions.[35]
- **Amendments to an authorisation** (EII Act section 31): Introduce a new process that allows the Infrastructure Planner to recommend an amendment to an authorisation and the Consumer Trustee to make such an amendment where there has been a material change in circumstances. This power would apply for example where there has been a material change to the scope of the recommended project compared to the project description set out in the notice of authorisation. This process should also allow the Infrastructure Planner to request that the Consumer Trustee recalculates and amends the maximum capital cost (MCC)

[35] See aemoservices.com.au/-/media/services/files/publications/authorisation-function/241203-december-network-authorisation-process-and-approach-paper.pdf?la=en

where the expected cost of the project has materially increased since the authorisation. This MCC process would be similar to the ISP feedback loop[36] and allow the Consumer Trustee to check that the project still has net benefits for consumers based on the latest estimated costs and benefits. This process to recalculate the MCC should only occur prior to the network operator submitting its initial revenue proposal to the AER.

- **Required content of the Infrastructure Planner's recommendations** (EII Act section 30(2) and EII Regulation clauses 43 and 44): Amend these provisions to streamline the matters that must be included in the Infrastructure Planner Recommendation Report (IPRR) to the Consumer Trustee recommending authorisation of an RNIP. These provisions should be amended to focus on the details of the project that is recommended for authorisation and the information the Consumer Trustee requires to undertake a cost-benefit analysis (CBA) for the project. These provisions currently contain a range of requirements that can cause delays by requiring the IPRR to be extremely long and contain information that is not relevant to the Consumer Trustee's assessment.[37] Several of the current requirements will also not be appropriate for the amended scope of the authorisation process and could result in unnecessary costs, delays and confusion if not amended.[38] We consider that the key information the Consumer Trustee requires is a description of the project (including its location, network capacity and timing), the costs of the project (including its total expected costs and the proportion of those costs that will be recovered from consumers vs generators or other funding sources) and the Infrastructure Planner's assessment of key risks related to the project (including cost contingency estimates and risks of delivery delays). We recommend that section 30(2) is amended to separate out the matters the Infrastructure Planner must consider and assess before making a recommendation (for example an assessment of different options for the RNIP and the appropriate procurement process) from the matters it must include in its recommendations to the Consumer Trustee.
- **Recommended contractual arrangements** (EII Regulation clauses 19B(6) and 43(1)): Remove these provisions that require the IPRR and authorisation to set out the contractual arrangements that the network operator must enter into with the Infrastructure Planner in relation to the recommended RNIP. These provisions do not appear necessary or appropriate where AEMO Services is only authorising the project not the network operator.
- **RNIP directions** (EII Act section 31(1)(a)): Remove the option of the Consumer Trustee recommending that the Minister give a direction to a network operator for an RNIP. Currently, the Consumer Trustee may authorise a network operator to carry out a project or recommend that the Minister directs a network operator to do so. The Consumer Trustee may only recommend a direction if it is satisfied that the direction is reasonably necessary to achieve the infrastructure investment objectives.[39] AEMO Services has never recommended a direction to date. AEMO Services' Network Authorisation Process paper states that it expects that it would only do so where required to ensure that a non-contestable project is delivered on time to achieve the investment infrastructure objectives. Given that the Infrastructure Planner recommendation and Consumer Trustee authorisation process would occur prior to selection of a network operator, the option of the Consumer Trustee recommending a direction would not be practicable. The Minister should still be able to direct a network operator to carry out an RNIP, although we consider that this should only occur in very rare cases where the network operator is unwilling to carry out an RNIP (eg for an enabling works RNIP that is required to connect a contestable RNIP to the existing network) and should not be used

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36 See clause 5.16A.5 of the NER.

37 For example, section 30(2) of the EII Act requires the Infrastructure Planner to make recommendations on different options for the RNIP but clause 19C(2)(b) of the EII Regulation prohibits the Consumer Trustee form assessing different options in its CBA.

38 See for example for the requirements in sections 30(2)(a) and 30(2)(c) of the EII Act, clauses 43(1)(c)(i), 43(1)(d)(i) and potentially clauses 44(b), (c) and (d) of the EII Regulation. Consideration should also be given to what information should be required under clause 44 of the EII Regulation and what level of detail can practically be included if the IPRR and authorisation occur earlier when some of the details currently required by clause 44(a) may not be known.

39 See clause 19(1) of the EII Regulation.

as a means of avoiding the need for a CBA by the Consumer Trustee. To enable such a direction, we recommend that the EII Act permit the Infrastructure Planner to recommend a direction to the Minister. Before making such a direction, the Minister should be required to consult with the Consumer Trustee. Similar provisions to those currently contained in sections 34(1) and (2) for PTIP directions should also apply setting out other people that must be consulted and matters that must be considered by the Minister.

We recommend that these changes are made as a priority with the aim that they commence in time to apply to the authorisation process for the New England REZ and any other upcoming recommended RNIPs (eg potential transmission or distribution network upgrades to utilise existing network capacity).

We consider that the authorisation process will be further streamlined and accelerated by the combination of this draft recommendation and our planning report recommendations in chapter 3 below. EnergyCo and AEMO Services should work closely together in the development of AEMO Services' IIO Report and Energy's new NSW System Plan (an expanded version of the current NIS as discussed in draft recommendation B.1 in section 3.3.1) to identify and assess network options. This should streamline the authorisation process by:

- EnergyCo, in consultation with all NSW TNSPs and DNSPs, developing comprehensive options for assessment by AEMO Services in the IIO Report.
- AEMO Services modelling and assessing those network options as part of the IIO Report.
- EnergyCo using the outcomes of the IIO Report to develop the NSW System Plan, including a plan for which projects it intends to recommend as an RNIP and when, and then making formal recommendations for authorisation of the relevant RNIPs.
- AEMO Services using the outcomes of the IIO Report instead of needing to undertake a separate CBA as part of the authorisation process, as permitted by clause 19B(3)(b) of the EII Regulation.

Under this approach to planning reports and the streamlined authorisation process, authorisation should be a much simpler and quicker process than is currently the case, unless the scope or cost of the recommended RNIP has materially changed since the most recent IIO Report and NSW System Plan.

Draft evaluation against the assessment criteria

We consider that this draft recommendation will promote the following aspects of the assessment criteria:

- **Promote timely planning and delivery of transmission projects**: The current recommendation and authorisation process occurs very late in the planning process and can take considerable time, which can lead to delays in finalising contractual arrangements and ultimately delivering the project. These changes should allow AEMO Services to authorise projects at an earlier stage prior to selection of the preferred network operator, providing increased certainty to EnergyCo and potential network operators and reducing the risk of project delivery delays.
- **Promote efficient planning and delivery of transmission projects**: This recommendation should improve the efficiency of the planning process by reducing transaction costs for AEMO Services, EnergyCo and potential network operators.
- **Improve outcomes for NSW electricity consumers, local communities and taxpayers**: This recommendation should not materially affect outcomes for consumers, local communities or taxpayers compared with the current arrangements. By reducing the costs of the recommendation and authorisation process, it should result in minor savings in costs that are ultimately recovered from consumers. It is expected to improve outcomes for consumers compared with the alternative options that were considered, including the options of removing the MCC or removing the authorisation process entirely, which would have reduced or removed the consumer protections afforded by the authorisation process.
- **Provide clear and effective allocation and coordination of roles and responsibilities**: This recommendation would clarify the respective roles of EnergyCo and AEMO Services in the RNIP

recommendation and authorisation process. It would also reduce duplication between their roles and the roles of the AER and IPART. It would focus the authorisation process on the issues where authorisation by AEMO Services as Consumer Trustee would add the most value based on the long-term financial interests of NSW electricity customers and the objects of the EII Act. It would remove or amend aspects of the authorisation process that currently duplicate work done by EnergyCo as Infrastructure Planner without adding material benefits. It does not minimise complexity and coordination issues as much as the option of removing authorisation, but has other benefits including supporting robust decision making.

This option would retain the authorisation process, as opposed to option A.3 from the options paper which would have removed authorisations and instead relied on AEMO Services providing advice to EnergyCo using its advice function under section 60(4) of the EII Act. We consider that retaining and streamlining rather than removing them better meets our assessment criteria. In particular:

- **Authorisations by AEMO Services as the Consumer Trustee are an important protection for consumers**: Authorisations provide an independent assessment that the project recommended by EnergyCo as Infrastructure Planner will deliver net financial benefits for consumers. The CBA that AEMO Services undertakes as part of the authorisation process is a substitute for the usual RIT-T assessment under the NER. Relying solely on a CBA undertaken by EnergyCo or non-binding advice from AEMO Services would reduce protections for consumers and risk adverse impacts on affordability.
- **Although removing authorisations would simplify the planning arrangements and consolidate functions, it could risk increasing rather than reducing confusion around roles and responsibilities**: Authorisations are an important part of the overall regulatory framework and an input into the AER's revenue determination. The notice of authorisation sets out the scope and timing of the project for which the AER is to determine the prudent, efficient and reasonable costs and revenues. In the absence of authorisations (or a similar process such as directions), there would not be a clear decision on these matters the AER could rely on and there would be a risk that the AER would need to assess those matters (as it does under the NER where a revenue determination considers both whether the proposed project's size, design and timing are prudent and whether the proposed costs of the project are efficient). Such an outcome would increase the risk of delays rather than reducing them.

We also considered removing the MCC to further streamline the authorisation process as proposed in option A.1 in the options paper, but consider that the MCC is an important protection for consumers to protect against cost increases between the costs used in the Consumer Trustee's CBA and the costs the network operator seeks to recover from customers in its revenue proposal to the AER. Although the competitive procurement process will provide some protections for competitive projects, there remains a risk of material scope or cost increases between the CBA and the revenue proposal that could mean the project no longer has benefits for customers.

We consider that this option should speed up the planning and delivery of projects by enabling them to be authorised earlier, providing more certainty to EnergyCo and potential network operators. However, we caution that there is a limit to how much earlier projects can be authorised and EnergyCo will need to consider carefully the appropriate time to recommend a project for authorisation.

This option should not be seen as a silver bullet that will allow projects to be authorised dramatically sooner in all cases. Its effectiveness will depend on the extent to which EnergyCo is able to determine the scope of the project for which it is seeking authorisation at an earlier stage of the process. The project should be specified in the IPRR and authorisation at a higher-level than is currently the case, but it will still need to be specified in sufficient detail for AEMO Services to undertake its CBA and describe the project in the notice of authorisation, including its network capacity, location and timing. Information on these issues will be required for both the main RNIP and also any enabling RNIP, for example any connection works that will be

undertaken by Transgrid to enable a contestable RNIP to connect to the existing transmission network. How early EnergyCo can settle these matters will likely depend on its planning and procurement processes.

This option also increases the risk of material changes occurring in the project's design or cost after the date of authorisation. These changes could require an amendment to the authorisation or increase the risk of the project breaching the MCC. Although we recommend a new process for amending an authorisation, any need for such an amendment could lead to delays. EnergyCo should therefore only recommend a project for authorisation when it is comfortable that there is a relatively low risk of material changes to the project's scope or expected cost. AEMO Services' IIO Report and section 60(4) advice functions will likely remain important in providing early AEMO Services advice and CBA assessment on network options to assist EnergyCo to determine what project to recommend for authorisation.

2.3.2 A.2: Strengthen the regulation of network-to-network connections

Overview of the draft recommendations

We recommend strengthening the regulatory arrangements for connecting new networks to existing transmission networks.

In parallel to our review, the NSW Government has commenced a targeted consultation process on this issue. DCCEEW is currently investigating targeted reforms to regulate the process to initiate, plan, agree and deliver network-to-network connections in NSW. DCCEEW's work will consider how best to facilitate joint planning, information sharing and timely delivery of connection works. DCCEEW intends to outline its preferred approach by October 2025. Information about this review is available on the DCCEEW website.[40]

Our draft recommendations have been developed independently of the DCCEEW process and we hope that our interim report will inform DCCEEW's work. As noted in section 2.2.2 above, strengthening the network-to-network connections process was supported by all stakeholders who commented on this issue in submissions to our options paper.

We consider that clear and effective network-to-network connection arrangements will be increasingly important due to the introduction of contestability and the potential for RNIPs and PTIPs to be delivered by new contestable transmission network operators or existing DNSPs.

The current NER connection arrangements were primarily designed for generation connections. They can also apply to network-to-network connections and have been used for such connections, for example between existing distribution and transmission networks. However, they rely on considerable cooperation between the two network operators and are challenging to apply to the connection of a new contestable network. The current arrangements risk inefficient outcomes and delays to delivery of projects because there are not sufficiently clear obligations related to processes, timeframes and information provision and because the connection process under the NER cannot commence until a contestable network operator has been selected by EnergyCo.

We received feedback that the process for agreeing the connection arrangements for connecting the contestable CWO RNIP to Transgrid's network was challenging for all parties involved. We recommend that new arrangements are implemented as a priority in time for delivery of the New England REZ to minimise the risks of similar challenges for that project and delivery delays.

These enhanced network-to-network arrangements could be implemented either by NSW modifications to the NER chapter 5 connections process or by additional NSW regulatory obligations outside of the NER. Given

[40] See https://www.energy.nsw.gov.au/nsw-plans-and-progress/regulation-and-policy/network-network-connection-process

the benefits of implementing reforms in the near future so they can apply to the New England REZ, we recommend initially implementing separate NSW arrangements rather than NER modifications.

In the longer term, there may be benefit in the AEMC reviewing the NER connections provisions to consider whether there would be benefit in enhancing the NER provisions for network-to-network connections more broadly across the NEM, eg to address the connection of new contestable network projects or interconnectors in other jurisdictions. That would be preferable to maintain national consistency and allow the separate NSW arrangements to be removed. However, this currently appears to only be a material issue in NSW and a NER rule change process would not be completed in time for the New England REZ. We therefore recommend separate NSW obligations are implemented in the short term.

Separate NSW arrangements to strengthen the network-to-network connection arrangements could be made under the EII Act or EII Regulation, the *Electricity Supply Act 1995* (NSW) (Electricity Supply Act) or other relevant NSW legislation, or licence conditions. We recommend using a reasonably flexible mechanism such as the EII Regulation, licence conditions or guidelines issued by the Minister under the Electricity Supply Act, which can be implemented and amended more easily than including detailed regulatory obligations in primary legislation.

We recommend that a strengthened network-to-network connections regime includes the following:

- An obligation on existing NSW transmission network operators to facilitate the connection of other networks to their transmission networks on reasonable terms.
- Clear obligations regarding the process and timeframes for connecting new networks to the existing transmission network.
- Enhanced joint planning obligations on existing NSW transmission network operators and EnergyCo to engage with each other in relation to joint planning of network connection arrangements.
- Enhanced obligations on existing NSW transmission network operators and EnergyCo to provide information to each other to inform their respective functions.
- A mechanism for EnergyCo to commence negotiations on network-to-network connections in relation to a proposed project prior to the appointment of a preferred network operator for that project.
- An obligation on existing NSW transmission network operators to develop and publish template agreements and technical requirements for network-to-network connections.
- A mechanism to resolve disputes related to compliance with the above processes and timeframes or the technical or commercial terms for connection.

As a minimum, these arrangements should apply to Transgrid in relation to the connection to Transgrid's existing transmission network of RNIPs that are owned and operated by another network operator. Consideration should also be given to whether these arrangements should also apply to:

- other network-to-network connections (eg distribution-transmission connections);
- other NSW transmission network operators (eg future connections or a transmission or distribution network to a contestable RNIP); and/or
- other works required to be undertaken by an existing network operator to facilitate the connection and delivery of an RNIP that is owned and operated by another network operator, eg line crossings, access to easements, asset relocations or other minor works.

We recommend that the scope of the reforms is initially kept relatively narrow to enable early implementation. The regime could then be expanded to other scenarios later, or those broader scenarios could be covered as part of more comprehensive reforms to the NER connections provisions in the longer term as noted above.

The efficient costs incurred by existing NSW transmission network operators in complying with these obligations should be recoverable by the existing network operator, eg either as part of its charges for prescribed transmission services under the NER or as part of an enabling works RNIP under the EII Act.

Draft evaluation against the assessment criteria

This draft recommendation will promote the following aspects of the assessment criteria:

- **Promote timely planning and delivery of transmission projects**: Strengthened network-to-network connection processes will facilitate the timely planning and delivery of projects by avoiding the risks of delays that can arise under the current arrangements due to insufficiently clear obligations, processes, timeframes and information sharing requirements and barriers to commencing the connection agreement process until a contestable network operator has been appointed.
- **Promote efficient planning and delivery of transmission projects**: Clearer processes, timeframes and obligations and the publication of template connection agreements and technical requirements can enable more efficient connection processes.
- **Improve outcomes for NSW electricity consumers, local communities and taxpayers**: Faster and more efficient connection processes will contribute to improved outcomes for consumers by reducing transaction costs and reducing the risks of delays to projects that could improve affordability, reliability or security. The recommended new obligations may impose additional costs on Transgrid (and potentially other network operators depending on their scope), which will ultimately be recovered from NSW electricity customers. However, clearer arrangements and reciprocal information sharing obligations could reduce costs for both Transgrid and EnergyCo and decrease the risk of inefficient expenditure or delays, which would benefit both parties as well as customers. We consider that the benefits of a more efficient and timely connection process will outweigh any additional costs.
- **Provide clear and effective allocation and coordination of roles and responsibilities**: The recommendations will improve the clarity of roles and responsibilities related to the network-to-network connections process.
- **Effectively integrate with the NEM**: We recognise that the recommended changes would increase the differences between regulatory arrangements in NSW and other NEM jurisdictions. However, we do not consider that the recommendations would adversely impact NEM planning arrangements and consider that they are justified as a short-term response to NSW's specific circumstances. We have sought to recommend changes that minimise departures from the NER, and any new obligations are intended to address specific gaps in the NER rather than creating inconsistency between the two sets of obligations. In the longer term, there may be value in the AEMC reviewing the NER connection processes to implement suitable NEM-wide reforms that enable the removal of these specific NSW provisions.

2.3.3 A.3: Reform the system strength regulatory arrangements to clarify accountability for system strength planning in REZs and improve coordination

Overview of the draft recommendations

We recommend amendments to the system strength planning arrangements in NSW to clarify accountability for system strength planning in REZs and improving coordination of system strength planning between contestable REZs and the remainder of the NSW NEM region.

We recommend that the NSW government works with EnergyCo, AEMO, Transgrid and other relevant stakeholders to develop the details of regulatory changes to address the issues with the current system strength arrangements in REZs identified in section 2.1.3 above. We recognise that system strength is a highly complex and technical area and that further work will be required to develop detailed policy positions and drafting for

amendments to the EII Act and the NER as it applies in NSW. Our draft recommendation therefore focusses on the outcomes that should be achieved by regulatory reforms rather than proposing amendments to specific regulatory instruments or provisions.

The reforms should address the issues with the current arrangements that are identified in Box 6 in section 2.1.3 above and seek to achieve the following outcomes:

- A clear regulatory framework for planning, procuring, providing and maintaining system strength services in REZs.
- A clear process for planning the minimum and efficient levels of system strength in REZs, including both the initial system strength needs for a new RNIP and the ongoing planning and provision of system strength over time as needs change.
- A clear process for a person to be appointed to have equivalent responsibilities to the SSSP within a non-SSSP network, or for different people to perform different parts of those responsibilities (eg one person may be responsible for planning and procuring system strength in REZs while a different person may be responsible for providing, operating and maintaining system strength services in each RNIP).
- AEMO has equivalent functions and powers in relation to system strength within a non-SSSP network as it has in relation to system strength on the SSSP's network.
- Clarity of how AEMO and the SSSP account for system strength provided on a non-SSSP network when setting the minimum and efficient levels of system strength and planning and procuring system strength services for the overall NSW NEM region.
- Clear cost recovery arrangements for system strength functions performed on a non-SSSP network by AEMO and any person responsible for planning, procuring or delivering system strength services within a non-SSSP network.
- Clear joint planning obligations to support effective and coordinated planning of system strength within REZs and across the NSW NEM region.

We consider that these reforms should be implemented as a priority so that they apply to the final design and allocation of responsibilities for the New England REZ.

In addition to these planning-related issues, we note that different system strength charging arrangements, network operator cost recovery arrangements, generator access standards and generator self-remediation options also apply where system strength is provided by Transgrid as the SSSP under the NER compared with where it is provided by a contestable network operator in a REZ under the EII Act. While these issues are not directly related to planning and are outside of the scope of this review, we consider that there would be merit in the NSW government and EnergyCo seeking to minimise these differences where possible.

We do not consider that any specific changes are needed to the regulatory arrangements for planning inertia services, although there would be value in the NSW government considering opportunities to optimise the planning and provision of system strength and inertia when implementing our recommendation above. System strength is a locational service that must be provided in certain locations that are relatively close to connecting inverter-based resources. As a result, it is critical to have clear arrangements for how system strength is planned and provided in REZs. In contrast, inertia services can be provided anywhere in the NSW inertia sub-region, which covers the entire NSW NEM region, and it is less critical to have specific inertia planning arrangements in REZs. However, there are efficiency benefits in planning and producing system strength and inertia together, as many of the options of providing system strength can also provide inertia at no cost or only minor additional costs, meaning that the person who is the SSSP should also be the Inertia Service Provider.

Draft evaluation against the assessment criteria

As outlined in section 2.1.3 above, the current planning arrangements for system strength are complex. They primarily rely on the NER arrangements where Transgrid (in its role as SSSP for the NSW NEM region) and AEMO assess the system strength requirements for NSW and plan and procure system strength services to meet minimum and efficient levels of system strength to maintain system security and enable the connection and efficient dispatch of inverter-based generators. However, those NER arrangements are currently incompatible with the contestable REZ arrangements under the EII Act, with the obligations and powers of AEMO and Transgrid only applying to Transgrid's transmission network and not applying in contestable RNIPs such as the current CWO REZ or the proposed New England REZ.

In November 2024, EnergyCo and AEMO agreed a set of policy principles for the design and implementation of a consistent approach to manage system strength in the NSW REZs to address some of the above issues. We understand that Transgrid's feedback was integrated into the principles. We have reviewed these principles and they have informed our recommendations. However, these principles do not have any regulatory basis and would require amendments to relevant regulatory instruments to be implemented.

The issues with the current arrangements explained in section 2.1.3 created challenges for the CWO REZ, which was the first contestable transmission network in NSW. We consider that these issues will be even more challenging for the proposed New England REZ due to its proposed meshed design with multiple connection points to the existing Transgrid transmission network. This meshed design will make it significantly more difficult and less efficient to have different planning arrangements for system strength services on transmission networks that are owned and operated by different network operators but located very close to each other.

An increase in the number of contestable RNIPs that sit outside of the NER system strength framework will also make it increasingly challenging for AEMO and Transgrid to efficiently fulfil their NER obligations to plan, procure and operate system strength services for the entire NSW NEM region when they have no powers over contestable parts of the NSW transmission network, which could risk increased costs and reduced system security.

We therefore consider that urgent reforms to system strength regulatory arrangements in REZs are required to deliver on the review objectives and meet our assessment criteria.

In the options paper, we proposed two potential options for addressing issues with the current system strength planning framework. One option was to make targeted changes as in our draft recommendation above to amend the system strength planning arrangements to account for contestable network operators in NSW. The other option was to make a more significant changes to system strength roles and responsibilities by making EnergyCo the SSSP and Inertia Service Provider for NSW instead of Transgrid.

In developing our draft recommendations, we carefully considered both of these options against the assessment criteria. We also considered a potential approach of recommending targeted reforms to improve the system strength planning arrangements for REZs in the short term combined with a longer term change to make EnergyCo the SSSP and Inertia Service Provider, noting that a change to who is the SSSP would be a complex reform that could not be completed in time to apply to the New England REZ.

We recognise that there would be benefits in making EnergyCo the SSSP for NSW. Under such a model, EnergyCo would plan and procure system strength and inertia services across all of the NSW NEM region, but would not own or operate any system strength or inertia services. Its role would be similar to that of AEMO in Victoria, as an independent planner and procurer. This option would be the most comprehensive approach to simplifying system strength and inertia planning arrangements in NSW and creating consistent regulatory arrangements across NSW. It would also avoid any perception of a conflict of interest in Transgrid being both the planner and provider of system strength and inertia services.

We gave considerable thought to the potential benefits and costs of such an approach and how it could be implemented. If we were undertaking this review at the same time as the Roadmap was implemented in 2020 and the AEMC made the rule change to implement the NER system strength arrangements in 2020 to 2021, we may have recommended that EnergyCo be made the SSSP and Inertia Service Provider for NSW.

However, our draft assessment is that the costs and risks involved in making such a change now would outweigh the benefits. We consider that the targeted amendments to the system strength planning arrangements outlined in our draft recommendation above are sufficient to address the material issues with the current arrangements and better meet the review objectives and assessment criteria.

Making EnergyCo the SSSP and Inertia Service Provider for NSW would be a very complex reform. It would take considerable time to implement, risk losing the expertise Transgrid has built in this area, require a major increase in EnergyCo's expertise and resources, require EnergyCo to become subject to large parts of the NER and likely require significant amendments to the NER, and require complex transitional arrangements. In particular:

- As noted in the options paper, this option would require EnergyCo to become subject to significant parts of Chapters 5 and 6 of the NER that regulate planning, procuring and charging for system strength services (in a similar way to how those provisions apply to AEMO in Victoria). It would likely also require significant NSW modifications to the NER to enable a modified version of those NER system strength provisions to apply to EnergyCo. For example, EnergyCo would likely need to become a TNSP for the purposes of the chapter 5 provisions that implement the system strength planning framework and undertake RIT-Ts for system strength services that were planned and procured under the NER. Consideration would also need to be given to how EnergyCo would charge for system strength services, noting that Transgrid currently recovers its system strength costs partly through system strength charges to connecting parties and partly through its charges to all users in accordance with its AER-approved transmission pricing methodology and AER revenue determination. Unlike AEMO in Victoria, EnergyCo is not currently a TNSP, does not undertake RIT-Ts, is not involved in connections or transmission pricing and does not have a transmission pricing methodology.
- The required regulatory changes would take considerable time to develop, consult on, enact and implement. We estimate that they could not be implemented until 2027 at the earliest. This means that they could not be in place in time to apply to the New England REZ or other upcoming projects.
- Transgrid is currently close to completion of its RIT-T process for meeting NSW's forecast system strength requirements. Based on this RIT-T process, Transgrid will plan and procure system strength solutions to meet the system strength standards set by AEMO that commence on 2 December 2025 and forecast system strength requirements over the 2025 to 2033 period based on AEMO's forecasts of inverter-based resource connections. We agree with the comments by Akaysha Energy in its submission regarding the interactions between this RIT-T process and any potential reforms (see section 2.2.2) and consider that:
  - Any reforms to the system strength regulatory arrangements arising from our review should not delay this critical process, which has already taken almost three years and is now urgent to maintain system security when NSW coal power stations close.
  - Making EnergyCo the SSSP after Transgrid has already planned and procured large amounts of system strength services under the current arrangements would require extensive transitional arrangements that would further increase the complexity of the reforms.
  - The benefit of making EnergyCo the SSSP would be diminished given that Transgrid would have already planned and procured sufficient system strength to meet NSW's initial and forecast needs before this reform could be implemented.
- While EnergyCo has experience in planning and procuring system strength services in REZs, we agree with the comments EnergyCo and several other stakeholders made in submissions that the SSSP and Inertia

Service Provider roles would require considerable additional specialist expertise that EnergyCo does not currently have and would be a major change its functions. To perform these functions, EnergyCo would need to hire a significant number of additional staff, which is likely to be challenging given the specialist skills required and limitations on pay in government agencies, and may require more extensive changes to EnergyCo's current governance, funding and employment arrangements. Transgrid has built expertise in this area over the past four years, which is likely to be difficult to transfer to EnergyCo.

Our draft recommendation will promote the following aspects of the assessment criteria:

- **Promote timely planning and delivery of transmission projects**: The recommended reforms should be able to be implemented in time to apply to the New England REZ and other upcoming transmission projects. By clarifying roles and responsibilities and addressing gaps in the current regulatory arrangements, they will promote more timely planning and delivery of those projects than the current arrangements or the alternative option of making EnergyCo the SSSP and Inertia Service Provider for NSW.
- **Promote efficient planning and delivery of transmission projects**: The recommendations will enable more efficient planning of system strength. By clarifying responsibility for planning and procuring system strength in REZs and better coordinating system strength planning between REZs and the rest of NSW, the recommendations will minimise system strength costs and enable more coordinated planning. Compared to the alternative option of making EnergyCo the SSSP, the recommendations better recognise the specialist nature of system strength planning and the limited supply of appropriately skilled personnel. This recommendation will also work together with draft recommendation A.4 below to remove barriers to DNSPs providing system strength solutions on their distribution networks as either an RNIP or a PTIP where that is more efficient than a transmission solution.
- **Improve outcomes for NSW electricity consumers, local communities and taxpayers**: The recommendations will support improved consumer outcomes in relation to affordability and security of supply by addressing the current risks of duplication or gaps in system strength planning. Compared to the alternative option of making EnergyCo the SSSP and Inertia Service Provider, the recommendations will improve outcomes for consumers and taxpayer by avoiding the significant costs that would be incurred to expand EnergyCo's technical capabilities to perform these functions.
- **Provide clear and effective allocation and coordination of roles and responsibilities**: Implementing our draft recommendations would help clarify the allocation of system strength planning roles and responsibilities and allocate those roles to the bodies that are best placed to perform them. The alternative option of making EnergyCo the SSSP would more comprehensively address conflict of interest issues and minimise coordination challenges in the longer term, but could not be implemented in time to address those issues in the short term without delaying the planning and delivery of projects that are required to maintain system security and reliability and meet NSW's renewable energy and net zero targets.
- **Effectively integrate with the NEM**: None of the options under consideration neatly integrate with the NEM's planning arrangements under the NER due to NSW's specific circumstances. We consider that our recommendations appropriately allocate roles between NSW-specific and national bodies and strike an appropriate balance between NSW's specific circumstances and the benefits of integrated planning across the NEM. In particular, the recommendations enable AEMO to exercise the same system strength functions and powers in contestable REZs in NSW as it does in other parts of the NEM. That could also have been achieved by making EnergyCo the SSSP for NSW, which would have also increased alignment between the arrangements in Victoria and NSW, but would have either required extensive modifications to the NER or required extensive changes to EnergyCo's governance so that it became a TNSP similar to AEMO in Victoria.

We recognise that this draft recommendation will not address all of the issues that were identified with the current system strength arrangements in section 2.1.3. In particular, it will not fully address concerns that the current RIT-T and related NER processes for planning, procuring and delivering system strength services to

meet NSW's initial needs have taken considerable time and will not be complete until well after the December 2025 commencement of the NER's amended system strength planning requirements.

Where system strength projects are not delivered sufficiently promptly under the NER to meet urgent system security challenges, the NSW framework would enable them to be instead planned and delivered under the EII Act, either as a PTIP under the current arrangements or as an RNIP under this draft recommendation if located in a REZ. However, we consider that use of the PTIP process to accelerate projects that have already commenced the planning process under the NER should be a last resort and not used on a regular basis to address broader concerns about the length of the RIT-T, CPA and related NER planning and approval processes. A more efficient solution would be to address those aspects of the NER directly rather than turning to separate state-based planning processes.

We consider that there would be merit in the AEMC undertaking a review of the implementation of the system strength rules to consider whether the current rules strike the right balance between speed and rigour in the planning process. As discussed in draft recommendation B.4 in section 3.3.4 below, we also recommend that as part of its upcoming review of the ISP the AEMC consider how system strength projects can better integrated into the ISP, noting that the current system strength projects were unable to use the NER's streamlined RIT-T process or early works provisions because they are not actionable ISP projects.

2.3.4 A.4: Remove barriers to planning efficient distribution network projects under the EII Act

Overview of the draft recommendations

The EII Act's REZ network infrastructure project (RNIP) provisions currently apply equally to transmission and distribution projects. For example, the RNIP definition refers to 'network infrastructure' rather than being limited to transmission projects, and a distribution project has been recommended by EnergyCo and authorised by AEMO Services for the Hunter-Central Coast REZ on the basis that it was preferable to transmission network alternatives.

However, the EII Act's priority transmission infrastructure project (PTIP) provisions currently only apply to transmission network infrastructure projects and cannot be used for distribution projects.

Box 9: Current PTIP definition

The current definition of a PTIP in the EII Act is:

priority transmission infrastructure project is a transmission infrastructure project that—

(a) is located in the State, and

(b) is identified in or forms part of an infrastructure project identified in—

(i) the most recent integrated system plan published by AEMO under the *National Electricity Rules*, or

(ii) a project assessment draft report or project specification consultation report prepared under the *National Electricity Rules*.

We recommend amending the EII Act's PTIP definition to cover distribution network projects.

This could be achieved by:

- amending the words 'a transmission infrastructure project' to instead either refer to 'a transmission or distribution infrastructure project' or 'a network infrastructure project'; and
- adding a new subparagraph (iii) to cover a project that is identified in the relevant RIT-D reports, ie 'an options screening report or draft project assessment report prepared under the National Electricity Rules'.[41]

Draft evaluation against the assessment criteria

The aim of this recommendation would be to remove barriers to planning and approving distribution projects that are more efficient alternatives to transmission network options. It would enable the EII Act's processes for planning and approving RNIPs and PTIPs to apply equally to transmission and distribution projects that benefit electricity customers and meet the objects of the EII Act.

Several stakeholders we met with during our consultations emphasised the importance of strategic and proactive planning of DNSPs' sub-transmission networks in NSW to replace aging network assets and augment capacity to maintain reliability within the Sydney-Newcastle-Wollongong load centres. This could include opportunities to convert current distribution network assets to transmission voltages to increase the capacity of those parts of the network. Several submissions also noted the impact of data centres, industrial electrification and other new load, generation and storage connections to distribution networks, and the importance of accounting for those connections in strategic network planning as is discussed further in section 3.3.3 and draft recommendation B.3 below. These factors mean that planning under the EII Act needs to address both transmission and distribution options and provide planners with suitable regulatory pathways to plan and approve critical projects that are required to maintain reliability and system security regardless of the voltage level of the relevant project.

This recommendation would enable fast-tracking of urgent distribution projects that are required to address reliability or system security needs where the standard NER processes may be too slow to address the need or may face other barriers. For example, PTIPs could be used to facilitate upgrades to the sub-transmission network in Sydney to enable energy from the REZs to reach customers and maintain reliability. PTIPs could also potentially enable DNSPs to play a greater role in the provision of system strength services without being the SSSP, for example by enabling a synchronous condenser or other system strength solution to be located on a distribution network if that is more efficient than a transmission network location and there were barriers to that approach under the NER's system strength provisions.

This recommendation would also work together with our draft recommendations to enhance joint planning between EnergyCo and DNSPs and make EnergyCo the exclusive Infrastructure Planner for all EII Act projects (see sections 2.5.1 and 2.5.2 below) to clarify and reinforce that EnergyCo plays a key role in coordinating the planning and delivery of strategic transmission and distribution projects across NSW rather than only being the planner for the 5 declared REZs. This would enable EnergyCo to play a key coordinating role in ensuring that the NSW transmission and distribution network is planned holistically from generators in the REZs to customers in the main cities, rather than stopping planning at the boundaries of the transmission networks as has been an acknowledged limitation of previous ISPs. As discussed in section 2.5.1 below, EnergyCo would not take over or duplicate the detailed planning of TNSPs' and DNSPs' existing networks and would rely on the detailed network knowledge of the TNSPs and DNSPs.

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41 Consideration could also be given to renaming PTIPs as 'priority network infrastructure projects', but this change does not appear strictly necessary and would require numerous consequential changes in the EII Act and EII Regulation and related guidelines and other documents.

The intention of this recommendation is not to convert every distribution project that meets the RIT-D threshold (currently $7 million) into an EII project instead of being planned and approved under the NER. We expect that the vast majority of distribution projects would continue to be planned and approved under the NER, and PTIPs would continue to be used sparingly. Projects would still need to meet the other requirements to become a PTIP, including the tests set out in section 34(3) of the EII Act. Section 34(3) requires that the Minister must not direct a network operator to carry out a PTIP unless satisfied that it is an appropriate response to a breach of the NSW Energy Security Target identified in an EST Monitor Report or a forecast system security service shortfall identified in the most recent ISP and is in the public interest. We also note that draft recommendation A.7 below recommends clarifying the criteria for deciding which projects should be planned under EII Act instead of the NER (see section 2.4.3).

This draft recommendation will promote the following aspects of the assessment criteria:

- **Promote timely planning and delivery of transmission projects**: It will enable faster planning and approval of distribution network projects that are required to address an urgent reliability or system security risk.
- **Promote efficient planning and delivery of transmission projects**: It will improve efficient planning and delivery by removing barriers to distribution network projects that are a more efficient option than transmission network alternatives.
- **Improve outcomes for NSW electricity consumers, local communities and taxpayers**: It will support improved reliability and system security outcomes by reducing barriers to accelerating projects that are required to address urgent reliability or system security risks. It will also support affordability by removing barriers to adopting distribution options where they are lower cost than transmission options.
- **Effectively integrate with the NEM**: It will integrate with the NEM by retaining the existing PTIP triggers that require a PTIP to be identified in the ISP or a regulatory investment test report under the NER. It will also work together with draft recommendations A.7 and B.3 below to provide increased clarity on which projects are planned and delivered under the NSW and national frameworks and better incorporate significant distribution projects in national and NSW planning reports.

2.4 DRAFT RECOMMENDATIONS: MEDIUM TERM REFORMS TO CLARIFY ROLES AND RESPONSIBILITIES

Our draft recommendations for medium term actions to clarify roles and responsibilities are summarised in the table below and explained in the following sections.

Table 2.7: Draft recommendations for medium term reforms to clarify roles and responsibilities

Draft recommendation	Prioritisation
A. Clarifying, streamlining and coordinating responsibility for transmission planning in NSW	
Medium term reforms to clarify roles and responsibilities	
A.5: Clarify EnergyCo's current planning functions in the EII Regulation	By mid-2026
A.6: Require EnergyCo to consult on and publish a guideline explaining its planning functions and how it will perform them	By the end of 2026
A.7: Clarify which projects should be planned and approved under the EII Act instead of the NER	By the end of 2026
A.8: Clarify which projects should be procured contestably	By the end of 2026

2.4.1 A.5: Clarify EnergyCo's current planning functions in the EII Regulation

Overview of the draft recommendations

All stakeholders who made submissions to the consultation paper and options paper considered that the current regulatory arrangements for transmission planning in NSW were complex and unclear, with a lack of clarity on the respective roles and responsibilities of the various parties involved in transmission planning.

To help address this issue, we recommend amending the EII Regulation to clarify EnergyCo's planning-related functions as Infrastructure Planner. This recommendation would work together with draft recommendation A.6 (require EnergyCo to consult on and publish a guideline explaining its planning functions and how it will perform them – see section 2.4.2) to provide much needed clarity on the current allocation of roles and responsibilities for transmission planning in NSW under the EII Act.

We consider that this clarity should be provided by a combination of changes to the EII Regulation and new EnergyCo guidelines. We considered whether the same outcomes could be achieved by either amending the EII Regulation or developing new guidelines, but we consider that it would be preferable to use a combination of both tools as they serve complementary purposes:

- Amendments to the EII Regulation provide a clear legal basis for EnergyCo's functions and powers and recovery of the costs of exercising those functions.
- Development of an EnergyCo guideline can provide more detailed guidance on those functions and how EnergyCo intends to exercise them in practice and can be more easily amended over time to provide additional guidance or examples on new issues.

This recommendation focusses on EnergyCo because we consider that the planning functions of other bodies will be sufficiently clear once our other recommendations are implemented, including draft recommendation A.1 in relation to AEMO Services' authorisation function. We also note that AEMO Services already publishes a detailed Network Authorisation Process paper which explains its authorisation functions (which it updates whenever the EII Act or EII Regulation are amended)[42] and the AER publishes detailed guidelines explaining its functions.[43] We recommend that EnergyCo's guideline briefly explains the planning functions of other relevant bodies and how they differ from EnergyCo's functions, similar to the introductory sections of AEMO Services' Network Authorisation Process paper.

The EII Act and EII Regulation currently provide some guidance on EnergyCo's functions as Infrastructure Planner.[44] However, most of these provisions relate to the Infrastructure Planner's access-related roles and specific functions under chapter 9A of the NER or impose obligations on how it exercises specific functions such as the content of its recommendations or the conduct of its competitive assessment processes. Schedule 1A sets out a detailed and comprehensive six-page list of the Infrastructure Planner's access functions. In contrast, there is very little clarity in the EII Act or EII Regulation on EnergyCo's roles in planning RNIPs and PTIPs beyond the high-level statement that the Infrastructure Planner's role includes 'to investigate, plan, co-ordinate and carry out planning, design, construction and operation of storage and network infrastructure.'[45]

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42 Available at https://aemoservices.com.au/-/media/services/files/publications/authorisation-function/241203-december-network-authorisation-process-and-approach-paper.pdf?la=en

43 Available at https://www.aer.gov.au/about/strategic-initiatives/renewable-energy-zones/guidelines-nsw-rez

44 In particular, section 30 of the EII Act set out its functions for recommending RNIPs, section 63(4) provides a high-level description of the Infrastructure Planner's role, clauses 42C to 42D of the EII Regulation provide more information on its access-related roles, clause 42E notes that it has roles under chapter 9A of the NER, clause 43 to 45 of the EII Regulation regulate the content of the Infrastructure Planner's recommendations for RNIPs and PTIPs and the conduct of its competitive assessment process, Schedule 1A of the EII Regulation provides considerable detail on its access-related roles and Schedule 1B provides more details on its roles under chapter 9A of the NER.

45 See section 63(4)(c) of the EII Act.

We recommend adding a new schedule to the EII Regulation that sets out the Infrastructure Planner's functions to investigate, plan, coordinate and procure network infrastructure including relevant RNIPs and PTIPs. This schedule would be modelled on Schedule 1A, which sets out the Infrastructure Planner's access functions.

This schedule should reflect the full range of the Infrastructure Planner's planning functions, including the following:

- Investigating, assessing options and making recommendations for RNIPs and PTIPs.
- Planning REZs, including planning RNIPs and PTIPs, coordinating network, generation and storage infrastructure in REZs, and other related functions.[46]
- Undertaking development activities and early works to facilitate the planning and delivery of RNIPs and PTIPs.[47]
- Assessing, monitoring and enforcing potential RNIP or PTIP network operators' proposed RES Board Plan and First Nations Guideline commitments.
- Procuring and entering into agreements with network operators for the delivery of RNIPs and PTIPs.
- Making recommendations to the Minister in relation to new or amended REZ declarations or REZ access scheme declarations.
- Engaging in joint planning with TNSPs, DNSPs, AEMO and jurisdictional planning bodies in other NEM jurisdictions.
- Providing information on potential network options to AEMO and AEMO Servies to inform the ISP, IIO Report and other relevant planning reports.
- Preparing the Network Infrastructure Strategy (or the NSW System Plan if and when recommendation B.1 below is implemented).
- Engaging and consulting with stakeholders to inform the planning of potential RNIPs or PTIPs, including leading engagement with local communities, electricity customers or their representatives and First Nations people.

We consider that all of the above functions are currently undertaken by EnergyCo in its role as Infrastructure Planner. However, many of these functions are not referred to in the EII Act or EII Regulation and only those people who are closely involved in the operation of the Roadmap would know that EnergyCo's responsibilities include these matters and probably several other matters that are not listed here.

We recommend that these changes are made by mid-2026. They should reflect EnergyCo's current roles, as amended by our short-term recommendations in section 2.3. The changes to the EII Regulation should be made prior to EnergyCo finalising its guideline (which should occur by the end of 2026 at the latest) so the guideline is consistent with the EII Regulation.

We recognise that further amendments will be needed once the longer-term recommendations in section 2.5 below are implemented. However, we consider that greater clarity would be valuable in the short to medium term and that this recommendation should not wait until the longer term recommendations are implemented, which may not be until late 2027. Additional amendments to the EII Act or EII Regulation will be needed to implement our longer-term recommendation to make EnergyCo the Jurisdictional Planning Body and exclusive

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46 For example, EnergyCo is currently coordinating enabling projects including Port to REZ road upgrades and the Newcastle Logistics Precinct – see https://www.energyco.nsw.gov.au/our-projects/enabling-projects. It would be helpful to clarify whether EnergyCo is performing these functions as part of its role as Infrastructure Planner for the CWO and New England REZs or in a different capacity.

47 For example, early works should include prudent actions to mitigate the risk of delays, such as easement acquisition and actions to enable the timely procurement of long lead time assets.

Infrastructure Planner (see draft recommendation A.9 in section 2.5.1 below), and the schedule of the Infrastructure Planner's planning functions could be updated at the same time.

Draft evaluation against the assessment criteria

This draft recommendation primarily promotes the assessment criterion of providing clear and effective allocation of roles and responsibilities. It does not involve any material changes to current roles and responsibilities, but will provide stakeholders with greater clarity in the respective roles, responsibilities and objectives of the bodies undertaking transmission planning and related functions. This should indirectly also support other assessment criteria by reducing the risks that unclear roles and responsibilities could lead to less timely or efficient planning and make it harder for local communities and consumers to engage effectively in planning decisions.

2.4.2 A.6: Require EnergyCo to consult on and publish a guideline explaining its planning functions and how it will perform them

Overview of the draft recommendations

We recommend that EnergyCo develop, consult on and publish a guideline explaining its planning functions as Infrastructure Planner and how it intends to perform those functions. This guideline should include EnergyCo's approach to stakeholder engagement setting out how EnergyCo will consult with stakeholders when exercising its functions.

We recommend that EnergyCo is required to consult on and publish this guideline by the end of 2026, and to update and maintain it to reflect any changes to its functions.

As noted in the section above, this recommendation would work with our recommended amendments to the EII Regulation to clarify EnergyCo's planning-related functions as Infrastructure Planner. There is currently no publicly available material explaining these functions. DCCEEW (or its predecessors) published several policy papers in 2020-2022 when the regulatory arrangements for the Roadmap were being developed, but there are no comprehensive and up-to-date explanations. EnergyCo published a draft version of Network Authorisation Guidelines in May 2022 that described at a very high-level the process EnergyCo will undertake in developing recommendations about RNIPs, but a final version was never published and there is no guidance material on its other planning-related functions other than general descriptions on its website.

As discussed in the following sections, this guideline will also be a useful mechanism for implementing two of our other draft recommendations as a more efficient and flexible alternative to EII Act or EII Regulation amendments.

Draft evaluation against the assessment criteria

We consider that developing a guideline explaining EnergyCo's functions will be a relatively simple and low cost way of significantly increasing clarity and stakeholder understanding of the roles, responsibilities and processes for planning network projects under the EII Act and the opportunities for stakeholders to engage in those processes.

It will promote the assessment criterion of providing clear and effective allocation and coordination of roles and responsibilities. It will also facilitate more effective consultation and engagement with affected stakeholders including consumers and local communities by requiring EnergyCo to consult on a stakeholder engagement plan as part of the guideline and clarify how stakeholders can engage in EnergyCo's various planning functions and decisions.

2.4.3 A.7: Clarify which projects should be planned and approved under the EII Act instead of the NER

Overview of the draft recommendations

We recommend specifying criteria that will be used to determine which projects will be planned, approved and delivered under the EII Act instead of the NER.

We recommend that these criteria are developed and consulted on by EnergyCo and included in the guideline referred to in draft recommendation A.6 above. We considered whether the criteria should instead be set out in the EII Regulation, but consider that a guideline will be more effective as it can provide more detailed guidance than regulations, be more flexible and adaptable over time, and is better suited to development through consultation with stakeholders. We welcome stakeholders' views on which approach is preferable.

These criteria would not replace or override the statutory tests for a project to be a RNIP or a PTIP under the EII Act or the formal process for recommending and authorising or directing an RNIP or PTIP. Instead, they would provide greater clarity on how EnergyCo will assess whether projects should continue to be planned and delivered by AEMO and the relevant TNSP and DNSP under the NER or should instead be planned and delivered by EnergyCo and the relevant network operator as an RNIP or PTIP under the EII Act.

We consider that these criteria should be developed by EnergyCo in consultation with stakeholders through a public consultation process as part of the development of a guideline. As a result, we do not set out recommended principles in this report. However, to inform the development of the guideline and consultation process, our views are that:

- The NER should be the default regime for planning, approving and delivering transmission and distribution network projects.
- Projects should only be planned, approved and delivered under the EII Act where there are specific circumstances that mean that it would better promote the objects of the EII Act for these projects to become an RNIP or PTIP, for example where:
  - the project is necessary to meet the infrastructure investment objectives, a target breach in an ESTM Report, or a forecast system security service shortfall (an 'identified NSW investment need') and EnergyCo considers that the identified NSW investment need is not likely to be met in a sufficient timeframe under the NER framework;
  - the project is located in a REZ and the impact on local communities or the benefits of coordinated network, generation and storage investment planning means that the project should be planned and approved as an RNIP under the EII Act; or
  - the project meets the criteria to be a contestable project (see section 2.4.4 below) and EnergyCo considers that planning and procuring it as a contestable project under the EII Act would result in more efficient outcomes than if it was delivered by the relevant TNSP or DNSP under the NER.
- Interconnectors and other projects that materially affect inter-regional flow paths should be jointly planned by AEMO and the relevant TNSPs in each region under the NER unless there are exceptional circumstances that justify planning them under the EII Act.

Draft evaluation against the assessment criteria

As discussed in section 2.1.4, the EII Act has created an alternative pathway for planning and approving transmission projects in NSW so that projects can be planned, approved and delivered under either the national regulatory regime in the NEL and NER or the NSW regime under the EII Act. The EII Act contains tests for RNIPs and PTIPs, but those tests are relatively broad and could be met by most current actionable or future ISP projects and many other significant transmission and distribution projects. As a result, there is currently

not a clear test or criteria for which projects should be planned under each regime and EnergyCo has considerable discretion as to which projects to recommend as an RNIP or PTIP.

There is also currently no clarity on the criteria or processes that EnergyCo would use when deciding whether a project that is currently an actionable or future ISP project should become an RNIP or PTIP. We note that this movement between regimes occurred for the Hunter Transmission Project, which was originally an actionable ISP project in the 2022 ISP (it was then called Sydney Ring North) but is now being planned as a PTIP. A similar decision may also need to be made soon on whether the Sydney Ring South project (also called 'Reinforcing Sydney, Newcastle and Wollongong Supply (Southern Ring)') remains under the NER or becomes an EII Act PTIP. Sydney Ring South was an actionable ISP project in the 2022 and 2024 ISPs and Transgrid has commenced preparatory activities for its planning under the NER.[48] However, both the ISP and EnergyCo's NIS note that the project may be delivered under the NER or the EII Act. We consider that the Sydney Ring South project is becoming increasingly urgent so that energy from the SW REZ, and from other states and Snowy via Energy Connect, VNI West and HumeLink, can reach the major load centres in Sydney, Newcastle and Wollongong and maintain reliability when coal-fired power stations close.

Developing, consulting on and publishing criteria for assessing which projects are planned and delivered under the EII Act instead of the NER will provide much needed clarity on these issues. It will promote the following aspects of our assessment criteria:

- **Promote timely and efficient planning and delivery of transmission projects**: Clear criteria for which projects are planned and delivered under each regime will support more efficient and timely planning decisions and delivery of projects, including where the planning and delivery of critical projects needs to be accelerated to meet of NSW's legislated objectives for a clean, affordable, reliable power system and net zero targets. It will also discourage inefficient forum shopping by proponents of projects that may perceive one regime as preferable to another due to the nature of the approval process or the cost recovery arrangements.
- **Provide clear and effective allocation and coordination of roles and responsibilities**: This recommendation will help provide clarity on the allocation of roles and responsibilities of various planning bodies and support clear and transparent decision making.
- **Effectively integrate with the NEM**: This recommendation will help allocate transmission planning roles more clearly and efficiently between NSW and national bodies and provide greater clarity on how those roles are allocated. As noted above, we consider that the NER should be the default framework for planning, approving and delivering major transmission and distribution network projects, with clear and transparent criteria setting out the circumstances that justify adopting an alternative planning and delivery pathway under the EII Act.

2.4.4 A.8: Clarify which projects should be procured contestably

Overview of the draft recommendations

We recommend specifying criteria that will be used to determine which EII Act projects will be planned and procured contestably rather than delivered on a non-contestable basis by the relevant incumbent TNSP or DNSP.

As with the criteria above for which projects are planned under the EII Act or the NER, our draft view is that these criteria are developed and consulted on by EnergyCo and included in the guideline referred to in draft recommendation A.6 above. We considered whether the criteria should instead be set out in the EII Regulation, similar to the contestability tests that currently apply in Victorian under the NER. We consider that

[48] See Transgrid's ISP Preparatory Activities Report for the project, available at https://aemo.com.au/-/media/files/major-publications/isp/2023/teor-reference-materials/transgrid--reinforcing-sydney-newcastle-and-wollongong-supply-southern-ring.pdf?la=en

a guideline is likely to be more effective for similar reasons to those set out above, but we would welcome views on which approach is preferable.

We note that EnergyCo proposed draft contestability criteria in its draft Network Authorisation Guidelines in 2022, but never finalised those guidelines or responded to stakeholder feedback on the draft guidelines.

All stakeholders who commented on this issue in submissions to options paper supported the establishment of contestability criteria. However, there were a range of views on the appropriate criteria.

We recommend that the appropriate criteria are developed by EnergyCo in consultation with stakeholders through a public consultation process as part of the development of its guideline. We recommend that this process considers and consults on the circumstances in which the benefits of contestability are likely to outweigh the additional costs and complexity created by contestability. We note that several stakeholders submitted that contestability should be the default approach. We consider that contestability can have benefits, but that many projects will not be suitable for contestability because they are not readily separable from the existing backbone network and making them contestable would lead to higher costs or system security or reliability risks.

Draft evaluation against the assessment criteria

This recommendation will primarily promote the assessment criterion of providing clear and effective allocation and coordination of roles and responsibilities. It will help provide clarity on the allocation of roles and responsibilities of various planning bodies and support clear and transparent decision making. It will also facilitate more effective consultation and engagement with affected stakeholders through developing the criteria as part of a public consultation process.

2.5 DRAFT RECOMMENDATIONS: MEDIUM TO LONGER TERM REFORMS TO BETTER COORDINATE TRANSMISSION PLANNING ACROSS NSW

Our draft recommendations for medium to longer term actions to better coordinate transmission panning across NSW are summarised in the table below and explained in the following sections.

Table 2.8: Draft recommendations to better coordinate transmission planning across NSW

Draft recommendation	Prioritisation
A. Clarifying, streamlining and coordinating responsibility for transmission planning in NSW	
Medium to longer term reforms to better coordinate transmission planning across NSW	
A.9: Make EnergyCo the Jurisdictional Planning Body for NSW and exclusive Infrastructure Planner so it can coordinate planning across NSW	By 2027, before the first NSW System Plan is published
A.10: Extend the NER joint planning provisions to apply to EnergyCo and enhance joint planning between EnergyCo, TNSPs, DNSPs and AEMO	By 2027, before the first NSW System Plan is published

2.5.1 A.9: Make EnergyCo the Jurisdictional Planning Body and exclusive Infrastructure Planner so it can coordinate planning across NSW

Overview of the draft recommendations

We consider that EnergyCo should coordinate the planning of strategic network projects across NSW. In order to perform this role more effectively, we recommend that EnergyCo becomes:

- the Jurisdictional Planning Body (JPB) for NSW under the NER; and
- the exclusive Infrastructure Planner for all REZs and projects under the EII Act.

Appointing EnergyCo to these roles will help clarify the allocation of roles and responsibilities and enable a single party that has no actual or perceived conflicts of interest to coordinate the planning of all strategically important network projects across NSW. We consider that the JPB role should be performed by a person who is independent of any electricity market participants, subject to obligations to act consistently with the public interest and can coordinate planning across all transmission and distribution networks in NSW. EnergyCo can become the JPB for NSW by appointment by the NSW Minister for Energy under the NER.

We also recommend that EnergyCo is also made the exclusive Infrastructure Planner under the EII Act. Currently, EnergyCo has only been appointed as the Infrastructure Planner for the five currently declared REZs and two PTIPs. Any other person can be appointed by the Minister as the Infrastructure Planner for new REZs or PTIPs. While we recognise the potential value of flexibility, we consider that the ability to appoint multiple Infrastructure Planners is unnecessary, significantly complicates the allocation of planning roles, and is inconsistent with the role that we envisage EnergyCo playing in coordinating planning across NSW.

We recommend that section 63 of the EII Act is amended to appoint EnergyCo as the Infrastructure Planner for all REZs and remove section 63(2) which allows different Infrastructure Planners to be appointed for different REZs or parts of REZs.

We note that the EII Act is currently unclear on whether an Infrastructure Planner must be appointed in relation to a PTIP, with section 63 of the EII Act only referring to REZs but clause 43 of the EII Regulation also requiring the Infrastructure Planner to make recommendations about PTIPs in relation to which the Infrastructure Planner is appointed. We recommend that EnergyCo becomes the Infrastructure Planner for all PTIPs.

When implementing this recommendation, the NSW Government should consider whether the EII Regulation should require a recommendation from the Infrastructure Planner for all PTIPs and, if so, how to ensure that the required contents of the recommendation are not unduly onerous so as to risk delaying PTIPs that may be necessary to address urgent reliability or security issues. We note that the EII Act and EII Regulation contain detailed and prescriptive requirements for the contents of RNIP recommendations, but do not contain similar requirements for PTIP recommendations. PTIP recommendations should be proportionate to the cost and impacts of the project and the urgency of the reliability or security issue that project is addressing. We consider that PTIP recommendations should ideally be prepared in all cases, but there may be merit in including exceptions to the requirement for a recommendation from the Infrastructure Planner for minor or urgent projects.[49]

[49] In the absence of a recommendation from the Infrastructure Planner, DCCEEW could instead make a recommendation to the Minister. For example, we note the potential precedent of the NER RIT-T exemptions for projects that are required to address an urgent and unforeseen issue that would otherwise put at risk the reliability of the network or that have an estimated capital cost of below $8 million – see NER clauses 5.16.3.

In performing these roles, EnergyCo's function would be to *coordinate* planning of strategic network projects across NSW. EnergyCo would not take over any of Transgrid's other planning functions or any of the current planning functions of the NSW DNSPs.

We consider that Transgrid should continue to have a major role in transmission planning in NSW, including continuing to:

- plan its network
- undertake joint planning with EnergyCo, AEMO and DNSPs
- publish its TAPR
- be the System Strength Service Provider and Inertia Service Provider for NSW
- plan connections to its network
- be responsible for transmission pricing, including being CNSP for NSW
- undertake all of its current system security, system control and system operation functions, and
- plan and deliver NER transmission projects and EII Act projects where it is the TNSP or network operator.

We do not recommend that EnergyCo takes on the System Strength Service Provider or Inertia Service Provider roles or that EnergyCo's NSW System Plan replaces TNSPs' and DNSPs' TAPRs and DAPRs. TNSPs and DNSPs would continue to plan their individual networks and perform those functions. EnergyCo's role as JPB, Instructure Planner and publisher of the NSW System Plan would be to work with the TNSPs, DNSPs, AEMO and other stakeholders to drive more coordinated, consistent and independent planning across NSW (in addition to its other existing functions).

We note from our discussions with stakeholders that there can be some confusion as to what functions are part of the JPB role given that Transgrid currently performs a number of related planning roles under the NER as outlined in section 2.1.2. We are only recommending that EnergyCo takes on the roles that are specifically allocated to the JPB under the NER, which are set out in the following table.

Table 2.9: Responsibilities of the Jurisdictional Planning Body under the NER

Responsibility	NER clause	Would EnergyCo take on this role?
Prepare REZ Design Reports: If required by the ISP, the JPB must prepare and publish a REZ design report. If the ISP requires preparatory activities to be undertaken in relation to a REZ, the JPB must ensure those preparatory activities are undertaken as part of preparing the REZ Design Report.	5.24	**Yes** No REZ Design Reports have been required to date, with AEMO noting in the ISP that they would overlap with existing reports under the EII Act. If such a report was required in future, EnergyCo is the most suitable person to prepare it as it would contain similar information to reports and recommendations EnergyCo already prepares as Infrastructure Planner for NSW's REZs.

Responsibility	NER clause	Would EnergyCo take on this role?
Assist AEMO with its NTP functions: A JPB must assist AEMO in connection with its performance of its National Transmission Planner (NTP) functions (which includes AEMO's ISP functions) on request by AEMO.	5.22.17	**Yes** EnergyCo would work with NSW TNSPs and DNSPs to assist AEMO and provide any information AEMO requires. There are considerable synergies between this role and our recommendation that EnergyCo prepares a NSW System Plan, which will require close coordination between EnergyCo and AEMO to maximise consistency between the ISP and NSW System Plan.
Assist AEMO with the ESOO: The JPB must provide AEMO with information and assistance AEMO requires for preparing the ESOO on request by AEMO.	3.13.3A	**Yes** EnergyCo would work with NSW TNSPs and DNSPs to collate the information AEMO requires. EnergyCo currently prepares similar inputs for the IIO Report, and will need to work with AEMO to ensure consistency between the ESOO and NSW System Plan.
Inter-network power system tests: AEMO must consult with *jurisdictional planning representatives* on inter-network tests and setting changes related to proposed new or modified transmission lines, generating units, bidirectional units, or changes to power system stabilisers or settings that may have a material inter-network impact. AEMO must consult and have regard to any advice from *jurisdictional planning representatives* on AEMO's criteria for assessing whether a proposed transmission network augmentation is reasonably likely to have a material inter-network impact.	5.7.7 and 5.21	**EnergyCo could either perform this role with support from Transgrid or nominate Transgrid as its representative to perform this role** EnergyCo stated in its submission that it does not currently have any capability to undertake this function and would need to expand its resourcing to do so. We note that this obligation applies to *jurisdictional planning representatives*, not to the JPB. NER chapter 10 defines the jurisdictional planning representative as 'The representative from the Jurisdictional Planning Body for a participating jurisdiction nominated by that Jurisdictional Planning Body as the jurisdictional planning representative for that participating jurisdiction'. These are the only NER provisions that use this term. We recommend that EnergyCo either obtains support from Transgrid to enable it to perform this function or nominates an appropriate person from Transgrid to be the jurisdictional planning representative for these functions (with Transgrid's agreement).
System Strength Service Provider (SSSP)	5.20C.3	**No** EnergyCo would not become the SSSP for the NSW NEM region. This role would continue to be performed by Transgrid. This is consistent with the current NER provisions, which provide that the JPB is only the SSSP if the JPB is a TNSP, otherwise the CNSP for the region is the SSSP. EnergyCo is not a TNSP under the NER and we do not recommend making it one. Transgrid is the CNSP for NSW.

Responsibility	NER clause	Would EnergyCo take on this role?
Inertia Service Provider	5.20B.4	**No** We recommend that EnergyCo would not become the Inertia Service Provider for the NSW inertia sub-network. This role should continue to be performed by Transgrid. This would require a modification to the NER.[50] The NER Inertia Service Provider provisions do not include the same flexibility that is included in the SSSP provisions noted above. They provide that if there is more than one TNSP in an inertia sub-network then the JPB for that inertia sub-network is the Inertia Service Provider. We consider that this inconsistency is likely to be inadvertent and that it would be unworkable for EnergyCo to be the Inertia Service Provider without also being a TNSP and the SSSP. As discussed in section 2.3.3, we do not consider that EnergyCo should become the SSSP or Inertia Service Provider for NSW.

Transgrid should have a clear right to recover costs it incurs in assisting EnergyCo in the performance of its JPB functions and in assisting with the transition of these functions to EnergyCo. Transgrid should be able to recover these costs as part of its regulated charges under the NER. The NSW Government should consider whether any modifications to the NER are required to clarify that this assistance by Transgrid is a 'prescribed transmission service' as defined in Chapter 10 of the NER.

The NSW Government and IPART should also review Transgrid's current transmission licence conditions to consider if any changes are necessary to reflect it ceasing to be the JPB for NSW. The NSW government should also engage with the ACT government to ensure continued coordinated transmission planning for the NSW NEM region, which includes the NSW and the ACT (noting that the JPB role only apply to the jurisdiction, ie NSW, not the broader NSW NEM region).

EnergyCo noted in its submission that it would require access to NEM information held by AEMO to perform some of these JPB functions. It cannot currently access this information because it is not a Registered Participant under the NER. We understand that this issue also impacts EnergyCo's performance of some of its current functions. We note that recent amendments to the NEL allow AEMO to share certain types of information with additional parties.[51] It is unclear whether these amendments are sufficient for EnergyCo's needs as JPB.

We recommend the NSW Government engage with AEMO and EnergyCo to determine whether EnergyCo requires additional access to AEMO information. If it is determined that it does require such information and that the recent changs to the NEL are not sufficient, then we recommend that NSW make modifications to the NER as it applies in NSW (or submit a rule change request to the AEMC) to address this issue and enable EnergyCo to access information held by AEMO that it requires to perform its functions. Our initial view is that this would best be achieved by amending the NER to deem a Jurisdictional Planning Body who is not otherwise a Registered Participant to be a Registered Participant for specific provisions of the rules including the provisions that enable it to access the information it requires to perform its functions and the dispute resolution and confidentiality provisions in Parts B and C of Chapter 8. This is consistent with the approach

50 This change could be made by NSW modifications to the NER as it applies in NSW to provide that if the JPB is not a TNSP then the CNSP is the inertia service provider for the relevant inertia sub-network. Alternatively, the NSW government could submit a rule change to the AEMC, which we consider should meet the requirements for a non-controversial rule change.

51 See the *Statutes Amendment (National Energy Laws) (Data Access) Act 2025*.

already adopted in the NER Chapter 10 definition of Registered Participant for several other roles. That definition currently provides that several other types of bodies who are not registered by AEMO under Chapter 2 are a Registered Participant for the purposes of specific provisions of the NER.

As discussed in section 4.3.2 below, we also recommend that the NSW Government review EnergyCo's governance and funding arrangements to ensure that it has the resources, staff and funding it requires to perform these new and expanded functions effectively.

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Transgrid is currently the JPB for NSW and has performed that role since the JPB role was first added to the NER in 2009. This was appropriate when Transgrid was a public body that was the sole TNSP in NSW (except for parts of Ausgrid's network that operate at transmission voltages and the Directlink interconnector) and the most appropriate body to lead and coordinate transmission planning across the entire state.

However, the establishment of EnergyCo and the introduction of contestability has significantly complicated the allocation of roles and responsibilities and meant that there is currently no single person that has the clear responsibility and ability to coordinate planning across all networks in NSW.

NSW currently has four TNSPs and three DNSPs, with potential for more TNSPs in future due to contestability. Transgrid no longer has the lead role in planning increasingly significant parts of the state's transmission network, with EnergyCo leading the planning of REZs and PTIPs. There are also challenges in the alignment of Transgrid's interests if it is coordinating planning across the entire state given that it is a private business that is subject to commercial incentives, is not required to act consistently with the long-term interests of consumers or the objects of the EII Act, and has a subsidiary that competes with other TNSPs and DNSPs for contestable projects.

We consider that the JPB role should be performed by a person who is independent of any electricity market participants, subject to obligations to act consistently with the public interest and can coordinate planning across all transmission and distribution networks in NSW. We consider that EnergyCo is best placed to perform this function. We consider that there are also significant synergies between EnergyCo's current role as Infrastructure Planner and the JPB role and that these roles should be performed by the same person. We therefore consider that EnergyCo performing both functions would best meet the assessment criteria.

This recommendation would work together with other draft recommendations (eg removing barriers to distribution projects, reforming system strength arrangements in REZs, enhancing joint planning and introducing the NSW System Plan) to clarify EnergyCo's critical role in coordinating the planning of strategic transmission and distribution projects across NSW.

EnergyCo would work with AEMO, AEMO Services, TNSPs and DNSPs to coordinate the planning of the entire interconnected NSW network from generators in the REZs to customers in the main cities. EnergyCo would not take over the detailed planning of individual networks that is currently undertaken by TNSPs and DNSPs, but would coordinate the planning of the overall system, including:

- preparing a NSW System Plan that draws on information from each TNSP's and DNSP's planning report for its network (ie its TAPR, transmission asset management report (TAMR) or distribution annual planning report (DAPR)) as recommended in section 3.3.1;
- undertaking joint planning with AEMO, TNSPs, DNSPs and other JPBs;
- providing consolidated information on the overall NSW transmission and distribution system to AEMO to inform the ISP, ESOO and other national planning reports and to AEMO Services to inform the IIO Report;

- working with AEMO, AEMO Services, TNSPs and DNSPs to identify what strategic transmission or distribution network projects are required to meet the infrastructure investment objectives and maintain reliability and system security in NSW;
- planning REZs, including planning, procuring and recommending RNIPs in currently declared REZs;
- assessing whether to recommend new or amended REZ declarations or REZ access schemes to the Minister; and
- planning, recommending and procuring PTIPs where they are necessary to address reliability and security risks, including for both transmission projects and distribution projects.

This draft recommendation will promote the following aspects of the assessment criteria:

- **Promote timely planning and delivery of transmission projects**: This recommendation will support more timely planning and delivery of network projects by having an independent body with clear responsibility for coordinating the planning of those projects across NSW. Making EnergyCo the JPB and sole Infrastructure Planner will enable it to look beyond individual REZs and PTIPs to plan the entire interconnected NSW network, and work with AEMO to ensure coordinated planning of the interconnected NEM. It will be able to take a holistic approach to determining the required timing of projects to meet NSW's objectives and targets, including determining the appropriate staging of all RNIPs and PTIPs and accelerating the planning and delivery of projects where needed to meet NSW's targets.
- **Promote efficient planning and delivery of transmission projects**: This recommendation will support more efficient planning and delivery of projects by enabling more coordinated planning across transmission, distribution, generation, load and CER by having a single entity who is independent of any market participants that can coordinate planning across NSW's multiple transmission and distribution networks.
- **Improve outcomes for NSW electricity consumers, local communities and taxpayers**: Allocating the JPB and Infrastructure Planner roles to a public entity who is required to act consistently with the objects of the EII Act will support improved outcomes for consumers, local communities and taxpayers. EnergyCo will need additional staff and funding to perform these functions, with those costs recovered from either electricity customers or taxpayers. We consider that the net increase in costs from this change will be relatively low, with some of the additional costs offset by reduced costs elsewhere due to reduced duplication and reductions in Transgrid's costs. In particular, these costs would be at least partly offset by a reduction in Transgrid's costs of performing the JPB function, which Transgrid currently recovers from electricity customers as part of its charges for prescribed transmission services under the NER. The new functions that are proposed to be allocated to EnergyCo are relatively narrow and have synergies with existing EnergyCo functions. To assist with our final report, we will request that EnergyCo provides an estimate of its expected cost and resourcing impacts of these new functions.
- **Provide clear and effective allocation and coordination of roles and responsibilities**: This recommendation will improve clarity of roles and minimise complexity and coordination challenges by removing the option of having multiple Infrastructure Planners for different REZs or projects. It will also allocate planning roles to the bodies that are best placed to perform them and do not have conflicts of interest.
- **Effectively integrate with the NEM**: Making EnergyCo the JPB will enable EnergyCo to more effectively support AEMO's exercise of its national transmission planning functions, including providing consistent and consolidated information across all NSW transmission and distribution networks to inform the ISP and ESOO. It is also consistent with the arrangements in Victoria, the only other NEM jurisdiction with transmission contestability.

2.5.2 A.10: Extend the NER joint planning provisions to apply to EnergyCo and enhance joint planning between EnergyCo, TNSPs, DNSPs and AEMO

We recommend amending the NER as it applies in NSW to extend joint planning obligations to apply to EnergyCo in its role as the Jurisdictional Planning Body for NSW. These amendments would require joint planning and cooperation between EnergyCo and each of the NSW TNSPs and DNSPs and AEMO.

Effective joint planning between EnergyCo, TNSPs, DNSPs, AEMO and jurisdictional planning bodies in other NEM jurisdictions will be critical for the efficient and timely planning and delivery of network projects to meet NSW's legislated targets, the objects of the EII Act and the national electricity objective. EnergyCo currently has a very limited and often informal role in joint planning under the NER as explained below. Going forward, EnergyCo should play a more significant role in leading and coordinating joint planning between these bodies, consistent with its recommended new roles as Jurisdictional Planning Body for NSW under the NER and exclusive Infrastructure Planner under the EII Act.

The current NER joint planning provisions in clause 5.14 only apply to TNSPs and DNSPs and do not apply to EnergyCo:[52]

- TNSPs and DNSPs undertake joint planning under clause 5.14.1 where their networks are connected.
- DNSPs and other DNSPs undertake joint planning under clause 5.14.2 where a potential augmentation or non-network option affects more than one DNSP's network.
- TNSPs and other TNSPs undertake joint planning under clause 5.14.3 in relation to specific issues where there are interactions between their networks.
- TNSPs and AEMO undertake joint planning under clause 5.14.4 in relation to the ISP.

EnergyCo's current role in joint planning is relatively limited and includes:

- NSW modifications to the NER under chapter 9A of the NER in December 2024 implemented new joint planning arrangements for 'IP planned REZ network'. These new provisions in clause 9A.10 of the NER apply to certain specified parts of the transmission network that are planned by EnergyCo under the EII Act, for example contestable RNIPs. They modify the standard NER joint planning provisions in clause 5.14 (see below) to apply joint planning arrangements to IP planned REZ networks to enable joint planning between the Infrastructure Planner, TNSPs, DNSPs and AEMO. These provisions only apply to those specific IP planned REZ networks, eg the CWO REZ network infrastructure project that is owned and operated by ACEREZ. This is currently EnergyCo's only formal role in joint planning under NER.
- AEMO has established several committees and working groups that seek to promote coordination and consultation between jurisdictional planning bodies in each NEM region and AEMO, including the Joint Planning Committee and Executive Joint Planning Committee. Transgrid currently participates in these groups as the Jurisdictional Planning Body for NSW, but other jurisdictional bodies involved in planning including EnergyCo and VicGrid are also invited to attend.
- In its Transmission Access Reform final report, the AEMC recommended a new forum to increase collaboration on jurisdictional REZs and other jurisdictional schemes. It recommended that 'jurisdictions and market bodies establish a collaborative forum to support delivery of jurisdictional schemes. Collaboration efforts would focus on understanding the impact of schemes on the broader power system and addressing common operational issues that arise as jurisdictional schemes are developed and implemented. This could include understanding congestion patterns and how they may change within and

[52] Making EnergyCo the JPB for NSW as recommended in section 2.5.1 above will not automatically extend any of these joint planning provisions to apply to EnergyCo or give EnergyCo any formal role in joint planning with NSW TNSPs and DNSP under the NER. EnergyCo becoming the JPB will only mean that it becomes responsible for the specific functions noted in Table 2.9 above, including engaging with AEMO on REZ design reports and information AEMO requires to inform the ISP and ESOO.

between regions outside REZs.'[53] This forum has now been established as the Collaborative Forum on Operations and Congestion. DCCEEW and EnergyCo participate in this forum.

We recommend that the NER joint planning provisions in clauses 5.14 and 9A.10 are amended to impose broad obligations on:

- NSW TNSPs and DNSPs to undertake joint planning with EnergyCo regarding any matters related to EnergyCo's functions as Jurisdictional Planning Body or Infrastructure Planner
- EnergyCo to undertake joint planning with AEMO regarding any matters related to AEMO's ISP functions or EnergyCo's functions as Jurisdictional Planning Body or Infrastructure Planner.

We recognise that the nature of joint planning with EnergyCo will necessarily be different to the current joint planning between TNSPs and DNSPs under clause 5.14.1 to 5.14.3 and not all provisions of those clauses will be relevant to EnergyCo. The current joint planning provisions largely focus on interactions between the networks of connected DNSPs and TNSPs. Some of those provisions will not be relevant to EnergyCo, who does not own or operate any networks.

Our recommended new EnergyCo joint planning provisions would draw on relevant parts of NER clauses 5.14.1(d), 5.14.4, 9A.10.3 and 9A.10.4 to impose relatively broad obligations on TNSPs, DNSPs and EnergyCo to cooperate, consult and provide information that each party or AEMO requires to undertake its planning functions. This would include providing information each party requests to enable it to prepare its planning reports, jointly assessing the adequacy of existing network assets, providing information on and undertaking joint planning of potential augmentations or non-network options, identifying any network limitations or constraints that required coordinated action, and working together to ensure efficient planning outcomes and to identify the most efficient options to address identified needs.

Joint planning with DNSPs should, in particular, be expanded by EnergyCo recognising the increased importance of greater integration and coordinated planning of transmission and distribution networks as discussed in more detail in section 3.3.3 below. EnergyCo should undertake more comprehensive joint planning with DNSPs to:

- Understand the impact of distribution issues on EnergyCo's transmission planning activities and reports, including preparation of the recommended new NSW System Plan. This includes obtaining information from DNSPs and working with them to develop forecasts and understand the impact of new load and generation connections, demand forecasts and customer energy resources (CER) hosting capacity.
- Understand and assess potential major distribution network projects, identify and assess options for distribution-based RNIPs or PTIPs and jointly plan those projects with DNSPs. This includes distribution projects that could be a more efficient RNIP or PTIP alternative to a transmission network option. It also includes distribution network upgrades that are needed to enable energy from generators in REZs to reach customers in the major load centres in Sydney-Newcastle-Wollongong and which may need to become a PTIP to maintain reliability and security.
- Collate and provide information on distribution network issues and projects to AEMO, AEMO Services and other bodies to inform their planning reports and decisions, including the ISP, IIO Report, ESOO and ESTM Report.

We also recommend that EnergyCo continues to undertake joint planning with AEMO and JPBs in other jurisdictions in relation to inter-regional issues through the current committees and forums noted below. We recommend that the EII Regulation and EnergyCo's guidelines recognise this as part of EnergyCo's planning functions – see our recommendations in sections 2.4.1 and 2.4.2.

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53 Available at www.aemc.gov.au/sites/default/files/2024-12/Transmission%20Access%20Reform%20Final%20Report%20-%20Volume%201.pdf – see recommendation 3 on page iv

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Enhanced joint planning will promote more effective and timely planning and delivery of transmission projects. With six different transmission and distribution network operators in NSW and the scope for more in future, having an independent party responsible for undertaking joint planning with each network operator and considering interactions between the networks will be increasingly important. Coordination and joint planning with AEMO and other jurisdictions will also be critical to minimise the risk that the adoption of different transmission planning arrangements in NSW leads to less efficient outcomes or reliability or security risks across the NEM, therefore promoting more effective integration with the NEM.

EnergyCo's expanded joint planning roles would not replace any of the current joint planning obligations on DNSPs and TNSPs, who would continue to engage in joint planning on specific issues affecting their networks. Allocating additional joint planning roles to EnergyCo could risk some duplication, but the focus of the respective joint planning arrangements would be different.

EnergyCo's role would be to act as an independent planner who can coordinate planning across the various networks and assess the merits of potential competing distribution or transmission network options to determine the optimal combination and staging of projects to meet NSW's legislated objectives and targets for a clean, affordable, reliable power system. EnergyCo's expanded joint planning role can also lead to more efficient and streamlined processes for developing various planning reports, with EnergyCo able to act as a central point to collate information from the various TNSPs and DNSPs to inform the ISP, ESOO, IIO Report, ESTM report and other NSW or national planning reports.

We commend the recent establishment of the Collaborative Forum on Operations and Congestion. We consider that this forum, alongside existing joint planning bodies including the Joint Planning Committee, has an important role in coordinating the planning and operation of jurisdictional arrangements for REZs as NSW and several other jurisdictions adopt state-based approaches to planning and delivering REZs and other major transmission projects. We encourage EnergyCo and DCCEEW to play an active role in this forum, in particular to seek alignment with planning bodies and governments in neighbouring jurisdictions in relation to REZs with cross-border impacts as discussed in the VNI West example in Box 10 in section 3.1.1.

3. Improving the consistency and effectiveness of transmission planning reports

3.1 ISSUES WITH THE CURRENT ARRANGEMENTS

This section sets out the main issues we have identified with the current regulatory arrangements for NSW transmission planning reports under the EII Act and NER.

3.1.1 There are numerous different reports that guide transmission planning in NSW with a lack of clarity on how they fit together to drive consistent planning decisions

Multiple planning reports create confusion and coordination challenges

The planning of NSW transmission and sub-transmission networks is currently covered in multiple different planning reports that have different scopes and objectives and are prepared by different bodies. At least six regular transmission planning reports are currently prepared by different bodies in NSW. This increases to more than 10 planning reports once important reports related to planning NSW distribution networks and system security services are added.

There is insufficient consistency between the various planning reports and clarity as to what each report's plan covers and how they fit together to drive effective, timely and coordinated planning of the overall interconnected system. This makes effective planning of the network very difficult. It also makes it challenging for stakeholders wishing to engage in the planning process or use the information to inform investment decisions.

The table below provides a brief overview of the key planning reports relevant to transmission planning that are currently prepared under the national and EII act frameworks. For each report, it sets out the responsible party, publication timing and purpose of the report.

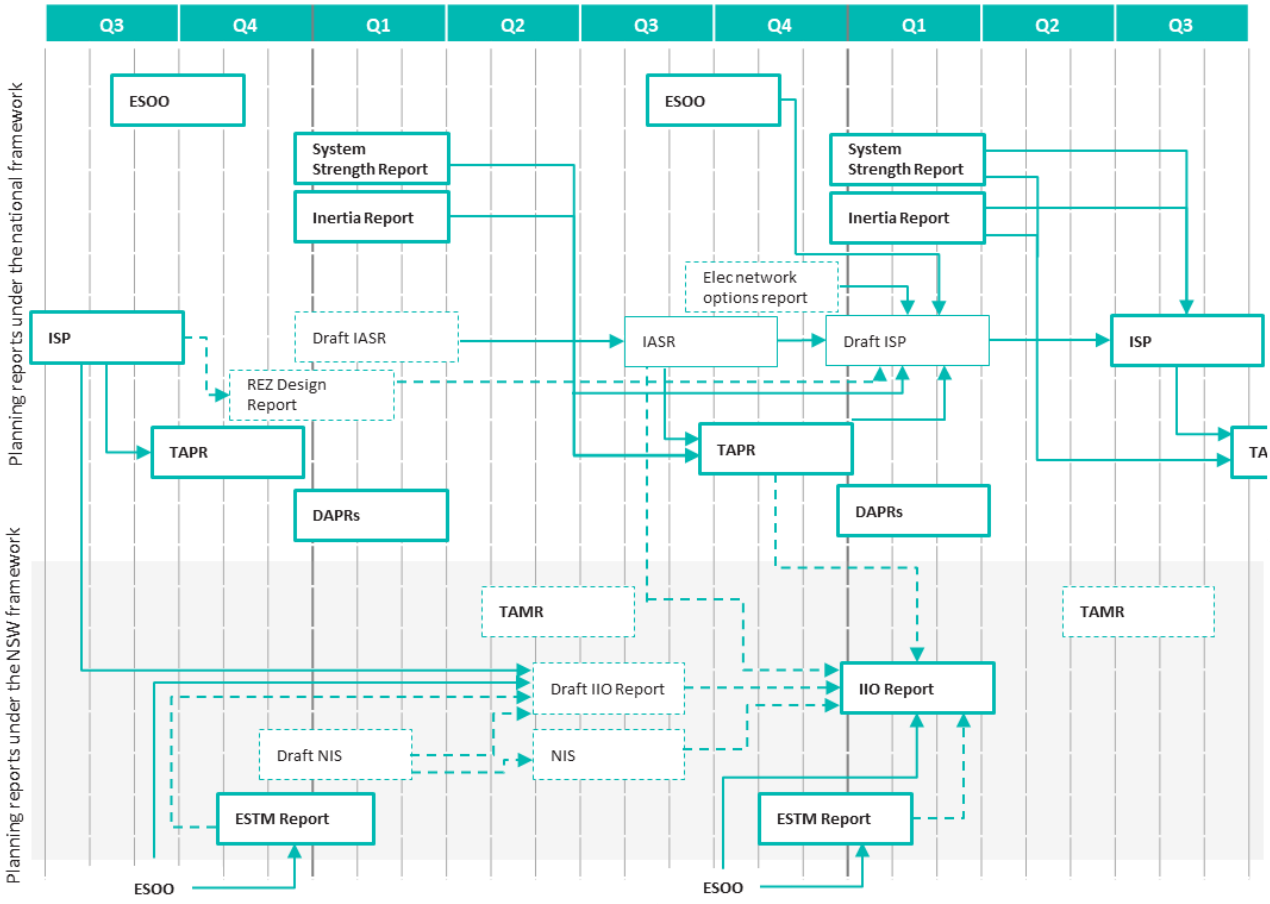
Table 3.1 Overview of key planning reports

Report name	Responsible party	Report purpose
National strategic planning reports		
Integrated System Plan (ISP)	AEMO	Provides a whole of system plan for the efficient development of the power system that achieves power system needs for a planning horizon of at least 20 years to contribute to achieving the NEO.
Inputs, Assumptions, Scenarios Report (IASR)	AEMO	Outlines the key inputs, assumptions, and scenarios used as the foundation for AEMO's forecasting and planning publications.
ISP methodology	AEMO	Outlines a cost benefit analysis and modelling methodology to be used for the ISP.

Report name	Responsible party	Report purpose
National security and reliability reports		
Electricity Statement of Opportunities (ESOO)	AEMO	Forecasts electricity supply reliability in the NEM over a 10-year period, identifying potential supply gaps.
System Strength Report	AEMO	Identifies system strength requirements and shortfalls across the NEM to maintain power system stability.
Inertia Report	AEMO	Identifies inertia requirements and shortfalls in the power system needed to maintain frequency stability during disturbances.
Network Support and Control Ancillary Services Report (NSCAS Report)	AEMO	Identifies requirements for Network Support and Control Ancillary Services to maintain power system security and reliability in accordance with the power system security standards and the reliability standard.
Network planning reports		
Transmission Annual Planning Report (TAPR)	TNSPs	Documents Transgrid's assessment of the NSW transmission network, identifying constraints, limitations, and planned investments over a minimum 10-year horizon.
Transmission Asset Management Report (TAMR)	NSW REZ Network Operators	For REZs planned by the Infrastructure Planner, documents the condition and potential for replacement of network assets.
Distribution Annual Planning Report (DAPR)	DNSPs	Documents each DNSPs' assessment of their network, identifying constraints, limitations, and planned investments over a minimum 5-year horizon.
REZ Design Report	Jurisdictional Planning Body (in NSW, Transgrid)	Where required in an ISP, sets out a plan for the development of the transmission network in one or more REZ stages. No REZ Design Reports for NSW have been required by the ISP to date, with AEMO noting in the ISPs that such reports would overlap with other REZ-related planning reports prepared under the EII Act.
NSW strategic planning reports		
Infrastructure Investment Objectives Report (IIO Report)	Consumer Trustee (AEMO Services)	Sets out the development pathway for the infrastructure required to be constructed over the following 20 years to achieve the infrastructure investment objectives. Also sets out a plan for the competitive tenders that the Consumer Trustee will conduct during the following 10 years to give effect to the development pathway.
Energy Security Target Monitor Report (ESTM Report)	Energy Security Target Monitor (DCCEEW)	Monitors and reports on NSW's progress toward meeting its energy security targets to ensure sufficient reliable electricity supply is maintained.
Network Infrastructure Strategy (NIS)	EnergyCo	The NIS is not referred to in the EII Act or EII Regulation but identifies options for delivering the development pathway through REZs, including options for RNIPs and PTIPs over the next 20 years.

Figure 3.1 below provides an illustrative example of the interactions between the various NSW and national planning reports relevant to transmission planning. Reports in a box with a dotted line are not required by the NER, EII Act or EII Regulation (or, in the case of REZ Design Reports and TAMRs, have to date not been prepared in practice). In addition, there is no formal link between the reports joined by a dotted line (that is, while the various reports may feed into each other in practice, there is no requirement in the NER, EII Act or EII Regulation for them to do so).

Figure 3.1 Illustrative example of planning report interactions under the current national and NSW frameworks



Current frameworks lack coordination mechanisms between planning reports

The NER provisions related to planning of actionable ISP projects endeavour to set out how the relevant NER planning documents interact and build on each other to maximise consistency. For example, the NER requires that the ISP's inputs, assumptions, scenarios and identified needs are used in RIT-Ts and other planning documents for actionable ISP projects. However, there are no similar provisions for EII Act projects or non-actionable ISP NER projects.

There could be benefits in adopting such an arrangement for the NSW planning reports such as the IIO Report, NIS, TAPR and DAPRs, but such an approach is currently complicated by several issues, including the following:

- The NIS is not referred to in the EII Act or EII Regulation. As a result, the scope and purpose of the NIS and how it interacts with the ISP, IIO Report and Transgrid's TAPR is not clear. Based on the only NIS published to date, the 2023 NIS, there appears to be inconsistency and duplication between the NIS and these other reports.

- The ISP and IIO Report are prepared by related parties (AEMO and AEMO Services) and the IIO Report currently places significant reliance on inputs, assumptions and modelling from the ISP. However, the two reports have different scopes, objectives and decision-making criteria. The ISP's primary purpose is to assess major transmission projects, while the IIO Report also has important objectives of assessing and recommending development pathways and tender plans for generation, storage and firming projects. The two reports also optimise for different objectives. The ISP's objective under the NER is to minimise total system costs across the NEM (eg capital expenditure, fuel costs, other operating costs and the value of emissions) while meeting power system needs. The IIO Report's objective under the EII Act is to minimise consumer costs in NSW, ie electricity prices for NSW electricity customers. These differences mean that it is difficult for the IIO Report to use the ISP's modelling, scenarios, inputs and assumptions without modifications.
- TAPRs and DAPRs may include some projects that are included in the ISP, IIO Report and/or NIS. However, they also cover many smaller projects where the ISP's inputs, assumptions, scenarios and identified needs are of limited relevance to guide planning and decision-making.

Reporting cycles and information gaps may undermine planning effectiveness

Other challenges with the current approach to planning reports include the following:

- The current reports are based on set annual or two-yearly publication cycles. For example, the ISP and IIO Report are published every two years, and the TAPR and DAPRs are published every year. The IIO Report uses inputs, assumptions and modelling from the ISP, which means that the 2025 IIO Report will be based on the 2024 ISP, which is based on the inputs, assumptions, scenarios and methodologies set out in the 2023 IASR and 2023 ISP Methodology. This means that NSW transmission planning decisions made in 2026 are likely to be based on key inputs and assumptions that are at least three years old. This may have been acceptable in the past when the pace of change in the sector was slower; now it means that these reports cannot be treated as a 'set and forget' process and there is an increased need for planning decisions to use updated information and approaches like sensitivity testing to inform robust decision-making.
- Information on distribution networks is critical for effective transmission planning, for example, understanding distribution network hosting capacity, CER uptake and hosting limits, forecast new connections of large loads like data centres or industrial electrification, and forecast new generator connections to distribution networks. However, transmission planning reports and the modelling that informs the ISP and IIO Report currently have very little visibility of this information. AEMO is currently expanding how the ISP accounts for distribution network capabilities and the impact of CER, but the 2026 ISP will still only contain relatively limited information on these issues and will not be able to optimise between transmission and distribution projects.[54]
- Generators and investors have told us that the current approach to planning reports makes it very difficult for investors in network, generation or storage projects to get clear and consistent information to inform efficient investment decisions as the information is spread across multiple reports.

As a result of these issues, the current reporting arrangements are likely to result in duplication, inconsistency and less efficient planning decisions.

[54] See AEMO's Draft ISP Methodology, which was published for consultation on 13 March 2025 and is available at https://aemo.com.au/consultations/current-and-closed-consultations/2026-isp-methodology

State-based planning creates inter-jurisdictional coordination risks

Coordination between the planning reports in each NEM jurisdiction is also an increasing challenge. Several other NEM jurisdictions have also developed their own state-based transmission planning arrangements, including Victoria, Queensland and Tasmania.[55] However, electrons follow the laws of physics and do not respect state boundaries.

The shift towards State-based transmission planning carries the risk that the individual targets of State governments could result in suboptimal outcomes for consumers across the NEM. State transmission planning bodies are tasked with meeting the renewable energy, emissions and reliability targets set by each respective state government. Renewable energy developments in neighbouring States may not be accounted for when developing plans to meet state-based targets, even though greater coordination between states could be a more efficient way to provide low cost and low emissions energy to consumers.

While AEMO and governments have established various jurisdictional coordination committees and forums as discussed in section 2.5.2, there is currently no formal mechanism to coordinate their plans and resolve situations where neighbouring jurisdictions both want to connect new generation to shared transmission assets. There is a risk that customers will miss out on the cost savings associated with economies of scale and diversity that led to the creation of the NEM. Customers could end up funding unnecessary investment, and investors could face higher than expected congestion due to unforeseen energy flows emanating from neighbouring jurisdictions.

There may be an increased role for the Commonwealth government or AEMO to resolve these issues or provide more transparency over the impact of state policies, the risks of inconsistent state policies and planning decisions, and the combined cost impact of various state policies in the ISP.

These risks related to jurisdictional coordination are illustrated by the case study in the following box.

Box 10: VNI West case study

VNI West passes through energy resource-rich locations both north and south of the NSW-Victoria border. Both EnergyCo and VicGrid are looking to connect new generation to the new transmission capacity associated with VNI West — in the South West REZ (NSW), North West REZ (Victoria) and Grampians Wimmera REZ (Victoria). VNI West also connects to the new Energy Connect interconnector between NSW, Victoria and South Australia, which also supports the connection of new renewable generation in the South West REZ.

The sum of new generation capacity forecast to connect in these REZs based on EnergyCo and VicGrid's latest public reports is substantially higher than was originally proposed by AEMO in the 2024 ISP – over twice as much wind generation and 13-47% more solar generation.

The recent draft Victorian Transmission Plan includes additional network upgrades not contemplated in the ISP that are expected to release additional capacity along VNI West. However, there is a question as to whether the additional upgrades would have been necessary if a whole-of-system least cost plan was adopted.

The NER framework that underpins the ISP is not designed to resolve these issues. The ISP treats State government policy as an input, not an output. It would be inappropriate for AEMO, as an independent authority, to second guess the decisions of elected governments. However,

[55] For a summary of these regimes, see the paper recently published by the AEMC and Reform Matters, *AEMC, Jurisdictional REZ frameworks: Final Report*, available at https://www.aemc.gov.au/market-reviews-advice/jurisdictional-rez-frameworks-review

there is a risk that lower cost solutions are not considered if each State plan solely focusses on its own State's needs and the uncoordinated decisions of each State government or planner is then adopted in the ISP.

Utilising the renewable generation that will connect to VNI West and Energy Connect will also require significant network upgrades between where those projects end in SW NSW and the major NSW load centres in Sydney, Newcastle and Wollongong. These projects therefore need to be closely coordinated with other NSW transmission and potentially distribution network upgrades, including HumeLink and Sydney South Ring, or the additional renewable energy they enable will be subject to constraints before it reaches customers. This coordination was easier when all of these major projects were planned under the ISP and the NER framework, but becomes more challenging when projects are planned under state-based regimes in different jurisdictions and covered in separate planning reports.

Close coordination between AEMO and each state-based planner, and the reports they each prepare, is therefore important to deliver the best long-term outcomes for customers. The recently established Collaborative Forum on Operations and Congestion and the enhanced joint planning measures discussed in section 2.5.2 above can help manage these challenges.

Stakeholder feedback on planning reports

These various challenges with the current arrangements for planning reports were recognised in submissions to the consultation paper and options paper:

- CEIG noted in its consultation paper submission that there are multiple reports assessing the same transmission priorities from different perspectives, which may present misaligned recommendations on timing, priority, and cost estimates. CEIG considered this creates confusion for renewable energy developers and investors, who must navigate conflicting signals about network availability and project feasibility, increasing financial risk and delaying investment decisions.
- Snowy Hydro emphasised in its consultation paper submission that stakeholders need easily accessible updates or reports that provide the details required for transmission planning.
- In its submission to the options paper, Transgrid agreed that current NSW transmission planning reporting arrangements can be confusing for stakeholders and that there are significant opportunities for clarification and streamlining.
- Endeavour Energy supported the review's findings that the current suite of reports overlap and that stakeholders would benefit from more targeted, consistent and streamlined reporting. It considered it unlikely that experts and interested stakeholders alike can meaningfully engage with the ISP, ISP IASR, NIS, IIO, TAPR and DAPR and the ESTM. In addition, as there is currently no prescribed role for the NIS, this creates a risk of divergence between EnergyCo, ASL, AEMO and Transgrid, particularly if each report is underpinned by differing assumptions and/or modelling approaches.
- Essential Energy agreed that better alignment and sequencing of planning documents would support more effective and timely infrastructure decisions. However, it did not consider the number of reports to be the core issue as a diversity of planning documents can serve different stakeholder needs and provide valuable insights across different parties that informs a whole of system perspective. Essential Energy considered the key concern lies in the absence of a clear hierarchy or consistent logic between these reports particularly where some are seen to carry more regulatory or investment weight than others without that being made explicit. This creates uncertainty about which documents matter most at different decision points and risks confusion where assumptions or conclusions are misaligned.

- Ausgrid agreed with the Review that 'clear, comprehensive and consistent planning reports are an important part of effective transmission planning'. The Options Paper identifies 14 key planning reports that oversee the NSW electricity network. This is too many. Rather than simply increase clarity and consistency between existing reports (Option B.1) we encourage the Review to explore ways to reduce the amount of planning reporting.
- CEIG reiterated its view that the abundance of overlapping planning reports has created confusion and undermined investor confidence: 'For clean energy investors, a clear and coordinated planning roadmap is essential. The current system produces multiple, and sometimes conflicting, planning signals. For example, developers assessing transmission readiness in a given REZ must interpret several different documents, each with varying timelines, capacity assumptions, and investment priorities. This makes it difficult to assess project viability, increases financial risk, and slows the investment pipeline.
- The EUAA stated that there are currently many different reports outlining the 'Plan' for NSW, often with significant overlaps and contradictions leading to further difficulty in understanding the true benefits and costs of the entire transition.
- ACEN observed that the preparation of overlapping planning reports based on different assumptions, modelling inputs, and timeframes leads to conflicting signals to investors, difficulty aligning generation and transmission decisions and stakeholder confusion over which reports carry weight in decision-making.

3.1.2 Planning of distribution networks, CER and the needs of customers could be better integrated into transmission planning reports and decisions

Changing demand patterns challenge traditional transmission planning approaches

Effective transmission planning needs to be informed by the needs of customers and generators and a deep understanding of current and planned generation, storage and loads. This includes increased consideration of opportunities to better utilise distribution networks and CER and understand the impacts of electrification and new connections. We consider that there is scope to more effectively integrate these options into transmission planning decisions and reports and improve coordination between transmission and distribution planning.

Transmission network planning has always relied on forecasts of demand and connections. However, accurate forecasts are becoming more challenging due to the impact of large new connections like data centres, electrification, electric vehicles, CER and the impact of government policies. The impacts are also becoming more localised, meaning the ISP's original approach of only considering customer demand for entire regions or sub-regions is insufficient.

For example, in South Australia ElectraNet's recent 2025 TAPR states:[56]

> *Large industrial loads — across mining, green steel, desalination, and data centres — are now driving record levels of connection enquiries. Active interest in new load connections in the short to medium-term currently exceeds 2,500 MW, with about 1,300 MW of additional demand forecast by 2035. This surge is driven by ambitious State and Federal policy settings,… which together are catalysing billions in green industrial investment….*
>
> *The first key observation of this report is that recent forecasts utilised in the ISP underestimate future electricity demand in South Australia and do not reflect the emerging reality. In an environment of growing demand and rapid change it is critical that demand forecasts and scenario plans are sufficiently flexible to capture expected load growth to support efficient and*

[56] See page 13, available at www.electranet.com.au/wp-content/uploads/2025/06/250516_TAPR_FINAL-1.pdf

timely transmission development to deliver the transition to net zero at least cost to consumers…

The second key observation of this report is that existing transmission planning arrangements and economic regulatory approvals are lagging the South Australian demand outlook and should be reviewed in the context of the state's rapidly accelerating energy transition. Past regulatory approaches are becoming an increasingly unreliable method to meet current and emerging demand signals.

The EII Act's REZ arrangements have done a good job of addressing the 'chicken and egg' timing issue with coordinating generation and network investment, but similar challenges are becoming increasingly important in relation to coordinating the timing of customer investments and network augmentations required to support them. For example, it is unclear how committed a major new load connection needs to be to trigger reliability-driven network investment under the NER or EII Act, and how such augmentation projects are reflected in the Energy Security Target Monitor Report, IIO Report, NIS and TAPR and proactively planned by the relevant bodies.

Current frameworks provide limited integration of distribution and CER options

The NER contains joint planning obligations on TNSPs, DNSPs and AEMO. This joint planning informs Transgrid's activities as the Jurisdictional Planning Body for NSW and the preparation of key NER planning reports including AEMO's ISP and Transgrid's TAPR. For example, Transgrid undertakes extensive engagement with the NSW and ACT DNSPs to undertake joint planning activities, develop maximum and minimum demand forecasts and undertake power system modelling for the overall NSW NEM region. EnergyCo has a limited role in joint planning in NSW under the recent amendments to chapter 9A of the NER, but joint planning with DNSPs is primarily undertaken by Transgrid.

There are also a range of obligations on TNSPs and AEMO to consider all credible network and non-network options when undertaking planning under the NER, for example in developing the ISP or TARR or undertaking a RIT-T. As discussed below, AEMO is currently enhancing how distribution and CER issues are considered in the ISP in response to the recent ECMC review of the ISP. These obligations and processes facilitate the consideration of distribution network and CER issues in transmission planning under the NER, but there remain limitations on the extent to which those options are able to be considered on a level playing field with transmission solutions.

Box 11: Response to the review of the ISP: actions related to enhancing energy demand forecasting and generation and storage information

In the Response to the Review of the ISP, the Energy and Climate Change Ministerial Council agreed that AEMO should make several changes to enhance the ISP from 2026 onwards.[57] The relevant parts of these changes are summarised in below. Some of these actions were implemented through the AEMC's *Improving consideration of demand-side factors in the ISP* rule change final decision in December 2024, while others are currently being implemented.[58]

- Undertaking stakeholder engagement to enhance assumptions underpinning CER and distributed resources projections so they reflect a comprehensive view of initiatives affecting CER and distributed resources uptake and the implications for demand.

57 Available at www.energy.gov.au/sites/default/files/2024-04/ecmc-response-to-isp-review.pdf

58 Available at www.aemc.gov.au/rule-changes/improving-consideration-demand-side-factors-isp

- Analysing how electrification and CER / distributed resources development sensitivities affect demand projections and consider these in the ISP modelling where relevant.
- Analysing how DNSP investments, programs and annual plans, may impact CER and distributed resources development, and thereby the Optimal Development Path for transmission, and include these findings in the ISP to inform DNSP planning.
- Developing a framework, methodology and guidance material to support DNSPs and jurisdictions to develop projections and undertake analysis in a consistent manner to support the ISP's development.
- Including a statement in the ISP aimed at informing the market and policy makers about the expected development of CER and distributed resources that helps identify opportunities to promote uptake within each jurisdiction.
- Jurisdictions and AEMO will work together to ensure the provision of key inputs for the ISP, including information about relevant jurisdictional policy developments and scenarios and projections about industrial and consumer electrification demand in NEM sub regions.
- The System Planning Working Group and AEMO will work with relevant stakeholders including DNSPs to develop a suitable approach to trade off the cost of unlocking increasing tranches of orchestrated CER and distributed resources against other investment options for use in the ISP.
- AEMO should centralise the available information on renewable generation and storage, such as by summarising important material from other relevant documents in the ISP and/or including links to other relevant documents in a manner that facilitates easy access for stakeholders.

EII Act shows potential for hybrid solutions but faces structural barriers

In contrast, the EII Act's regulatory arrangements were designed around large transmission network projects. There is some scope to apply aspects of them to distribution and non-network options, but this has to date been limited to sub-transmission options or hybrid network and non-network options. For example, the Waratah Super Battery involves both network and non-network components and has been approved as a PTIP, and EnergyCo recently selected Ausgrid as the preferred network operator for the HCC RNIP using a sub-transmission solution. The NSW government and EnergyCo also recently announced plans to develop an 'urban renewable energy zone' involving distribution network, battery and CER solutions in the Illawarra REZ as noted above.

Box 12: Waratah Super Battery project

The Waratah Super Battery (WSB) project is an example of how the EII Act can accommodate non-network options within an RNIP or PTIP.

The WSB is an innovative project involving an 850 MW/1680 MWh battery to increase the utilisation of capacity of the transmission system supplying the Sydney, Newcastle and Wollongong regions following the planned retirement of the Eraring Power Station.

The project provides a System Integrity Protection Scheme (SIPS), allowing the battery to act as a 'shock absorber' for the grid, automatically responding to sudden faults that may overload transmission lines by instantly injecting energy close to the load centres. 'Paired generators' elsewhere on the network were also contracted to instantly ramp down the corresponding

amount of power output during these events so that the lines supplying the Sydney, Newcastle and Wollongong regions are not overloaded.

The WSB contains 4 components. The network augmentation, SIPS and paired generation service components are a PTIP, with the Minister directing Transgrid to carry out the PTIP in October 2022. The battery service component was procured separately on a contestable basis and is not part of the PTIP.[59]

The project involved a combination of network infrastructure and non-network services that were procured under both the contestable and non-contestable regulatory frameworks in the EII Act. EnergyCo as the Infrastructure Planner procured a battery and paired generation services under the contestable regulatory framework as non-network solutions. In parallel, EnergyCo non-contestably procured Transgrid as the project's network operator to undertake supplementary network augmentation works and deliver the SIPS control system. This approach enabled the project to delivered faster than would have been achievable under the NER.

Other constraints limit broader integration

There appear to be some barriers to broader use of the EII Act to plan and approve distribution networks, CER and non-network options, including:

- As noted in chapter 2 above, the definition of a PTIP currently only covers transmission infrastructure projects.
- The RNIP and PTIP planning and approval process require a person to be authorised or directed as a network operator to carry out the project, which enable hybrid network and non-network options as in the WSB example but would limit the scope for purely non-network options.
- Non-transmission options are currently not incorporated into key planning reports such as the 2023 IIO Report or 2023 NIS. We understand that EnergyCo and AEMO Services are currently implementing processes to better understand distribution network options for the upcoming 2025 NIS and IIO Report. We also understand that AEMO Services and EnergyCo have enhanced their processes for engaging with DNSPs to obtain information on potential distribution network projects for assessment as part of those reports. However, there remain limitations on their ability to do so given the current regulatory framework and modelling constraints. Those reports do not currently consider non-network options.
- The current modelling capabilities of the relevant Roadmap bodies also limit the extent to which they can incorporate enhanced information on distribution networks, customer connections, CER and distributed generation in the IIO Report, NIS and ESTM Report. AEMO is currently working on enhancing its capabilities in these areas for the 2026 ISP as outlined above, but it will continue to have limited visibility of distribution network. Because the IIO Report and NIS currently rely on ISP modelling, any such enhancements would also benefit those reports, but not until 2027 on the current planning reports cycle.[60]

[59] See gazette.nsw.gov.au/gazette/2022/10/2022-473.pdf

[60] In practice, when preparing the IIO Report, AEMO Services relies on the use of AEMO's in-house models, utilising the most up to date data that is available as inputs to the model.

3.2 OPTIONS CONSIDERED TO ADDRESS THESE ISSUES

3.2.1 Options paper

Planning reports

The options paper identified three options for stakeholder consideration regarding potential improvements to planning reports. The goal of these options was to enhance clarity and consistency in key planning information, while maintaining effectiveness, accountability and certainty for key stakeholders, including investors. By aligning and clarifying the roles of various reports, such as the NIS and IIO Report, the options seek to make the planning of strategic NSW network projects more coherent and streamlined.

The options are summarised in Figure 3.2.

Figure 3.2: Overview of planning report options

In addition to the above options, the options paper noted that potential improvements could be considered in relation to national planning reports, including:

- Considering national-level improvements to integrate state-based regimes in the NER planning documents.
- Increasing the ISP's focus on inter-regional issues so that it complements the state-based focus of jurisdictional planning reports.
- Streamlining TAPRs and DAPRs and clarify their objectives and how they fit with the ISP and other jurisdictional planning documents.

- Reviewing whether aspects of the current separate system security reports could be combined or better integrated into the ISP or other reports to reduce the number of separate reports.

The options paper noted that the AEMC will soon be progressing work to consider network planning arrangements at the distribution level in response to a rule change requested received by Energy Consumers Australia, and national level as part of the AEMC's ISP review due to be completed in 2027.

Distribution network options, CER and the needs of customers

The options paper contained the following options for feedback to address how NSW planning reports and network planning and approval processes consider distribution network issues, customer connections, CER, distributed generation and other issues that are outside of the boundaries of traditional transmission networks:

- Expand the NIS and/or IIO Report to include information on distribution networks and CER issues, including distribution network and non-network options that will be considered for planning as an RNIP or PTIP.
- Expand AEMO Services' modelling capabilities and engagement with EnergyCo and DNSPs so that it can obtain increased information on distribution network issues and more accurately model distribution network options in the IIO Report.
- Clarify or expand how the NIS, IIO Report and ESTM Report forecast major new load connections to the distribution network and forecasts of CER uptake, distributed generation and demand growth, and how those matters are taken into account when planning RNIPs or PTIPs
- Expand joint planning between EnergyCo and DNSPs so that EnergyCo can obtain more comprehensive information on distribution network issues to inform the NIS and provide to other Roadmap bodies to inform the IIO Report and ESTM Report
- Clarify or expand the scope of the RNIP and PTIP tests to include distribution network options or non-network options that may be a preferable alternative to meet the infrastructure investment objectives or an identified reliability or system security need.[61]

3.2.2 Submissions to the options paper

Planning reports

There was general agreement from all stakeholders that all proposed options would deliver improvements over the status quo. All stakeholders agreed on the benefit of recognising the NIS in legislation and expanding its scope to become the overarching planning document for strategic network infrastructure projects in NSW.

Regarding option B.1 (Enhanced Coordination and Clarity), there was strong support for clarifying relationships between planning documents and aligning input assumptions and publication timelines. Transgrid emphasised that this would substantially reduce stakeholder confusion and clarify where relevant information will be available. Essential Energy favoured options B.1 and B.2, noting that better sequencing of reports would reduce duplication and create a logical reporting pathway from national to regional to local levels. Re-Alliance also strongly supported increased clarity and consistency as a minimum requirement.

Option B.2 (Expanded NIS) received the broadest support from stakeholders as a balanced approach. Submissions that supported this approach included:

[61] This option is addressed in chapter 2 above and draft recommendation A.4.

- Transgrid saw benefits in consolidating major strategic NSW transmission projects into a single planning report, creating a 'single source-of-truth' while retaining separate TAPRs and DAPRs for detailed local information.
- Origin preferred option B.2 as it delivers streamlining benefits without major structural changes, though emphasised the need to clearly define respective obligations of EnergyCo, AEMO, TNSPs, and DNSPs.
- CEIG supported expanding the NIS into a comprehensive NSW Infrastructure Plan that would harmonise multiple reports and provide clear short-, medium-, and long-term infrastructure priorities with improved investor certainty.
- AEMO Services noted an expanded NIS would create a clear basis for AEMO Services' IIO Report production and streamline the authorisation process.
- Windlab supported option B.2 for creating a single planning document based on verifiable measurements and recommended additional reforms including developer feedback mechanisms and network 'over-build' capacity.

Option B.3 (Fully Integrated Plan) received mixed views from stakeholders. Support came from those stakeholders seeking comprehensive integration of planning reports:

- The JEC strongly supported this option, preferring a single planner consulting widely over joint planning systems.
- Re-Alliance saw this option as providing a single source of comprehensive community information and an opportunity for government leadership on infrastructure and associated environmental/social issues.
- The EUAA supported the single overarching report approach, emphasizing the need for consistent modelling and recognition of CER and bi-directional distribution flows.
- ACEN favoured incorporating the TAPRs into an expanded NIS including all major transmission projects for a holistic approach.

Other stakeholders were concerned about the complexity of this option:

- Transgrid acknowledged its potential benefits but warned that preparing a comprehensive Integrated Infrastructure Plan would be challenging and not pertinent to all stakeholders, potentially fragmenting data publication.
- Essential Energy opposed consolidating all reports into one document, fearing it could create bottlenecks and reduce flexibility.
- Ausgrid supported expanding the NIS but opposed replacing the TAPRs and DAPRs, emphasising networks need autonomy for connections and specific projects.

In terms of implementation, EnergyCo highlighted that consolidated planning would be a significant implementation task requiring NER modifications, transitional arrangements and expanded resources. It suggested some elements might be more efficiently retained by other entities. The CEC also noted that streamlining benefits must be weighed against potential pitfalls of excessive centralisation.

Overall, submissions revealed a preference for balanced reform (Option B.2) that achieves coordination without excessive centralisation, maintains specialised expertise where needed, and provides clear stakeholder benefits. There was strong recognition that better integration is essential, but different views on how far consolidation should go while maintaining effectiveness and stakeholder access to relevant information.

Distribution network options, CER and the needs of customers

There was strong support across all stakeholders who commented on this issue for better integration of distribution-level planning into transmission planning. Stakeholders including the three NSW DNSPs, Transgrid, EUAA, CEIG and the JEC considered that current transmission planning operates in a 'silo' without sufficiently considering distribution network constraints and opportunities.

Most stakeholders who commented on these options strongly supported the options to expand planning reports, enhance modelling capabilities, and incorporate distribution and CER considerations into transmission planning. These options would ensure major new load connections, CER uptake, and demand growth are considered comprehensively in transmission planning.

Multiple stakeholders advocated for a 'whole-of-system' planning approach rather than fragmented planning. The JEC specifically noted that this should involve orchestrating transmission networks, distribution networks, and consumer energy resources together, moving beyond simply considering new elements as inputs to transmission planning.

Several submissions emphasised the need for better coordination and information sharing between DNSPs and transmission planners. Transgrid specifically suggested establishing a single point of accountability for joint planning with DNSPs to ensure proper coordination.

In its submission, the EUAA highlighted that utilising existing capacity within distribution networks could result in less transmission investment, leading to a cheaper transition for consumers. It considered that this supports a more integrated approach to planning. Nexa Advisory recommended the NIS should explicitly incorporate CER forecasts, distribution network constraints, and data-sharing obligations, and also recommended clear methodologies for how major new loads and CER developments factor into investment decisions. Re-Alliance raised concerns around implementation delays, noting that AEMO's enhanced modelling capabilities would not commence until the 2027 planning cycle, which they consider problematic given the speed of renewable energy transition needed.

While most submissions support enhanced integration of distribution and transmission planning, Tesla cautioned against adding excessive reporting scope under the proposed options, arguing this goes against the review's objectives. However, Tesla did support for removing barriers to distribution and non-network options.

3.3 DRAFT RECOMMENDATIONS

Our draft recommendations to improve the consistency and effectiveness of transmission planning reports and enhance the consideration of distribution and non-network options in transmission planning decisions are summarised in the following table and explained below.

We also note that our recommendations in chapter 2 above in relation to clarifying roles and responsibilities include a draft recommendation to remove barriers to considering distribution network options under the EII Act (see section 2.3.4). This recommendation addresses the option of clarifying or expanding the scope of the RNIP and PTIP tests to include distribution network options or non-network options that may be a preferable alternative to meet the infrastructure investment objectives or an identified reliability or system security need.

We recommend that these actions are implemented by 2027, with the aim of publishing the first NSW System Plan by the end of 2027. However, we recognise that a number of actions would need to be implemented to enable this to occur, including prior implementation of our draft recommendation in chapter 2 regarding changes to EnergyCo's functions and our draft recommendations in chapter 4 regarding EnergyCo's engagement, governance and funding. Changes to the EII Act and EII Regulation and implementation of new Energy and AEMO Services processes would also be required.

Implementation of these planning report recommendations are therefore likely to be a staged process, with initial changes made in time for the 2027 IIO Report and inaugural 2027 NSW System Plan and then further enhancements made to future versions of those reports over time. Such an approach is consistent with the continual development we have seen in the ISP since the first version in 2018 and the enhancements that are currently occurring between the 2023 and 2025 IIO Report.

The recommendations are summarised in the following table, with more details in the remainder of this section.

Table 3.2: Draft recommendations to improving the consistency and effectiveness of planning reports

Draft recommendation	Prioritisation
B. Improving the consistency and effectiveness of transmission planning reports	
B.1: Expand the NIS to become a NSW System Plan that consolidates information and coordinates planning of strategic projects across NSW	By 2027, with the first NSW System Plan published by the end of 2027
B.2: Coordinate the development and timing of the various planning reports in NSW and clarify how they fit together to deliver an integrated plan while ensuing each planning report is fit for purpose for meeting its objectives and relevant stakeholder needs	By 2027, prior to publication of the first NSW System Plan
B.3: Expand planning report processes so they are informed by comprehensive information on transmission, distribution and non-network options and can assess their relative benefits	By 2027, prior to publication of the 2027 IIO Report and NSW System Plan
B.4: Engage with the AEMC and AEMO on potential improvements to the ISP, TAPRs and DAPRs to clarify their interaction with state-based planning reports and review their contents and timing	By 2027

3.3.1 B.1: Expand the NIS to become a NSW System Plan that consolidates information and coordinates planning of strategic network projects across NSW

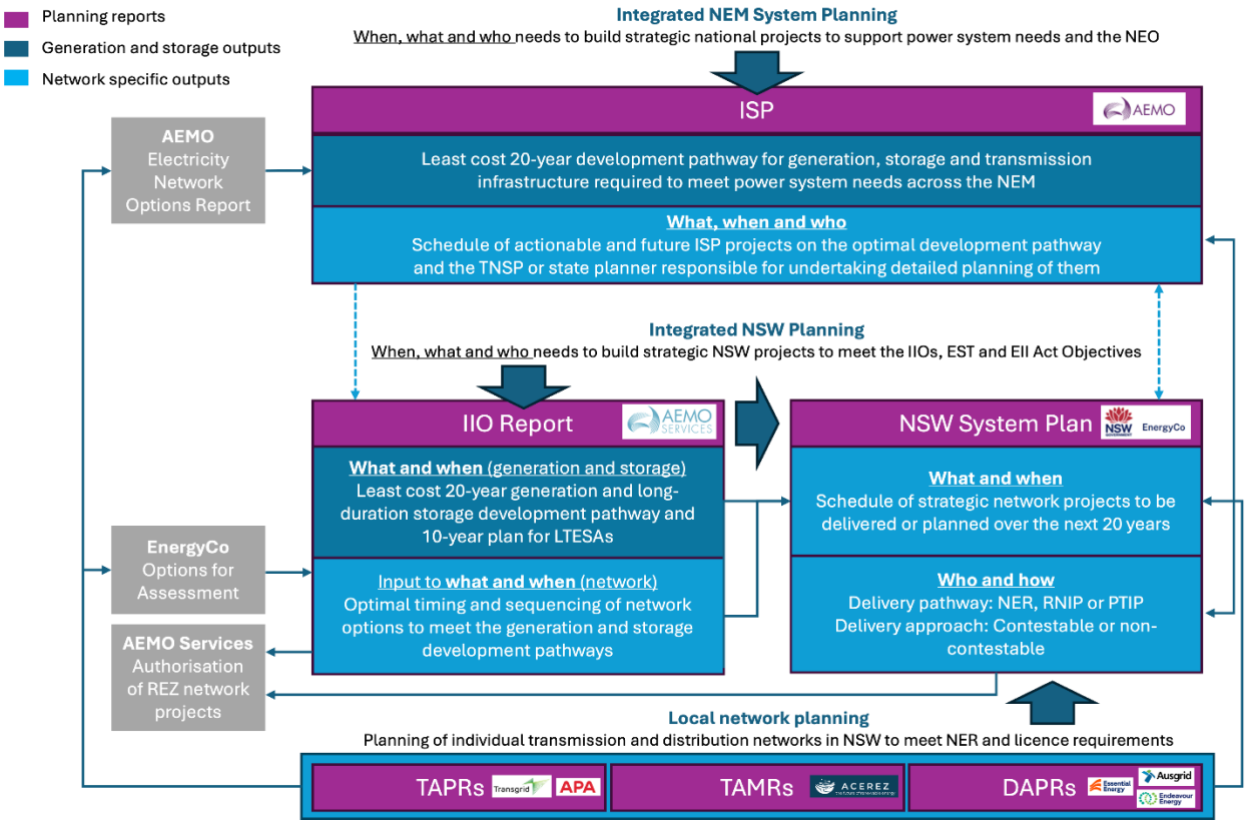
Overview of the draft recommendations

We recommend expanding the scope of the Network Infrastructure Strategy (NIS) and formally recognising this document in legislation. The NIS would be expanded to become a NSW System Plan that consolidates and coordinates the long term planning of all strategic network projects across NSW.

This recommendation will support a whole-of-network strategic planning framework that reduces fragmentation and ensures strategic alignment of NSW electricity infrastructure investments through a single, legislatively recognised planning document. This option was supported by nearly all stakeholders who provided submissions to the options paper. Overall, this recommendation is broadly consistent with option B.2 in the Options Paper.

Figure 3.3 shows the relationships between the key planning reports in NSW following the introduction of the NSW System Plan and how they would fit together to deliver an integrated plan for NSW and the NEM.

Figure 3.3: Integrated planning reports



An important feature of this recommendation is its application to 'strategic NSW projects'. We acknowledge Transgrid's submission to the options paper emphasising the importance of clearly defining 'strategic planning'. Box 13 provides an overview of the types of strategic projects we envisage would be included within the scope of the NSW System Plan. EnergyCo should consult on this issue and other scope issues as part of development of the inaugural NSW System Plan.

Box 13: Defining the Scope of 'Strategic NSW projects'

While detailed criteria would be developed through further consultation by EnergyCo, the scope of 'Strategic NSW projects' should encompass three main categories:

- **REZ and Priority Projects |** Renewable energy zone network infrastructure projects (RNIPs) and priority infrastructure projects (PTIPs) that are planned or proposed to be planned under the EII Act framework.
- **ISP Projects |** Actionable and future ISP projects within the NSW NEM region identified in AEMO's Integrated System Plan (ISP).
- **Other Strategic Projects |** Additional transmission, distribution or non-network projects designated by EnergyCo as strategic based on their capacity to achieve the objects of the EII Act or help meet the Energy Security Target or infrastructure investment objectives under the EII Act but which have not yet been made an RNIP, PTIP or ISP project.

This framework would provide EnergyCo with flexibility to identify and prioritise projects that deliver the greatest benefit to NSW electricity customers while ensuring alignment with state policy objectives and national planning processes. Planning of individual transmission and distribution networks and other NER projects that primarily serve local network reliability and

customer connection requirements would remain the responsibility of individual network service providers and would be addressed in the relevant TNSP's TAPR or TAMR, or DNSP's DAPR.

The NSW System Plan would not replace other planning reports but would consolidate information and coordinate planning of strategic NSW projects.

We consider that the NSW System Plan should be formally recognised in legislation, similar to the approach currently taken to prescribing the key requirements for the IIO Report in section 45 of the EII Act and clauses 24 and 25 of the EII Regulation. The EII Act would set out EnergyCo's functions for preparing the plan, including the plan's objective and timeframes for preparation and publication. The EII Regulation would then include detailed requirements for EnergyCo in exercising this function, including required content, factors to consider during preparation, joint planning obligations and processes, and consultation and engagement requirements.

The NSW System Plan should be prepared approximately every two years. This timing is consistent with the ISP and IIO Report. We considered whether the NSW System Plan should be prepared either more frequently (eg annually like the TAPRs) or less frequently (eg every 4 years like the Victorian Transmission Plan),[62] but consider that every two years strikes the best balance and enables the NSW System Plan, ISP and IIO Report to work together the most effectively.

It should be published after the IIO Report, which would continue to be published every two years. This would enable the NSW System Plan to use the IIO Report's modelling to inform its assessment and recommendations of projects. The timing of the NSW System Plan should be coordinated with the ISP and IIO Report as discussed in section 3.3.2 below.

As discussed in more detail in section 3.3.2 below, the NSW System Plan should be developed using the scenarios and modelling from the IIO Report (with the IIO Report in turn based on the inputs, assumptions and scenarios from the ISP's IASR). The NSW System Plan would use the IIO Report's modelling of NSW's needs for network, generation and storage investment to develop a more detailed assessment and recommendation of strategic network projects.

We envisage that the NSW System Plan would explain the schedule of strategic projects EnergyCo considers are needed in NSW over a 20-year time horizon to meet the NSW infrastructure investment objectives and the EII Act objects. The plan would include information on the need for investment in additional capacity, and the proposed location, size and timing of potential options to deliver the needed capacity. It would explain how the plan might be adapted under different scenarios or sensitivities.

The NSW System Plan would focus on strategic NSW projects as outlined above, including strategic projects on transmission and distribution networks downstream from the REZs to support the network and maintain reliability and security as the system transitions to increased levels of renewable energy. For all identified needs, EnergyCo would be expected to consider and identify opportunities for non-network options to provide alternatives to network projects. It could use the plan to initiate consultation on non-network options, having regard to the specific need and timing requirements, similar to the approach adopted by AEMO in the ISP and TNSPs in the RIT-T.

The NSW System Plan should set out a recommended schedule of projects to meet NSW's needs over the next 20 years, including EnergyCo's proposed approach and timing for recommending any RNIPs or PTIPs based

62 The draft 2025 Victorian Transmission Plan states that the intention is to publish the first final Victorian Transmission Plan in 2025, publish an update in 2027 and then publish a new version every four years after that.

on the plan over the next two years until the next plan is published. The plan should categorise projects based on their urgency and strategic importance, building on the approach taken in the 2023 NIS where projects were classified as 'deliver now', 'secure now' or 'plan for the future'.

In preparing the plan, EnergyCo would be required to work with network planners at the NSW transmission and distribution businesses through joint planning and give due regard to relevant information contained in the most recent transmission and distribution annual planning reports and transmission asset management reports (TAPRs, DAPRs, and TAMRs).

In line with the current approach taken by EnergyCo in the NIS, the NSW System Plan should incorporate assessment of community, environmental and cultural factors alongside technical and economic considerations when evaluating transmission and distribution options, including early engagement with Traditional Owners, First Peoples, landholders and local communities to understand local priorities and inform project planning.

EnergyCo would also be required collaborate closely with AEMO in preparing the plan to ensure alignment and coordination when identifying the appropriate framework under which each project should progress. For example, the optimal development path outlined in the ISP includes projects that will progress under the NER as actionable ISP projects, as well as those that will progress under the EII Act as PTIPs or RNIPs (called actionable NSW projects within the ISP).[63] The expectation would be that EnergyCo and AEMO would continue to collaborate closely to identify which projects should proceed under the EII Act framework as an RNIP or PTIP, and which should progress under the national framework as an actionable ISP project.

In addition to providing the schedule of projects required to meet NSW's network capacity needs over the 20-year time horizon, EnergyCo would be required to specify in the plan whether NSW strategic projects proceeding under the EII Act meet the criteria or test for contestable provision (discussed in section 2.4.4) and, if unclear at the time of publishing the plan, when it intends to make that decision.

We considered whether to recommend changes to the scope of the TAPRs, DAPRs and TAMRs, and whether to transfer responsibility for the ESTM Report and parts of the IIO Report from the EST Monitor and AEMO Services to EnergyCo respectively as proposed in option A.3 in the options paper. After careful consideration, we have decided not to include these options in our interim recommendations for the following reasons.

Regarding the TAPRs and DAPRs, stakeholders highlighted that these reports serve specific functions and provide valuable information to distinct stakeholder groups. Any changes to their scope would require careful consideration of these existing purposes and stakeholder needs. Preparation of these reports also requires detailed knowledge of each network based on the outcomes of the relevant NSP's annual planning review, which EnergyCo does not currently have. Making the NSW System Plan also serve as the single TAPR for NSW and replace each TNSPs TAPR or TAMR as proposed in option A.3 would require a significant increase in EnergyCo's planning staff and resources and very close coordination with each TNSP, and would risk losing the important details that are currently contained in individual TAPRs and TAMRs.

We consider that modifications to these established reporting frameworks could disrupt their current effectiveness without clear benefits. We recommend that the NSW System Plan consolidates key information from the individual TAPRs, TAMRs and DAPRs to provide a single source of strategic information for stakeholders, but does not replace those reports. We do not recommend making any changes to the scope or content of TAPRs, TAMRs or DAPRs.

We instead recommended that the AEMC consider the scope of TAPRs and DAPRs more broadly in the context of jurisdictions implementing state-based transmission frameworks as discussed in section 3.3.4 below.

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63 If a project falls under the ISP framework, AEMO would determine the TNSPs responsible for leading the RIT-T process for that actionable ISP project. Additionally, AEMO could recommend preparatory activities or early works that a TNSP should undertake to facilitate the project's progress efficiently.

This would provide a more appropriate forum for such considerations of the appropriate scope and contents of those reports in light of state-based planning regimes that have been adopted in NSW, Victoria, Queensland and Tasmania and other developments including the AEMC's upcoming review of the ISP and rule change request on integrated distribution planning.

For the ESTM Report, we understand this report has a very specific focus and serves a broad audience. The Energy Security Target Monitor also has functions that are unrelated to transmission planning, with a number of other actions that could be taken in response to a target breach. We consider that it would be more effective for the role of ESTM to remain separate and do not consider that there is a clear rationale for transferring responsibility for the ESTM to EnergyCo, other than it resulting in one less report.

As several stakeholders noted during consultation, while the number of planning reports may not be ideal, this is not necessarily a material issue provided the objective, scope and interrelationships between reports is clear and well understood by stakeholders. Our recommendations therefore focus on improving coordination and information sharing between existing reports rather than restructuring or consolidating reporting responsibilities. This is discussed further in section 3.3.2.

Draft evaluation against the assessment criteria

We consider that this draft recommendation will promote the following aspects of the assessment criteria:

- **Promote timely planning and delivery of transmission projects:** The current planning arrangements lack consistency between various planning reports and clarity as to what each report covers and how they fit together, making effective planning of the network difficult and challenging for stakeholders to engage in planning processes or make informed investment decisions. This recommendation should provide stakeholders with a single reference point for strategic network planning information including scenarios, increasing clarity and confidence in their planning decisions and potentially reducing delays in project development.
- **Promote efficient planning and delivery of transmission projects:** The current fragmented approach creates duplication of effort across multiple planning processes and increases administrative burden on planners and stakeholders, who must reconcile potentially inconsistent information across multiple reports when making investment decisions. This recommendation should reduce this duplication and reduce transaction costs for all parties by streamlining decision-making processes and optimising the use of planning resources.
- **Improve outcomes for NSW electricity consumers, local communities and taxpayers:** This recommendation should reduce costs for electricity consumers by eliminating planning inefficiencies, with any savings passed through via lower network charges. Communities should benefit from a clearer engagement pathway and greater certainty about infrastructure development timelines. Taxpayers should receive improved value from government planning expenditure through a reduction of duplicated planning functions. The consolidated approach may also enable faster connection of renewable energy sources, which could contribute to wholesale electricity price outcomes for consumers.
- **Provide clear and effective allocation and coordination of roles and responsibilities:** This recommendation would leverage EnergyCo's established REZ planning capabilities and whole-of-system perspective to coordinate strategic projects across NSW while consolidating information from existing planning reports produced by other bodies. It would provide clear definition of roles and responsibilities, with EnergyCo responsible for system-wide coordination while other bodies maintain their specific planning functions for their individual networks. The approach should reduce coordination challenges and overlaps between different planning processes while utilising established relationships between planning bodies to facilitate information sharing.

3.3.2 B.2: Coordinate the development and timing of the various planning reports in NSW and clarify how they fit together to deliver an integrated plan

Overview of the draft recommendations

We recommend improved coordination of the development and timing of the various network planning reports in NSW to deliver an integrated planning approach that provides clarity on how the different documents relate to each other and inform strategic decision-making.

Our recommendations to achieve this outcome are:

- **Coordination of timing and publication:** EnergyCo should be required to prepare the NSW System Plan every two years and work with AEMO Services and AEMO to establish publication dates that coordinate with other key planning documents including the IIO Report, IASR and ISP. To provide additional clarity to stakeholders on how these planning reports fit together, we recommend EnergyCo prepare and publish a planning timetable at the start of each two-year period, similar to AEMO's ISP timetable under the NER.[64] This timetable would show key dates for preparing the NSW System Plan and reference other key planning documents and their publication dates. We recognise that aligning the timing of these reports and their inputs within a two-year cycle may be challenging and consider that the optimal alignment should be determined by EnergyCo, AEMO and AEMO Services through consultation. Accordingly, we have not set out a proposed timeline for their publication in this interim report. However, we recommend that the first NSW System Plan is published in 2027 and set out a high-level diagram of the interaction between the reports above.
- **Consistency of scenarios and modelling**: We recommend that the IASR serves as the foundation for inputs, assumptions and scenarios used in the IIO Report and NSW System Plan, with reasons for any divergence made public. The IIO Report should be the primary document for developing scenarios and undertaking modelling of the NSW system's need for network, generation and storage projects. The NSW System Plan would use the IIO Report's modelling to undertake a more detailed assessment and recommendation of strategic network projects as discussed in section 3.3.1 above. This approach will promote greater consistency between the ISP, IIO Report and NSW System Plan.
- **Clear preparation processes and content requirements:** We recommend establishing clear preparation processes and content requirements for the NSW System Plan in legislation, similar to the approach taken for the IIO Report. This should include clearly defining the objective of the NSW System Plan to provide clarity on its purpose and scope. It should also identify which planning documents will inform development of the NSW System Plan, including the IIO Report, ESTM Report, TAPRs, TAMRs and DAPRs, and specify how they will be used. There may also be benefit in reviewing the preparation process and content requirements for the IIO Report currently set out in the EII Act and EII Regulation to ensure they are as clear as possible and define the objective and scope of the IIO Report accurately and consistently with the objective and scope of the NSW System Plan.
- **Integration across planning documents:** To ensure effective integration between the IIO Report and NSW System Plan, we recommend that EnergyCo develop an 'NSW Options for Assessment' document as input into AEMO Services' IIO Report. This document would identify transmission, distribution and non-network options across NSW, building upon the most recent NSW System Plan and capturing current information on network options including delivery timeframes and costs. EnergyCo would prepare this following close engagement with Transgrid, NSW DNSPs, and other potential providers. AEMO Services would use this information in its modelling, with EnergyCo then adopting the IIO Report outcomes when developing the NSW System Plan. While we understand that EnergyCo provides a similar list to AEMO

64 Available at https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2026-integrated-system-plan-isp

Services now to assist with preparation of the IIO Report, we consider there is value in formalising this document and highlighting its role as a key input to the NSW System Plan.

- **Joint planning obligations**: Clear joint planning obligations should be established to require NSW TNSPs and NSW DNSPs to provide information and collaborate with EnergyCo in preparing the NSW System Plan. This would include requirements for information sharing, consultation processes, and coordination mechanisms.
- **Feedback mechanisms:** We consider that establishing a formal feedback mechanism between AEMO's ISP development and EnergyCo's NSW System Plan preparation will be important. While engagement between these parties currently occurs, the process for determining how strategic projects in NSW are considered and which development pathway they should follow (national or NSW framework) lacks transparency. A formal feedback mechanism would provide clarity on the process AEMO and EnergyCo will use to determine the most appropriate development pathway for strategic NSW network projects, helping stakeholders understand how decisions are made and providing greater certainty regarding which assessment framework applies. This would also clarify how the ISP and NSW System Plan work together in an iterative way to consider strategic projects in NSW.
- **Integration guidance:** EnergyCo should set out its approach to integration with national and other NSW planning reports in a guideline (as recommended in section 2.4.2), providing transparency on how it will coordinate with various planning bodies and promote consistency where appropriate and reconcile any differences across planning documents.

Draft evaluation against the assessment criteria

We consider that this draft recommendation will promote the following aspects of the assessment criteria:

- **Promote timely planning and delivery of transmission projects:** This recommendation should improve project planning and delivery timelines by coordinating publication timeframes between NSW and national planning documents, clarifying the objectives of each of the NSW planning reports and their relationship to other national planning reports, and establishing clear processes for determining the appropriate development pathway (NER or EII Act and contestable or non-contestable) for strategic projects in NSW. A published timetable would also provide stakeholders with visibility of planning milestones, supporting timely engagement and decision-making.
- **Promote efficient planning and delivery of transmission projects:** This recommendation should reduce duplication by establishing clear information flows between planning processes through the NSW Options for Assessment document and formal feedback processes between EnergyCo and AEMO. The coordinated approach should also reduce inefficiencies by ensuring consistent use of inputs, assumptions and scenarios across planning documents (based on the IASR foundation) and establishing clear joint planning obligations that streamline collaboration between key parties.
- **Improve outcomes for NSW electricity consumers, local communities and taxpayers:** This recommendation should improve consumer outcomes by ensuring projects are developed under the most appropriate regulatory framework based on the need they are addressing, providing clarity regarding the project assessment process and cost recovery pathway for each project. The coordinated approach should enable more efficient project sequencing and better integration of NSW renewable energy zones with national transmission needs.
- **Provide clear and effective allocation and coordination of roles and responsibilities:** This recommendation would clarify the respective roles of EnergyCo, AEMO Services and AEMO in coordinated planning of strategic projects, while maintaining their distinct regulatory functions. The formal feedback mechanism would establish clear processes for determining development pathways, and the joint planning obligations would define collaboration requirements, reducing ambiguity about state and national responsibilities.

3.3.3 B.3: Expand planning report processes so they are informed by comprehensive information on transmission, distribution and non-network options and can assess their relative benefits

Overview of the draft recommendations

To ensure strategic NSW planning is informed by comprehensive information that enables assessment of the relative benefits of transmission, distribution and non-network options, we recommend that the following enhancements to NSW network planning reports should be implemented:

- **Expand distribution network assessment:** We recommend requiring the NSW System Plan and IIO Report preparation processes to include assessment of significant distribution network constraints, opportunities and solutions. The NSW System Plan should evaluate how distribution-level solutions such as demand response, distributed storage, voltage management or local network augmentation could defer or avoid the need for strategic transmission investments, ensuring alternative solutions across both network levels are considered when determining the schedule of strategic projects required to meet NSW's generation, reliability and security needs. The IIO Report should incorporate consideration of distribution level solutions to the extent these are provided as an input from EnergyCo as part of the Options for Assessment as discussed above). We understand that AEMO Services has started doing this for the 2025 IIO Report. The 2027 IIO Report should also build on the assessment of distribution network issues that AEMO has begun to adopt for the 2026 ISP, as set out in AEMO's recently released draft 2025 Electricity Network Options Report.[65]
- **Expand non-network solution assessment:** We recommend requiring EnergyCo to consider and identify opportunities for non-network options to provide alternatives to strategic transmission projects when preparing the NSW System Plan. For all identified network needs, EnergyCo should evaluate how non-network solutions such as demand response programs, battery energy storage systems, virtual power plants, industrial load management, and other market-based solutions could address the specific need and timing requirements. EnergyCo should use the NSW System Plan to initiate consultation on viable non-network options, engaging with market participants and service providers to assess their technical feasibility, economic viability, delivery timeframes, and reliability contributions. This could occur in a similar manner to how AEMO currently calls for and considers non-network options when developing the ISP.
- **Enhance reporting scope and content:** We recommend expanding the NSW System Plan and IIO Report to document the assessment of transmission, distribution and non-network options that were considered as potential options for RNIPs or PTIPs and the outcomes of comparative assessments. This enhanced reporting should provide transparency on how different solution types were evaluated and the relative benefits that informed planning decisions.
- **Enhanced AEMO Services modelling capability:** We recommend expanding AEMO Services' modelling capabilities to enable more comprehensive assessment of distribution network constraints, CER integration impacts and non-network solutions in the IIO Report. This should leverage AEMO's significantly improved modelling capabilities developed for the 2026 ISP, ensuring consistent analytical capabilities across all AEMO planning functions. The enhanced capability should include improved modelling of how distribution network limitations affect transmission planning outcomes and the ability to evaluate integrated transmission-distribution solutions. Given our recommendation that EnergyCo become the key planner for strategic projects in NSW, AEMO Services should engage closely with EnergyCo to access essential planning information and data required to implement these enhanced modelling capabilities.
- **Integrated forecasting coordination:** We recommend expanding requirements for the NSW System Plan, IIO Report and (where relevant) the ESTM Report to incorporate forecasts of major new load connections

[65] Available at aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2025/2025-electricity-network-options-report/draft-2025-electricity-network-options-report.pdf?la=en

to the distribution network, CER uptake, distributed generation and demand growth. Consistent forecasting methodologies should be used across these reports and parties should work together through joint planning to ensure that occurs. We also recommend that EnergyCo clearly explain how those matters are taken into account when planning RNIPs, PTIPs or other strategic projects in NSW.

- **Improved data integration:** We recommend developing structured processes for sharing distribution network capacity, constraint and cost data relevant to strategic transmission planning decisions between DNSPs and EnergyCo. This data should enable EnergyCo to understand and consider how local network conditions affect the relative benefits of transmission versus distribution solutions, enabling more informed project evaluation and pathway selection. EnergyCo should make this data available to AEMO Services to inform the IIO Report.

The above recommendations should be implemented as high-level requirements and principles that are designed to guide parties in achieving the desired outcomes. We recommend these obligations are implemented in a manner that is broadly consistent with the equivalent obligations that apply to AEMO when preparing the ISP under the NER. We note that the obligations on AEMO regarding consideration of non-network options in the ISP are set out in the NER (clause 5.22.12) and obligations on AEMO to explain the assumptions that underpin its demand-side forecasts in the ISP were finalised by the AEMC in 2024 in the *Improving consideration of demand-side factors in the ISP rule determination*.[66]

We acknowledge the views of some stakeholders who consider that, while progress is being made at the national level to improve the integration of distribution networks in the network planning processes, there is still a need to improve the current tools, models and methodologies used by system planners to do this better. While we consider the recent changes implemented at the national level should provide a guide as to minimum expectations, we encourage further consideration by Roadmap bodies of how NSW can build upon these national improvements to develop more sophisticated planning capabilities to ensure the state remains at the forefront of integrated energy system planning.

Successful implementation of the above recommendations will require EnergyCo to work closely and collaboratively with TNSPs and DNSPs as well as AEMO Services and AEMO to develop the information requirements and processes necessary to achieve the desired outcomes. This once again highlights the critical role of joint planning in preparing the key NSW planning reports. Joint planning is discussed further in section 2.5.2.

Draft evaluation against the assessment criteria

We consider that these draft recommendations will promote the following aspects of the assessment criteria:

- **Promote timely planning and delivery of transmission projects:** The current NSW planning processes lack comprehensive assessment of alternative solutions which can lead to suboptimal project selection and potential delays when transmission projects encounter implementation challenges that could have been avoided through earlier consideration of alternatives. Distribution and non-network alternatives also have the potential to be delivered more quickly than new greenfield transmission lines. This recommendation should accelerate project delivery by ensuring that the most appropriate solutions are identified upfront, reducing the risk of project delays due to unforeseen constraints or community opposition that alternative approaches might have addressed.
- **Promote efficient planning and delivery of transmission projects:** The current approach of assessing transmission solutions largely in isolation from distribution and non-network alternatives could create inefficiencies where lower-cost alternatives could achieve the same outcomes. This recommendation should improve efficiency by ensuring all credible options to address a specific NSW network need are evaluated on their relative merits, potentially identifying lower-cost solutions such as demand response or distributed

[66] See https://www.aemc.gov.au/rule-changes/improving-consideration-demand-side-factors-isp

storage that could defer or replace transmission investments. The improved data integration between DNSPs and EnergyCo should reduce information gaps that currently limit optimal solution selection, while the enhanced AEMO Services modelling capability should enable more sophisticated analysis of integrated solutions.

- **Improve outcomes for NSW electricity consumers, local communities and taxpayers:** This recommendation should reduce costs for electricity consumers by ensuring the most cost-effective solutions are selected through comprehensive assessment, with savings passed through via lower network charges. Communities should benefit from consideration of local distribution solutions that may have lower environmental and social impacts than large transmission projects, and from improved consultation processes on non-network options.
- **Provide clear and effective allocation and coordination of roles and responsibilities:** This recommendation would establish clear requirements for EnergyCo to coordinate assessment across transmission, distribution and non-network solutions while leveraging the expertise of DNSPs for distribution network analysis and AEMO Services for enhanced modelling. The formal obligations on parties to support information sharing should help clarify coordination responsibilities, while the joint planning approach should remove gaps in responsibility for considering integrated solutions across different network levels and technology types.

3.3.4 B.4: Engage with the AEMC and AEMO on potential improvements to the ISP, TAPRs and DAPRs to clarify their interaction with state-based planning reports and review their contents

Overview of the draft recommendations

To address coordination challenges between state and national planning frameworks, we recommend that the NSW Government engage with national bodies on several potential improvements to existing national planning arrangements and reports. These issues are best addressed through coordinated national actions rather than specific NSW reforms so that any reforms can also consider the impacts of other state-based transmission planning regimes including recent reforms in Victoria, Queensland and Tasmania.

We recommend that the NSW Government engage with the AEMC and AEMO to discuss potential improvements to the following aspects of national planning reports:

- **Integrate state-based regimes into national planning reports:** Consider national-level improvements to better integrate state-based planning regimes within NER planning documents, ensuring consistency and coordination between jurisdictional and national frameworks.
- **Streamline annual planning reports:** Review the content of TAPRs and DAPRs to clarify their objectives and relationship with the ISP and jurisdictional planning documents, reducing duplication and improving stakeholder clarity.
- **Timing of annual planning reports:** Review the timing of TAPRs and DAPRs to consider the optimal alignment with the ISP and state-based planning reports. For example, ElectraNet recently published its 2025 TAPR five months early and stated that it was doing so to better align with the Draft 2025 ISP,[67] and Energy Consumers Australia has submitted a rule change request to the AEMC on integrated distribution system planning that proposes that DAPRs are revised to become Integrated Distribution System Plans and published every two years to align with the ISP.[68]

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67 Available at www.electranet.com.au/wp-content/uploads/2025/06/250516_TAPR_FINAL-1.pdf

68 Available at www.aemc.gov.au/rule-changes/integrated-distribution-system-planning

- **Enhance joint planning arrangements:** Review current NER joint planning provisions to ensure they enable comprehensive and timely preparation of key planning documents, building on our recommendations in section 2.5.2 to extend joint planning obligations to EnergyCo
- **Consolidate system security reporting:** Assess whether separate system security reports could be better integrated into the ISP or other documents to reduce the overall number of planning reports, and how critical system strength and inertia projects can be included as actionable ISP projects so that the NER's early works and streamlined RIT-T provisions for actionable ISP projects apply.

A particular area requiring attention is the coordination of interstate transmission planning. In the Options Paper, we suggested increasing the ISP's focus on inter-regional issues to complement state-based jurisdictional planning. However, AEMO's submission argued that their current approach of considering both inter-regional and intra-regional issues provides valuable independent oversight and questioned whether changes are needed. We agree with this comment, but note that evidence from cases like VNI West (see Box 10) demonstrates that the shift towards separate state-based regimes is creating coordination challenges that require strong interstate coordination mechanisms. We recommend that the NSW Government work with the AEMC and AEMO to develop enhanced coordination arrangements that address these emerging risks.

The AEMC will soon progress work on distribution-level network planning (in response to Energy Consumers Australia's rule change request) and conduct its ISP review scheduled for completion in 2027. The NSW Government should collaborate with the AEMC and AEMO on both processes to advance the improvements outlined above and ensure NSW's experience with state-based planning informs national framework development.

4. Enhancing engagement, transparency and governance of transmission planning decisions

4.1 ISSUES WITH THE CURRENT ARRANGEMENTS

This section sets out the main issues we have identified with the current governance arrangements for transmission planning decisions under the EII Act. These issues relate to engagement with electricity consumers and local communities when making transmission planning decisions, transparency of transmission planning decisions, and the governance and funding arrangements for the entities involved in transmission planning in NSW.

4.1.1 The EII Act does not include a clear framework for effective engagement with consumers and local communities and transparency of planning decisions

Transmission planning requires balancing multiple competing objectives

Effective modern transmission planning is not simply an exercise in minimising costs. The planner needs to balance a wide range of objectives including cost, timing, community impacts, reliability, system security and renewable generation and emissions targets. The EII Act's objects reflect these broader objectives as set out in the box below. Each of the bodies with functions under the EII Act must act consistently with these objects. AEMO Services as the Consumer Trustee must also act independently and in the long-term financial interests of NSW electricity customers.

Box 14: Objects of the EII Act

- To improve the affordability, reliability, security and sustainability of electricity supply
- To co-ordinate investment in new generation, storage, network and related infrastructure
- To encourage investment in new generation, storage, network and related infrastructure by reducing risk for investors
- To foster local community support for investment in new generation, storage, network and related infrastructure
- To support economic development and manufacturing
- To create employment, including employment for Aboriginal and Torres Strait Islander people
- To invest in education and training
- To promote local industry, manufacturing and jobs
- To promote export opportunities for generation, storage and network technology.
- To increase employment and income opportunities for Aboriginal and Torres Strait Islander people in NSW
- To promote consultation and negotiation with the traditional Aboriginal owners of land on which generation, storage and network infrastructure is proposed to be constructed or operated under the Act.

We consider that transparency and effective engagement with local communities, consumers and other affected stakeholders is critical for making transmission planning decisions that promote these objectives. In particular, it is inevitable that there will be trade-offs between these objects when planning and approving projects and affected stakeholders need a process to provide meaningful input into their preferences and views on those trade-offs.

The EII Act does not include a comprehensive framework for engagement

Engagement with local communities and other affected stakeholders is an area where there is considerable overlap between transmission planning activities under the EII Act and activities related to environmental assessment planning approval under the *Environmental Planning and Assessment Act 1979* (NSW) and other NSW or Commonwealth regulatory requirements. In practice, EnergyCo and/or the relevant network operator undertake extensive engagement with local communities and other affected stakeholders as part of developing an Environmental Impact Statement (EIS) and obtaining environmental and planning approvals.[69] These activities inform EnergyCo's planning activities under the EII Act, for example its assessment of options for the route, design and capacity of a recommended RNIP or PTIP for inclusion in EnergyCo's recommendations to AEMO Services or the Minister.

However, the EII Act does not set out a clear framework for effective engagement with consumers, local communities and other stakeholders when making RNIP or PTIP recommendations or decisions under the EII Act. It also does not require publication and consultation on most draft decisions or recommendations or publications of reasons for decisions, which reduces transparency of decision-making.

There are a small number of specific narrow consultation obligations in the EII Act and EII Regulation, but not a comprehensive framework for engagement and transparent decision-making. For example:

- EnergyCo undertakes extensive local community engagement in REZs in practice, but there is no obligation under the EII Act for it to do so when developing RNIP or PTIP recommendations, other than an obligation to consult with local councils in the REZ when recommending an RNIP.
- The EII Act requires the Minister to consider the views of the local community before declaring a new REZ or directing a PTIP, but there are no similar obligations on EnergyCo or AEMO Services when recommending or authorising an RNIP other than the general obligation to act consistent with the objects of the EII Act.
- The Minister is required to publish draft declarations and consider submissions prior to declaring a new REZ or access scheme, but there are no similar obligations in relation to AEMO Services or EnergyCo's functions such as recommending an access scheme or setting access fees.
- The EII Act does not refer to consumer engagement and there are no obligations on EnergyCo or AEMO Services to consult with customers or their representatives. There is a Roadmap Consumer Reference Group organised by DCCEEW, but it appears to be used in a limited and ad hoc way.
- EnergyCo is required to provide a detailed recommendations report to AEMO Services when it recommends an RNIP for authorisation. EnergyCo's practice to date has been to publish a summarised version of this report, eg for the CWO and HCC REZs, but this is not required by the EII Act.
- AEMO Services is responsible for deciding whether to authorise RNIPs and for setting access fees. Its practice has been to publish a Statement of Reasons in relation to each of these decisions, but it is not required by the EII Act to consult on these decisions or publish reasons.

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[69] For example, a summary of the environmental assessment and planning approval process for the CWO REZ is available on EnergyCo's website at https://www.energyco.nsw.gov.au/cwo/planning-approvals#:~:text=The%20Central%2DWest%20Orana%20REZ,in%20Australia's%20renewable%20energy%20future

- There is limited transparency over the costs of contestable RNIP or PTIP projects. For the CWO and HCC RNIPs, very high-level cost information was provided by EnergyCo in its public version of the recommendations report. Confidentiality restrictions prevented the AER publishing detailed cost information in its revenue determination for the contestable part of the CWO project.[70]
- AEMO Services undertakes an extensive cost-benefit assessment as part of its decision whether to authorise an RNIP, but this cost-benefit assessment is only permitted under the EII Regulation to be disclosed to the Infrastructure Planner and DCCEEW. Its Statement of Reasons is unable to disclose the detailed results of the cost-benefit assessment, for example the amount of net benefits or the benefit-to-cost ratio. AEMO Services is required to calculate a maximum capital cost for RNIPs it authorises, but the EII Act provides that this amount is confidential and can only be disclosed to the AER and Minister.

Local communities also report issues with multiple parties consulting on similar issues related to the development of REZs, for example government entities, transmission planners, network operators and generators. This increases the burden on stakeholders and creates confusion. Having a single party responsible for leading consultation with local communities and providing greater clarity regarding the roles of each body could reduce these concerns.

Other transmission planning regimes include established engagement models

The approach to engagement with local communities, electricity consumers and other affected stakeholders under the Roadmap appears significantly less advanced than the various mechanisms under the NER or in other state-based transmission frameworks such as the examples set out in the box below.

Box 15: Consumer engagement under other transmission planning regimes in Australia

Under the NER, AEMO is required to establish an ISP Consumer Panel. The Panel advises AEMO on the development of the ISP and makes public reports on the IASR and draft ISP, which AEMO must have regard to and respond to. AEMO has also voluntarily established a Consumer and Community Reference Group that advises on ISP issues. AEMO has established an ISP Consumer Panel website page where information about the Panel's activities and reports are published. AEMO has also developed and published an ISP Stakeholder Engagement Plan with input from the ISP Consumer Panel.

Under the NER, the AER has established a Customer Challenge Panel, Customer Consultative Group and Consumer Reference Group. Information on the roles of these bodies and their reports are available on the AER's consumer engagement website page.

Under the NER, there are obligations on TNSPs to engage with local communities potentially affected by a future or actionable ISP project, or a REZ that has been identified through the ISP process and for which a REZ Design Report is required. This engagement must occur as part of the process for carrying out preparatory activities and through the RIT-T process for actionable ISP projects. Stakeholders who must be consulted include local landowners, councils, community members, environmental groups, and traditional owners. These stakeholders may also lodge a RIT-T dispute. TNSPs must also make reasonable efforts to meet the community engagement expectations set out in the NER when interacting with these local stakeholders.

Under the Queensland transmission planning framework, Priority Transmission Investment (PTI) Expert Panels are established to advise Powerlink for each PTI project. The Expert Panel advises

[70] See www.aer.gov.au/industry/registers/determinations/main-central-west-orana-renewable-energy-zone-network-project-contestable

Powerlink on implementing consultation engagement aspects of the PTI process, and challenges assumptions in recommendations and advice. The panel uses its technical and regulatory expertise in the energy sector to focus on the long-term interests of customers. It operates independently, with views reflecting the national energy objectives and Queensland's renewable energy goals. An Expert Panel comprised of three experienced Queensland consumer representatives was formed to provide advice on the first PTI project, the Gladstone Project, and its report was published by Powerlink. Powerlink also consults stakeholders more broadly on a draft assessment report for each PTI project.

Stakeholder feedback on engagement and transparency

We held a workshop with consumer groups as part of our engagement on the consultation paper. Feedback from consumer groups included the following points:

- Roadmap bodies have struggled to make consumer engagement a core part of what they do and have not made it a priority.
- Consumer representatives are often consulted too late after decisions are effectively already made.
- Engagement by Roadmap bodies is at the 'inform' end of the IAP2 public participation spectrum, rather than more meaningful 'consult', 'involve' or 'collaborate' engagement. For example, there were regular briefings by EnergyCo on the status of projects, but no consultation where consumer groups could influence key aspects of the planning of those projects and the trade-offs involved in those decisions.
- There should be more formalised and deeper engagement, in particular, to understand people's preferences and trade-offs between objectives.
- There has so far been a preference for speed over rigour, and this balance needs to be reconsidered.
- Effective consultation was hampered by confidentiality restrictions and a lack of transparency.
- Consumer groups were also critical of Transgrid's consumer engagement, considering it to be less effective than other network businesses across Australia.

The Energy and Water Ombudsman NSW (EWON) noted in its consultation paper submission that its jurisdiction was expanded in December 2024 to include new transmission infrastructure and REZ development and it has recently begun working with the NSW Government to expand jurisdiction further to include renewable energy generation and storage infrastructure. EWON noted that it has received 11 complaints to date about new transmission infrastructure development. Based on these complaints, community members often feel that they have been left out of consultation. Community members are also often confused by the multiple parties involved in transmission planning in a REZ and who their complaint should be about.

We also received several submissions to the consultation paper from members of local communities affected by new infrastructure in REZ that were critical of the current approach to engagement with local communities by Roadmap bodies. We also received a submission from researchers at the University of Canberra and Macquarie University (Jonathan Pickering and Madeline Taylor) addressing issues related to consultation with local communities, including highlighting that the current EII Act obligations to engage with local communities were limited and less extensive than under the NER.

In its options paper submission, the Australian Energy Infrastructure Commissioner (AEIC) stated that it views proactive community engagement and improved transparency as crucial elements of effective transmission planning and an equitable transition. It welcomed the consultation paper's recognition of the governance gaps in the EII Act regarding effective community and consumer engagement. It considered that 'current transparency and engagement obligations must be enhanced if we are to increase understanding and trust in the

system, while also improving practical outcomes for electricity consumers, local communities and other affected stakeholders in NSW'.

In its submission to the options paper, Re-Alliance supported the comments in the consultation paper that local communities and consumers should be seen as trusted partners by the various entities involved in transmission planning. It considered that this goal needed a clear requirement for EnergyCo to deliver meaningful community engagement and to support regions to understand, prepare for and maximise the potential long term benefits of renewable energy projects. Re-Alliance considered that effective transmission planning cannot happen in isolation and that early and meaningful consultation with communities, must be a key consideration. It also noted that the current lack of clear roles and responsibilities for decision makers in the area of transmission and implementation creates confusion, and makes it difficult for the community to meaningfully engage with transmission infrastructure development.

In its options paper submission, BlueScope Steel provided the following perspective on the current transparency and engagement as one of NSW's largest electricity users:

> *The current approach to electricity transition planning in New South Wales falls short of established best practices. It is marked by complexity, limited stakeholder accessibility, and a lack of clear delineation of responsibilities among the numerous involved entities. There is a concerning absence of transparency regarding the financial implications and benefits for consumers, who are required to fund initiatives based on unverified assumptions and budgets and remain unaware and unprepared for the potential long-term impacts on electricity pricing. Consumers have no meaningful opportunity to engage with the work of EnergyCo or AEMO Services. Public reports are limited to broad overviews, often citing confidentiality, and there is no public submissions process to ensure transparency or accountability. Enhancing transparency can allow stakeholders to access accurate information and better participate in decision-making. Clear accountability ensures each agency performs its role effectively, reducing inefficiencies, overlaps, and service gaps. Transparent and accountable processes also support social license in part by addressing community concerns and ensure alignment with legislative and policy goals.*[71]

The EUAA summed up its concerns about the current approach to engagement and transparency as follows:

> *Due to the lack of genuine consultation and transparency, it is extremely difficult for consumers to provide a deep insight into the inner workings of the various groups identified. If we are unable to see how the sausages are being made how can we vouch for the quality of their contents and benefits to society?*[72]

4.1.2 The current governance and funding arrangements of bodies involved in transmission planning in NSW may not support effective governance

Key planning bodies operate under different legal structures and objectives

Each of the key bodies involved in NSW transmission planning are a different type of legal entity with different governance arrangements. They also each have different statutory objectives that guide their decisions and different funding models.

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71 BlueScope Steel options paper submission.

72 EUAA options paper submission.

- **EnergyCo** is a NSW government agency established under the *Energy and Utilities Administration Act 1987* (NSW). It must exercise its functions as Infrastructure Planner under the EII Act in a way that is consistent with the objects of the Act. It is governed by an independent board of directors, but is subject to the control and direction of the Minister. It is also subject to the control and direction of the Secretary of DCCEEW on certain matters.[73] It cannot hire staff directly, with staff employed by the NSW Government under the *Government Sector Employment Act (NSW) 2013* (NSW) and senior executive staff being appointed by the Secretary of DCCEEW. EnergyCo is subject to the same staffing restrictions as DCCEEW, for example pay levels and any applicable limits on employee headcounts and senior executive numbers.
- **AEMO Services** is a subsidiary of AEMO (a public not-for-profit company limited by guarantee). In its role as Consumer Trustee, AEMO Services must exercise its functions in a way that is consistent with the objects of the EII Act and must act independently and in the long-term financial interests of NSW electricity customers. It is governed by a board of directors, which includes an independent chair and a mix of independent and AEMO directors. It is funded through the contribution determination mechanism under the EII Act.
- **Transgrid** is a private entity that entered into a 99 year lease for the transmission assets with the NSW government in 2015. Transgrid is structured as a trust owned by a consortium of private investors. The registered TNSP and licenced transmission operator is NSW Electricity Networks Operations Pty Ltd as a Trustee for the NSW Electricity Networks Operations Trust. It is governed by a board representing its security holders. It is not required to act consistently with the objectives of the EII Act and acts in the interests of its investors. It is funded through a combination of private investment and revenue from transmission services under the NER and EII Act.

Complex funding arrangements create operational challenges

EnergyCo's current funding arrangements are complex with different funding sources for different functions:

- It recovers its RNIP or PTIP project-related costs from the network operator once that person has been appointed as network operator for the project. The network operator then recovers those costs through their AER revenue determinations and the Scheme Financial Vehicle. EnergyCo can access funding from the Transmission Acceleration Facility for certain purposes, eg to cover development costs that are then reimbursed once a network operator is appointed.
- It recovers its costs of administering access schemes from access rights holders (eg generators in a REZ to which an access scheme applies) through access fees.
- Its other costs (eg operating costs or functions not related to an RNIP, PTIP or access scheme) are funded through the NSW budget process.

Some of these models may not be optimal to enable the relevant entities to effectively perform their functions. In particular, EnergyCo's governance and funding arrangements may need reforms to enable it to effectively perform its current functions and any new functions that are allocated to it based on the outcomes of this review. We note that significant reforms to EnergyCo's governance model were recommended in the Check-Up review and are currently being implemented to address several of the most critical issues regarding EnergyCo's governance model, including the recent establishment of an independent Board. However, some challenges may remain. For example, its current arrangements may not enable it to recruit and retain the staff it requires to be fully effective, noting the specialised nature of transmission planning and restrictions on staff numbers and pay in government entities. Its current funding arrangements are also complex and may limit its

[73] See sections 6 and 7 of the Energy and Utilities Administration Act 1987.

ability to be adequately funded to perform planning functions that are not related to a specific RNIP, PTIP or access scheme.

4.2 OPTIONS CONSIDERED TO ADDRESS THESE ISSUES

4.2.1 Options paper

Engagement and transparency

The options paper set out the following options for improving the current engagement approach of Roadmap bodies and improving the transparency of their decisions. It notes that these options are based on engagement models and obligations adopted under the NER or in other jurisdictional transmission planning regimes. These options are not mutually exclusive.

- Amend the EII Act or EII Regulation to require EnergyCo to engage with electricity consumers or consumer representatives and local communities potentially affected by an RNIP or PTIP, including through adding obligations to engage with local communities that are consistent with the NER obligations on TNSPs under the recent *Enhancing community engagement in transmission building rule change* final decision.
- Require EnergyCo to establish and fund a Consumer and Community Panel comprised of representatives of consumers and local communities (or a separate Consumer Panel and Local Communities Panel).
- Require EnergyCo and AEMO Services to consult with the Panel prior to making key decisions, including recommending, directing or authorising an RNIP or PTIP, declaring a new REZ or REZ access scheme, or setting access fees.
- Require the Panel to prepare and publish a report that the decision maker must have regard to when making certain decisions – for example, a Panel report on draft RNIP or PTIP recommendations or draft access fee decisions.
- Require EnergyCo and AEMO Services to publish and publicly consult on drafts of key decisions and explain how they have reflected feedback in their final decision, including recommending an RNIP or PTIP or setting access fees.
- Require EnergyCo to consult on, develop and publish a process and approach paper explaining how it will perform its key functions, including recommending RNIPs and PTIPs.
- Require EnergyCo to consult on, develop and publish a general stakeholder engagement plan and a specific stakeholder engagement plan for each REZ.
- Require AEMO Services to publish the results of the CBA it performs as part of its RNIP authorisation decision.

EnergyCo governance and funding

The options paper included the following options for improvements to EnergyCo's current governance and funding arrangements to enable it to effectively perform its functions, particularly if it is given expanded functions as would be the case under several of the options discussed in earlier sections:

- Make changes to EnergyCo's governance and funding arrangements to improve its ability to attract and retain suitable staff and perform any new functions.
- Introduce additional mechanisms for funding and approving staged projects, early works and long-lead time items, for example through changes to the RNIP and PTIP processes to make it easier to approve projects in stages or additional EnergyCo funding mechanisms.
- Require EnergyCo to publish and consult on its budget.

- Introduce a mechanism for IPART, the AER or the NSW government to review whether EnergyCo's expenditure on a RNIP or PTIP that will be recovered from consumers was prudent, efficient and reasonable.
- Ensure a clear separation between DCCEEW and EnergyCo on policy development so that EnergyCo's opportunity to influence policy decisions that affect its roles and responsibilities is consistent with that of other stakeholders.

4.2.2 Submissions to the options paper

Engagement and transparency

The options to improve engagement by Roadmap bodies with consumers and local communities and improve the transparency of decisions were supported by most stakeholder who commented on this issue, including the AEIC, Re-Alliance, the EUAA, Endeavour Energy, Essential Energy, Transgrid, Nexa Advisory, CEIG, Origin Energy, Iberdrola Australia, Verta Energy and Windlab.

Specific comments on these options included:

- The AEIC supported the proposed options to improve consumer and community engagement and enhance transparency. The AEIC considered that the most important actions would be stronger requirements for EnergyCo to engage actively and empathetically with electricity consumers or consumer representatives on a regional basis, and particularly with local communities potentially affected by an RNIP or PTIP. The AEIC supported the establishment of a Consumer and Community Panel and requirements for EnergyCo and AEMO Services to publish and consult on drafts of key decisions.
- Re-Alliance made a number of comments on engagement, transparency and governance issues including:
  - It supported the options to improve engagement with consumers and local communities and transparency of decision-making by Roadmap bodies.
  - It strongly supported the creation of a Consumer and Community Panel. It recommended clarification on the purpose and role of the Panel, noting that it will not replace the need for improved engagement and consultation and better communication more broadly. It considered that the option of requiring the Panel to prepare and publish a report may not be the best way to gather the knowledge and experience.
  - It recommended that socioeconomic assessment and landowner engagement on route selection should occur early via a 'Multi-Criteria Analysis' methodology as in Victoria. It also recommended considering how governance arrangements can help address increasing community concern around the environmental impact of new transmission infrastructure.
- JEC supported requiring EnergyCo to establish and fund a Consumer and Community Panel comprised of representatives of consumers and local communities. It recommended this panel should report and be accountable to EnergyCo formally, have a webpage on the EnergyCo website for publishing any reports or publications it produces and have an explicit power to self-initiate reports on any subject. JEC considered that there are currently a number of other critical areas of activity in Roadmap delivery that need direct input from an expert consumer panel and do not currently have it, including all decisions that involves costs and benefits to consumers. JEC considered that the ISP Consumer Panel should be considered as a model for this panel.
- The EUAA supported a combination of all of the options with particular focus on consumer engagement through a public consultation process and the establishment of a dedicated Consumer Panel along the lines of the AER's Consumer Challenge Panel, AEMO's ISP Consumer Panel or the Powerlink PTI Expert Panel. It considered that EnergyCo should be required to take account of what the Consumer Panel says and provide reasons if it has not followed the Panel's advice. The EUAA considered that there should be separate Consumer and Community Panels.

- Origin Energy stated that effective engagement with local communities is a prerequisite for the timely delivery of the Roadmap. It considered that aligning EnergyCo's community engagement obligations with NER requirements and requiring EnergyCo to consult on and publish stakeholder engagement plans would support the early and comprehensive engagement that is required to promote social licence.
- AEMO Services supported EnergyCo taking a leading role in conducting stakeholder consultation in relation to RNIPs, including engaging consumers and their representatives and local communities as well as establishing consumer and community panels/reference groups. AEMO Services noted that it does not conduct consultation on its authorisation decisions and considers that it is preferable for comprehensive and high-quality consultation to be conducted by an organisation with on-the-ground connections in NSW communities.
- AEMO Services supported publishing its CBA results. However, it noted that the CBA is a key input into setting of the maximum capital cost (MCC) and the EII Act requires the MCC to be kept confidential so AEMO Services also currently keeps the CBA results confidential. It considered that allowing the CBA results to be published would ensure greater transparency for stakeholders and give stakeholders greater confidence of the benefits of the authorised project. However, it noted that publishing the CBA while maintaining confidentiality of the MCC may be challenging.
- Endeavour Energy noted that the information contained in AEMO Services authorisation CBA may be commercially sensitive which could present a challenge to publishing it and an alternative would be to publish a CBA methodology.
- Nexa Advisory encouraged formalising and strengthening early, place-based community engagement by EnergyCo, particularly in REZ host regions.
- Windlab commented that additional consultation was also required with industry and developers, not just consumers and local communities.

Some stakeholders considered that some the options were not necessary and that existing arrangement were sufficient or could be enhanced rather than implementing new mechanisms:

- Ausgrid considered that 'engagement practices have improved as EnergyCo and AEMO Services have matured as organisations' and it did 'not see a pressing need to create further regulatory requirements for new consultation'. However, Ausgrid did support options to increase coordination of stakeholder engagement and considered that the establishment of a Consumer and Community Panel and development by EnergyCo of a stakeholder engagement plan could better coordinate stakeholder engagement, enable engagement to be better targeted and reduce the risk of consultation fatigue.
- Endeavour Energy recommended having regard to the existing obligations on network operators for engagement of customers and local communities. It considered that any new obligations should ensure that engagement is not duplicative or confusing for communities if multiple parties are engaging simultaneously and does not delay or frustrate the ability of network operators to engage with their stakeholders and communities in a timely manner.
- Nexa Advisory considered that EnergyCo should make greater efforts to consolidate existing engagement channels and questioned whether an additional, stand-alone Consumer and Community Panel would add genuine value or simply create another layer of consultation.

EnergyCo expressed similar views, noting:

- EnergyCo is committed to engaging local communities and consumers as it plans and deliver both the infrastructure itself and the substantial community and employment benefit programs supporting them under the Roadmap. This includes legislated obligations specific to the Ell Act, obligations as a project proponent under the *Environmental Planning and Assessment Act 1979*, and long-standing forums with impacted communities (including EnergyCo's REZ Community Reference Groups) and consumers (including

DCCEEW's Consumer Reference Group and EnergyCo's ongoing engagements with industry and consumer reference groups through EnergyCo's recently established Strategy and Relationships Branch).

- While EnergyCo welcomes consultation, engagement and transparency improvements, including greater specificity of its obligations, the intent of some options may already be delivered through existing governance frameworks, consultation mechanisms, engagement processes, reporting requirements, and legislative obligations. Some options, such as the Community and Consumer Reference Panel, may incur unnecessary complexity, consumer cost, resourcing, administrative effort and delay risks if existing arrangements deliver similar outcomes.
- Enhancing existing forums and reporting mechanisms may offer a more efficient and effective solution for addressing any identified gaps in consumer, community, and stakeholder consultation or transparency. Ideally, new elements could integrate with or replace existing processes to minimise redundancy and inefficiency, rather than introduce new ones.
- EnergyCo welcomes opportunities to improve transparency where valuable relative to additional effort. However, some information or decisions may not be suitable or feasible for public disclosure.

EnergyCo governance and funding

Several stakeholders considered that EnergyCo's current governance and funding arrangements may not be optimal for it to effectively perform its current functions any new functions recommended by the review and should be reviewed, including Ausgrid, Endeavour Energy, Nexa Advisory, CEIG, and EnergyCo itself.

As noted in chapter 2 above on roles and responsibilities, EnergyCo explained that it would need additional functions, staff and powers (eg access to information) to undertake some of the additional roles proposed in the options paper.

The AEIC stated that more meaningful community and stakeholder engagement would also benefit from the retention of suitable staff, potentially requiring changes to EnergyCo's governance and funding arrangements.

Ausgrid recommended adopting options to improve transparency around EnergyCo's funding, expenditure and budget. Ausgrid stated that EnergyCo was recovering over $2 billion of costs it incurred in relation planning and delivery of the CWO REZ from consumers and access rights holders and that it was not aware of any reporting of the breakdown of these costs. JEC supported a mechanism for the AER to review whether EnergyCo's expenditure on RNIPs and PTIPs was prudent and efficient. The EUAA advocated for greater consumer engagement and transparency of these costs. The EUAA also supported requiring EnergyCo to publish and consult on its budget.

Endeavour Energy recommended clear separation between DCCEEW and Energy in setting the policies and rules by which EnergyCo operates. JEC and the EUAA also supported clear separation between EnergyCo and DCCEEW on policy issues, with JEC noting that it considered this was the intention of the current arrangements.

JEC did not support the introduction of any new mechanisms for funding and approving early works or long lead-time projects. It supported empowering EnergyCo to begin works earlier, but considered that there were sufficient existing mechanisms to finance these types of works.

4.3 DRAFT RECOMMENDATIONS

Our draft recommendations to enhance engagement, transparency and governance of planning decisions are summarised in the following table and explained below.

We also note that our recommendations in chapter 2 above in relation to clarifying roles and responsibilities include a draft recommendation to require EnergyCo to consult on and publish a guideline explaining its planning functions and how it will perform them (see section 2.4.2). This recommendation addresses the options of requiring EnergyCo to consult on, develop and publish a process and approach paper explaining how it will perform its key functions and requiring EnergyCo to consult on, develop and publish a stakeholder engagement plan. We have included that recommendation in the roles and responsibilities section as we consider it is a critical step towards clarifying current roles and responsibilities as well as improving transparency and engagement.

Table 4.1: Draft recommendations to enhance engagement, transparency and governance

Draft recommendation	Prioritisation
C. Enhancing engagement, transparency and governance of transmission planning decisions	
C.1: Implement best-practice engagement obligations to enhance engagement with consumers and local communities and transparency of decision making	By 2026
C.2: Ensure EnergyCo's governance and funding arrangements are appropriate for its current and expanded functions and enable it to attract and retain suitable staff	By 2027

4.3.1 C.1: Implement best-practice engagement obligations to enhance engagement with consumers and local communities and transparency of decision making

Overview of the draft recommendations

We recommend amending the EII Act and EII Regulation to implement a package of best-practice engagement obligations to enhance engagement with consumers and local communities and the transparency of transmission planning decisions. These obligations would primarily apply to EnergyCo when exercising its functions as Infrastructure Planner, but some of them would also apply to AEMO Services' authorisations and access fees functions as Consumer Trustee.

This recommendation involves the four interrelated reforms outlined below.

Engagement by EnergyCo with local communities

We recommend amending the EII Act or EII Regulation to require EnergyCo to engage with local communities potentially affected by an RNIP or PTIP when developing recommendations for the relevant project.

We recommend that this obligation is implemented in a manner that is consistent with the equivalent obligations that apply to transmission projects that are planned under the NER, which were introduced by the AEMC in late 2023 in *Enhancing community engagement in transmission building rule change* as set out in the box below. We recommend adding equivalent obligations to the EII Act or EII Regulation (eg in clause 43 of the EII Regulation) to require the Infrastructure Planner to engage with affected local community stakeholders prior to recommending an RNIP or PTIP.

We recognise that EnergyCo already engages with local communities as part of the environmental planning process under the *Environmental Planning and Assessment Act 1979* and through EnergyCo's REZ Community Reference Groups. However, we consider that the importance of effective engagement with local communities should also be recognised in the EII Act and consistent engagement obligations should apply to all major transmission projects regardless of whether they are planned under the NER or EII Act.

Box 16: Enhancing community engagement in transmission building rule change

In November 2023, the AEMC made the *Enhancing community engagement in transmission building* rule change. This rule change amended chapter 5 of the NER to introduce new obligations on TNSPs and jurisdictional planning bodies to engage with local communities potentially affected by a future or actionable ISP project, or a REZ that has been identified through the ISP process and for which a REZ Design Report is required.

For a future or actionable ISP project, the relevant TNSP's preparatory activities must include 'engagement with stakeholders who are reasonably expected to be affected by the development of the actionable ISP project, future ISP project, or project within a REZ stage (including local landowners, local council, local community members, local environmental groups and traditional owners) in accordance with the community engagement expectations.'

The rule sets out the following community engagement expectations:

community engagement expectations in relation to actionable ISP projects, future ISP projects, or projects within a REZ stage (as applicable), means using reasonable endeavours to ensure that:

(a) stakeholders receive information that is clear, accessible, accurate, relevant, timely and explains the rationale for the relevant project;

(b) engagement materials, methods of communication and participatory processes are tailored to meet the needs of different stakeholders;

(c) the stakeholders' role in the engagement process is clearly explained, including how their input will be taken into account;

(d) stakeholders have sufficient opportunity to consider and respond to the information they receive;

(e) stakeholder feedback, including potential ways to deliver community benefits, are considered;

(f) stakeholders are informed about how stakeholder feedback has been taken into account in decision-making; and

(g) stakeholders are provided with a range of opportunities to be regularly involved throughout the actionable ISP projects, future ISP projects and REZ stages (as applicable).

Establishment of an EnergyCo Consumer Panel

We recommend that EnergyCo establishes and funds a Consumer Panel comprised of representatives of NSW electricity customers to provide EnergyCo with advice and input into its functions as Infrastructure Planner.

The EII Regulation could be amended to require EnergyCo to establish, fund and consult with the panel. Alternatively, EnergyCo could establish the panel as an Advisory Committee under section 10B of the Energy and Utilities Administration Act.

This Panel would not replace other opportunities for consumers and their representatives to be informed and consulted on decisions, but would provide a forum for deeper engagement at the 'involve' or 'collaborate' level of the IAP2 spectrum on key issues that affect electricity customers.

We recommend that this Panel is modelled on similar panels that apply to transmission planning activities under the national framework or in other jurisdictions, in particular the ISP Consumer Panel and Powerlink PTI Expert Panel. As a minimum, we recommend that:

- EnergyCo should be required to establish and fund the Panel, including developing a Terms of Reference, appointing and paying Panel members, providing secretariat support, providing information to the Panel and making its Board members and staff available to meet with the Panel;
- EnergyCo should be required to engage with the Panel and seek the Panel's advice on key activities it undertakes as Infrastructure Planner including development of the NSW System Plan, development of recommendations for RNIPs or PTIPs and development of the new guideline we recommend in section 2.4.2 above.
- EnergyCo should be required to take the Panel's advice into account when making its decisions, and provide reasons if it does not adopt the Panel's advice.

In the options paper, we consulted on whether EnergyCo should establish a joint Consumer and Community Panel or separate panels. We recommend that the panel is a Consumer Panel as outlined above rather than a joint consumer and community panel. We consider that engagement with local communities is more effectively facilitated by our separate local community engagement obligations recommendation above and existing EnergyCo actions including EnergyCo's REZ Community Reference Groups. Local community issues will vary for each REZ or project and location-specific engagement mechanisms will be more effective than a single panel that tries to address the diverse needs and perspectives of all consumers and local communities across NSW.

AEMO Services consultation with the Consumer Panel

We recommend that the Consumer Panel is established and funded by EnergyCo because we consider that EnergyCo should be responsible for leading consumer engagement on transmission planning issues under the Roadmap. However, we recommend that the panel is also available to AEMO Services to use for engagement and advice in relation to key decisions that affect consumers.

We recommend that AEMO Services consults with the Consumer Panel and seeks its advice in relation to development of the IIO Report, authorising RNIPs and setting REZ access fees, and any other Consumer Trustee functions where AEMO Services considers that the Panel's advice would be useful. We recommend AEMO Services shares its authorisation CBA methodology, inputs, assumptions and results with the Consumer Panel on a confidential basis as part of its engagement with the panel on authorisation decisions.[74]

Transparency of EnergyCo and AEMO Services draft and final decisions

To improve transparency and engagement on key transmission planning decisions, we recommend that EnergyCo and AEMO Services review which of their functions are suitable for publishing a draft recommendation or draft decision for public submissions. We consider that drafts should be published in relation to decisions that are likely to have a material impact on stakeholders and where confidentiality restrictions do not preclude publication. For example, we recommend that AEMO Services publishes and consults on a draft decision before setting access fees under section 26 of the EII Act.

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[74] There may be value in amending the EII Regulation to expressly permit such disclosure. Clause 19C of the EII Regulation currently provides that AEMO Services may, 'without limiting any other disclosure' share this CBA information with the Secretary of DCCEEW and the Infrastructure Planner.

However, we recognise that publication and consultation on a draft may not be appropriate for EnergyCo's functions that involve making recommendations to the Minister or AEMO Services rather than making decisions. For example, if EnergyCo recommend that the Minister makes a new or amended REZ declaration or REZ access scheme declaration, the EII Act already requires the Minister to consult publicly on a draft declaration so there would be limited value in also requiring EnergyCo to consult on a draft of its recommendations. Publication and consultation on a draft AEMO Services authorisation decision is also not appropriate as it would delay the authorisation decision and would be of limited value given the confidentiality restrictions that apply to the cost-benefit assessment on which the authorisation decision is based.

For recommendations and decisions where publication of a draft is not appropriate, the above recommendations to enhance EnergyCo's engagement with local communities when developing its recommendations and EnergyCo and AEMO Services engagement with the Consumer Panel, are a more workable alternative to publishing and consulting on a draft recommendation or decision.

We also recommend that EnergyCo, AEMO Services and the Minister publish recommendations and decisions related to recommending or authorising RNIPs, directing PTIPs or setting access fees, together with a summary of the reasons for making the recommendation or decision, with confidential information redacted where appropriate. We note that this is current practice, but is not required by the EII Act or EII Regulation.

We considered whether the EII Act or EII Regulation should be amended to implement the above recommendations and require publication of specified draft or final decisions, recommendations and accompanying statements of reasons. While such amendments may provide increased clarity and certainty, we do not consider that they are necessary given that current practice is to already publish most of the recommended documents. Instead, we recommend that EnergyCo consults on these issues as part of the development of the guideline we recommend in section 2.4.2 and explains in that guideline which draft or final recommendations or decisions it will publish and why. We understand that AEMO Services intends to publish and consult on an Approach Paper setting out its intended approach to setting access fees, and we recommend that AEMO Services uses that paper to consult on its approach and clarify what draft and final decisions and reasons it will publish in relation to access fee decisions.

Draft evaluation against the assessment criteria

This draft recommendation will improve outcomes for NSW electricity customers and local communities by facilitating more effective engagement with them in transmission planning decisions that affect them and fostering local community support. It will also provide clearer allocation and coordination of roles and responsibilities by supporting clear, transparent and robust planning and decision making. These outcomes will also promote timely and efficient planning and delivery of projects by improving community support for the projects and better accounting for the views and interests of local communities and consumers.

4.3.2 C.2: Ensure EnergyCo's governance and funding arrangements are appropriate for its current and expanded functions and enable it to attract and retain suitable staff

Overview of the draft recommendations

We recommend that the NSW Government undertakes a review of EnergyCo's governance and funding arrangements to assess what changes are required to ensure that EnergyCo is able to effectively perform its current and expanded planning functions, including that it has sufficient resources and funding and can attract and retain suitable staff with expertise in transmission planning and stakeholder engagement.

EnergyCo already plays a critical role in the delivery of the NSW Electricity Roadmap and several of our draft recommendations will increase its role, including new or expanded functions related to:

- preparing a new NSW System Plan (as a replacement for the NIS);
- becoming the Jurisdictional Planning Body for NSW;
- becoming the exclusive Infrastructure Planner;
- taking an increased role in joint planning with AEMO, TNSPs and DNSPs;
- increased involvement in network-to-network connections arrangements;
- being able to plan and procure PTIPs involving distribution network projects;
- preparing and consulting on a new guideline explaining its planning functions and how it will perform them; and
- enhancing its engagement with electricity consumers, local communities and other stakeholders.

We agree with submissions to the options paper by EnergyCo and several other stakeholders that EnergyCo's current governance and funding arrangements may not be optimal for it to effectively perform these new functions. We note that some reforms to EnergyCo's governance model recommended in the Check-Up review have already been implemented such as the establishment of an independent Board. We also understand from discussions with DCCEEW and EnergyCo that other potential reforms are currently under consideration.

Making specific recommendations on governance reforms are outside of the scope of this review and we consider that it is for the NSW Government to determine what reforms are needed, noting that there are a range of options for governance, employment, resourcing and funding that could be considered. However, we note below several specific issues that were raised in submissions and that should be considered as part of this review of EnergyCo's governance and funding arrangements.

EnergyCo's ability to attract and retain suitable specialist staff

EnergyCo will require additional specialised staff and consultants with experience in network planning. It is also likely to require additional staff with expertise in stakeholder engagement. Its current governance and funding arrangements may limit its ability to attract and retain these staff and be adequately funded to perform its expanded functions. Its funding and staffing also need to be sufficient so that its expanded state-wide planning functions do not distract it from, or divert resources from, its critical existing functions of delivering RNIPs and PTIPs.

EnergyCo and the NSW Government may also wish to consider whether the EnergyCo Board requires additional skills or additional governance arrangements such as a new Board committee to enable it to provide strategic direction and oversight in relation to these expanded planning functions.

EnergyCo's independence

As part of a review of EnergyCo's governance and funding, the NSW Government should also consider the appropriate level of independence of EnergyCo. We consider that it is critical that EnergyCo as Infrastructure Planner and JPB is independent from network operators and electricity market participants. However, we consider that it is appropriate for it to remain part of the NSW government and be subject to Ministerial direction in the performance of its functions.

As a NSW government agency established under the Energy and Utilities Administration Act, EnergyCo is currently subject to the control and direction of the Minister and the Secretary of DCCEEW. We consider that powers of direction by the Minister are appropriate given the nature of EnergyCo's functions. However, a degree of independence is also necessary so that stakeholders have confidence that EnergyCo is making decisions and recommendations that are in the long term interests of electricity consumers and consistent with

the objects of the EII Act. We consider that the Act currently strikes this balance appropriately with clear requirements on EnergyCo as Infrastructure Planner to make recommendations to the Minister or Consumer Trustee on RNIPs, PTIPs and other matters that are based on clear requirements in the EII Act and EII Regulation.

The NSW Government should consider the extent to which EnergyCo should be subject to the control and direction of the Secretary of DCCEEW and the level of flexibility and discretion EnergyCo has in relation to employment matters. In particular, the current restrictions on EnergyCo's ability to hire staff and pay competitive salaries to them as a government agency may be problematic and we recommend that the NSW Government consider whether any changes are required to ensure EnergyCo has appropriate ability to hire and retain suitable staff.

We also note that the relationship between EnergyCo and DCCEEW is not always clear to stakeholders given EnergyCo's status as a government agency. In the options paper we consulted on whether there should be a clearer separation between EnergyCo and DCCEEW on policy matters. We have not made a specific recommendation on this issue, but recommend that it is considered as part of any governance changes. We do not consider that a simple bright line rule can be made that EnergyCo does not have any input into policy matters. It has valuable subject-matter expertise and should be able to provide its opinions and advice on policy issues. It also currently has important roles in making recommendations to the Minister on matters that could be considered policy decisions.[75] However, there should be a clear separation between EnergyCo's role in providing advice and making recommendations vs the Minister and NSW government's roles in making policy decisions, particularly on policy decisions that affect EnergyCo's roles and responsibilities and the rules under which it operates.

Funding and oversight of EnergyCo's costs

The NSW Government should consider the appropriate mechanism for recovery of EnergyCo's costs related to its role as Infrastructure Planner and the appropriate method of oversight and transparency of those costs.

As discussed in section 4.1.2 above, EnergyCo currently recovers its RNIP or PTIP project-related costs from the network operator once that person has been appointed as network operator for the project. The network operator then recovers those costs through their AER revenue determinations and the SFV.

The AER is not able to review the prudency, efficiency and reasonableness of EnergyCo's development costs that are recovered from network operators as part of the AER revenue determination process. That is consistent with the approach in Victoria for early works and other costs incurred by AEMO in performing its Victorian planning functions, but is different to the approach to oversight of similar costs incurred by TNSPs in other jurisdictions under the NER.

EnergyCo's project expenditure is currently subject to the following oversight mechanisms that do not apply to TNSPs under the NER:

- The Transmission Acceleration Facility Investment Committee has been established under the Energy and Utilities Administration Act. The Committee is required to review and advise on any requests by EnergyCo to access funds from the Facility, which EnergyCo uses to fund project development expenditure until it is recovered from the network operator. The Committee consists of 3 independent members, 1 NSW Treasury representative and 1 EnergyCo representative. The Committee's role includes providing expert financial and risk management advice, assurance, reporting and governance. In its revenue determination for the contestable CWO RNIP, the AER explained the oversight provided by the Committee and the process the

[75] For example, recommending whether to declare a REZ access scheme and the design of the access scheme.

Committee adopted to assess that the amounts EnergyCo was seeking to recover for that project were prudent, efficient and reasonable.[76]

- EnergyCo is required to provide an annual report to IPART on the exercise of its functions under the EII Act. IPART is required to undertake a regular performance audit of EnergyCo's activities under the EII Act once every five years, with the first performance audit scheduled to occur by the end of 2025. EnergyCo is also subject to annual audits by the NSW Audit Office under the Government Sector Finance Act.
- EnergyCo's projects and its broader portfolio of activities are subject to independent reviews and advice by Infrastructure NSW (INSW), including regular INSW independent panel reviews. EnergyCo also provides monthly reports on projects and expenditure to INSW.
- All EnergyCo expenditure and budgets must be approved by the Expenditure Review Committee of Cabinet and its budget and financial accounts are published annually.

The NSW Government should consider whether these current mechanisms for the recovery of EnergyCo's costs and oversight of those costs remain appropriate or whether there are more effective ways of recovering these costs and ensuring their prudency and efficiency.

Draft evaluation against the assessment criteria

This draft recommendation will promote timely and efficient planning and delivery of transmission projects by ensuring that EnergyCo has sufficient resources, staff and funding and appropriate governance arrangements to enable it to effectively perform its functions, including the new or expanded functions that it will take on if our recommendations are adopted.

We consider that EnergyCo is the organisation that is best placed to coordinate electricity network planning across NSW and perform the other functions we recommend be allocated to it in chapters 2 and 3. We do not recommend establishing a separate planning authority as proposed by Transgrid in its options paper submission (see section 2.2.2), as such an approach would further complicate transmission planning in NSW by adding a new body. However, without changes to its governance and funding arrangements, there is a risk that resourcing, skills or budget limitations in EnergyCo will delay the planning and delivery of critical projects or lead to less efficient planning and delivery of those projects.

This recommendation is also consistent with the assessment criterion of providing clear and effective allocation and coordination of roles and responsibilities by ensuing that roles and responsibilities are allocated to bodies that are best placed to perform them and there is appropriate governance of those bodies.

[76] See www.aer.gov.au/system/files/2025-04/CWO%20REZ%20network%20project%20revenue%20determination.pdf

Appendix A Options that are not included in the draft recommendations

Table A.1: Summary of how the options are reflected in the draft recommendations and reasons for not including some options in the draft recommendations

Options paper option	Relevant draft recommendation or reasons for not including the option in the draft recommendations
A.1: Clarify boundaries of current roles to improve clarity, timeliness and coordination	Parts of this option are included in draft recommendation A.5 (clarify EnergyCo's current planning functions in the EII Regulation). For other parts of this option, we consider that option A.2 better meets the assessment criteria. Options A.1's proposed coordination mechanism has already been established through two new coordination bodies that were established in 2024 following with Check Up review: the Electricity Infrastructure Roadmap Advisory Council (RAC) and the Electricity Infrastructure Roadmap Steering Committee. The RAC's purpose is to promote cross-entity collaboration, information sharing and issue identification and resolution to assist entities to perform their functions under the EII Act. Its members are the Secretary, Chairs and/or relevant senior staff of DCCEEW, EnergyCo, AEMO Services, the SFV, the AER and IPART. The Steering Committee's purpose is to coordinate whole-of-government implementation for the Roadmap and to ensure Roadmap-related recommendations of the Check Up are implemented in a timely and effective manner. The Steering Committee's members are the relevant Deputy Secretaries or other senior officials of the relevant government Departments involved in Roadmap implementation.
A.2: EnergyCo becomes planner and procurer of strategic projects, Transgrid retains system security functions, scope and timing of AEMO Services' authorisation amended	This option is reflected in draft recommendations A.1 (simplify and accelerate the process for authorising REZ network infrastructure projects), A.9 (make EnergyCo the Jurisdictional Planning Body and exclusive Infrastructure Planner so it can coordinate planning across NSW) and B.1 (expand the Network Infrastructure Strategy to become a NSW System Plan that consolidates information and coordinates planning of strategic projects across NSW).
A.3: EnergyCo takes on most NSW planning roles similar to the Victorian arrangements with some exceptions	We consider that option A.2 better meets the assessment criteria as explained in section 2.3.1 (why we consider that authorisations should be retained and streamlined as in option A.2 rather than removed as in option A.3), section 2.3.3 (why we consider that system strength regulatory arrangements should be amended to clarify accountability for system strength in REZ as in option A.2 rather than making EnergyCo the SSSP and Inertia Service Provider as in option A.3) and section 3.3.1 (why we consider that the NSW System Plan should consolidate and coordinate planning information as in option A.2 but not replace TAPRs and ESTM Report as in option A.3).

Options paper option	Relevant draft recommendation or reasons for not including the option in the draft recommendations
A.4: Introduce a test or criteria to determine which projects should be procured contestably	This option is draft recommendation A.8 (clarify which projects should be procured contestably).
A.5: Introduce more prescriptive network-to-network connection processes	This option is draft recommendation A.2 (strengthen the regulation of network-to-network connections).
B.1: Increase clarify and consistency of planning reports	Parts of this option are included in draft recommendation B.2 (coordinate the development and timing of the various planning reports in NSW and clarify how they fit together to deliver an integrated plan). In relation to other parts of this option, we consider that option B.2 better meets the assessment criteria as explained in section 3.3.1.
B.2: Expanded Network Infrastructure Strategy	This option is reflected in draft recommendations B.1 (expand the Network Infrastructure Strategy to become a NSW System Plan that consolidates information and coordinates planning of strategic projects across NSW) and B.2 (coordinate the development and timing of the various planning reports in NSW and clarify how they fit together to deliver an integrated plan).
B.3: New NSW Integrated Infrastructure Plan	We consider that option B.2 better meets the assessment criteria as explained in section 3.3.1.
C.1: Introduce a test or criteria to determine which projects should be planned and approved under the EII Act instead of the NER	This option is draft recommendation A.7 (clarify which projects should be planned and approved under the EII Act instead of the NER).
C.2: Expand obligations on EnergyCo to consult and engage in joint planning with AEMO on relevant issues	This option is addressed as part of draft recommendation A.10 (extend the NER joint planning provisions to apply to EnergyCo and enhance joint planning between EnergyCo, TNSPs, DNSPs and AEMO).
C.3: Expand joint planning with jurisdictional planning bodies in other jurisdictions	We consider that recommendations are not required to implement this option and that it is adequately addressed by the current joint planning arrangements between EnergyCo and other jurisdictions discussed in section 2.5.2 and by making EnergyCo the Jurisdictional Planning Body for NSW under draft recommendation A.9.
C.4: EnergyCo to consult with VicGrid to identify opportunities to improve consistency between contestable procurement processes in NSW and Victoria	We consider that recommendations are not required to implement this option. EnergyCo has advised that it has already consulted with AEMO and VicGrid in relation to its procurement processes.

Options paper option	Relevant draft recommendation or reasons for not including the option in the draft recommendations
C.5: NSW government to engage with the ACT government to implement mechanisms to ensure effective planning across the NSW region of the NEM	A recommendation that the NSW government engage with the ACT government to ensure continued coordinated planning across the NSW NEM region is included as part of draft recommendation A.9 (make EnergyCo the Jurisdictional Planning Body and exclusive Infrastructure Planner so it can coordinate planning across NSW). Our recommendation that Transgrid continues to be the SSSP and Inertia Service Provider for the NSW NEM region (see section 2.3.3) reduces the risks that this option was seeking to address.
D.1: Make EnergyCo the SSSP and Inertia Service Provider for NSW	We consider that option D.2 better meets the assessment criteria as explained in section 2.3.3.
D.2: Amend the NER planning arrangements for system strength to account for contestable network operators	This option is reflected in draft recommendation A.3 (reform the system strength regulatory arrangements to improve accountability for system strength planning in REZs and improve coordination).
D.3: Clarify the test or principles for when system security services should be planned under the NER or the EII Act	This option is addressed as part of draft recommendation A.7 (clarify which projects should be planned and approved under the EII Act instead of the NER).
D.4: Expand obligations on EnergyCo when developing recommendations for an RNIP or PTIP to consult with AEMO on system security issues	We consider that specific recommendations are not required to implement this option and that it is adequately addressed by the current EII Act obligations on EnergyCo to consult with AEMO and by draft recommendation A.10 (extend the NER joint planning provisions to apply to EnergyCo and enhance joint planning between EnergyCo, TNSPs, DNSPs and AEMO).
D.5: Introduce other mechanisms to improve coordination between AEMO, EnergyCo, Transgrid and contestable network operators who provide system security services	This option is addressed as part of draft recommendations A.3 (reform the system strength regulatory arrangements to improve accountability for system strength planning in REZs and improve coordination) and A.10 (extend the NER joint planning provisions to apply to EnergyCo and enhance joint planning between EnergyCo, TNSPs, DNSPs and AEMO).
D.6: Expand the NIS and/or IIO Report to include information on distribution networks and CER issues, including distribution network and non-network options that will be considered for planning as an RNIP or PTIP	This option is included as part of draft recommendations B.1 (expand the Network Infrastructure Strategy to become a NSW System Plan that consolidates information and coordinates planning of strategic projects across NSW) and B.3 (expand planning report processes so they are informed by comprehensive information on transmission, distribution and non-network options and can assess their relative benefits).

Options paper option	Relevant draft recommendation or reasons for not including the option in the draft recommendations
D.7: Expand AEMO Services' modelling capabilities and engagement with EnergyCo and DNSPs so that it can obtain increased information on distribution network issues and more accurately model distribution network options in the IIO Report	This option is included as part of draft recommendation B.3 (expand planning report processes so they are informed by comprehensive information on transmission, distribution and non-network options and can assess their relative benefits).
D.8: Clarify or expand how the NIS, IIO Report and ESTM Report forecast major new load connections to the distribution network and forecasts of CER uptake, distributed generation and demand growth	This option is included as part of draft recommendations B.1 (expand the Network Infrastructure Strategy to become a NSW System Plan that consolidates information and coordinates planning of strategic projects across NSW) and B.3 (expand planning report processes so they are informed by comprehensive information on transmission, distribution and non-network options and can assess their relative benefits).
D.9: Expand joint planning between EnergyCo and DNSPs so that EnergyCo can obtain more comprehensive information on distribution network issues	This option is addressed as part of draft recommendations A.10 (extend the NER joint planning provisions to apply to EnergyCo and enhance joint planning between EnergyCo, TNSPs, DNSPs and AEMO) and B.3 (expand planning report processes so they are informed by comprehensive information on transmission, distribution and non-network options and can assess their relative benefits).
D.10: Clarify or expand the scope of the RNIP and PTIP tests to include distribution network options or non-network options	This option is reflected in draft recommendation A.4 (remove barriers to planning distribution network projects under the EII Act).
E.1: Amend the EII Act or EII Regulation to require EnergyCo to engage with electricity consumers or consumer representatives and local communities potentially affected by an RNIP or PTIP	This option is included as part of draft recommendation C.1 (implement best-practice engagement obligations to enhance engagement with consumers and local communities and transparency of decision making).
E.2: Require EnergyCo to establish and fund a Consumer and Community Panel (or separate panels)	This option is included as part of draft recommendation C.1 (implement best-practice engagement obligations to enhance engagement with consumers and local communities and transparency of decision making). As explained in section 4.3.1, we recommend establishing an EnergyCo Consumer Panel rather than a combined Consumer and Community Panel. Draft recommendation C.1 also includes separate recommendations to enhance EnergyCo's engagement with local communities. We consider that engagement with local communities is more effectively facilitated by dedicated location-specific community engagement mechanisms rather than a single panel that tries to address the diverse needs and perspectives of all consumers and local communities across NSW.
E.3: Require EnergyCo and AEMO Services to consult with the Panel prior to making key decisions	This option is included as part of draft recommendation C.1 (implement best-practice engagement obligations to enhance engagement with consumers and local communities and transparency of decision making).

Options paper option	Relevant draft recommendation or reasons for not including the option in the draft recommendations
E.4: Require the Panel to prepare and publish a report that the decision maker must have regard to when making certain decisions	We consider that a specific recommendation on this issue is not required and risks being too prescriptive. As discussed in section 4.3.1, we consider that EnergyCo and the Panel should develop Terms of Reference for the Panel that set out how EnergyCo will engage with the Panel and obtain its advice. Draft recommendation C.1 requires EnergyCo to engage with the Panel and seek its advice, to take that advice into account and to provide reasons if it does not adopt the Panel's advice.
E.5: Require EnergyCo and AEMO Services to publish and publicly consult on drafts of key decisions	This option is included as part of draft recommendation C.1 (implement best-practice engagement obligations to enhance engagement with consumers and local communities and transparency of decision making).
E.6: Require EnergyCo to consult on, develop and publish a process and approach paper explaining how it will perform its key functions	This option is reflected in draft recommendation A.6 (require EnergyCo to consult on and publish a guideline explaining its planning functions and how it will perform them).
E.7: Require EnergyCo to consult on, develop and publish a stakeholder engagement plan	This option is included as part of draft recommendation A.6 (require EnergyCo to consult on and publish a guideline explaining its planning functions and how it will perform them).
E.8: Require AEMO Services to publish the results of the cost benefit analysis (CBA) it performs as part of its RNIP authorisation decision	We consider that this option is not appropriate under the recommended amendments to the authorisation process in draft recommendation A.1. There would be benefits in requiring AEMO Services to publish the results of its CBA when authorising an RNIP, but doing so would disclose confidential information about the project's estimated costs and benefits part way though the network operator procurement process and allow the network operator to calculate the maximum capital cost. This would risk damaging the integrity of the competitive procurement process and risk network operators knowing the maximum amount they could bid and still have the project proceed because disclosing the CBA results would allow network operators to calculate the MCC. We consider that it is important that the MCC remains confidential as a protection for consumers. We consider that the current practices of EnergyCo and AEMO Services better balance transparency and confidentiality issues. This current practice involves AEMO Services publishing an explanation of its CBA process in its Network Approach Paper, EnergyCo publishing a summary of its CBA results in its public summary of the Infrastructure Planner Recommendations Report once the project has been authorised and a preferred network operator appointed, and AEMO Services publishing a Statement of Reasons explaining its reasons for authorising the project including a summary of its CBA process and high-level results.[77]

[77] These documents are available on AEMO's website. For example, the documents for the Hunter-Central Coast REZ authorisation are available at https://aemoservices.com.au/products/hunter-central-coast and the Network Authorisation Paper is available at https://aemoservices.com.au/-/media/services/files/publications/authorisation-function/241203-december-network-authorisation-process-and-approach-paper.pdf?la=en

Options paper option	Relevant draft recommendation or reasons for not including the option in the draft recommendations
	As part of draft recommendation C.1 (implement best-practice engagement obligations to enhance engagement with consumers and local communities and transparency of decision making), we recommend that AEMO Services consults the Consumer Panel when making authorisation decisions. This will enable members of the Panel to be consulted on behalf of consumers on the CBA methodology and results, including detailed CBA results that are not suitable for broader publication.
E.9: Make changes to EnergyCo's governance and funding arrangements to improve its ability to attract and retain suitable staff and perform any new functions	This option is draft recommendation C.2 (ensure EnergyCo's governance and funding arrangements are appropriate for its expanded functions and enable it to attract and retain suitable staff).
E.10: Introduce additional mechanisms for funding and approving staged projects, early works and long-lead time items	We consider that specific recommendations are not required in relation to this issue and that it is adequately addressed by current arrangements under the EII Act and NER and draft recommendation C.2 (ensure EnergyCo's governance and funding arrangements are appropriate for its expanded functions and enable it to attract and retain suitable staff). Changes by the AEMC to the NER in late 2024,[78] allow TNSPs to submit an early works contingent project application for actionable ISP projects without needing to complete a RIT-T. The RIT-T rules also allow a faster RIT-T process for actionable ISP projects where the Project Specification Consultation Report stage is not required. The EII Act allows an expedited approval and cost recovery process for PTIPs, and allows RNIPs and PTIPs to be approved in stages. EnergyCo also has a broader range of funding options under the EII Act than TNSPs under the NER, including the ability to access financing for development expenditure for early works or long-lead time items through the NSW government's Transmission Acceleration Facility. In recommendation C.2, we recommend the NSW government review EnergyCo's funding arrangements. We consider that these mechanisms collectively provide sufficient options for funding and approving staged projects, early works and long-lead time items. The concerns that led to the inclusion of this option primarily related to the current Transgrid process for planning and procuring system strength services. That process is unusual as it is a major strategic project but is proceeding under the standard NER RIT-T process and is neither an actionable ISP project nor a PTIP. In future, there would be benefit in projects of this nature being an actionable ISP project so that the NER early works provisions and streamlined RIT-T provisions apply. Draft recommendation B.4 (engage with the AEMC and AEMO on potential improvements to the ISP, TAPRs and DAPRs to clarify their interaction with state-based planning reports and review their contents) may assist in achieving that outcome.

78 See https://www.aemc.gov.au/rule-changes/bringing-early-works-forward-improve-transmission-planning

Options paper option	Relevant draft recommendation or reasons for not including the option in the draft recommendations
E.11: Require EnergyCo to publish and consult on its budget	We consider that recommendations are not required in relation to this issue and that it is adequately addressed by current arrangements that apply to EnergyCo as a NSW government agency. EnergyCo's expenditure is sourced initially from the NSW government through the Energy Administration Account and its project-related expenditure is subsequently recovered from consumers through the network operator revenue determination process or generators through access fees. All EnergyCo expenditure and budgets must be approved by the Expenditure Review Committee of Cabinet. EnergyCo's budget is published annually as part of the NSW State Budget. Its detailed financial statements are published in EnergyCo's Annual Report in accordance with the *Government Sector Finance Act 2018* (NSW) and audited by the NSW Auditor-General.
E.12: Introduce a mechanism for IPART, the AER or the NSW government to review whether EnergyCo's expenditure on a RNIP or PTIP that will be recovered from consumers was prudent, efficient and reasonable	This option is included as part of draft recommendation C.2 (ensure EnergyCo's governance and funding arrangements are appropriate for its expanded functions and enable it to attract and retain suitable staff). As discussed in section 4.3.2, as part of this recommendation the NSW Government should consider the appropriate mechanism for EnergyCo to recover its project-related costs and to provide oversight and transparency in relation to those costs.
E.13: Ensure a clear separation between DCCEEW and EnergyCo on policy development	This option is included as part of draft recommendation C.2 (ensure EnergyCo's governance and funding arrangements are appropriate for its expanded functions and enable it to attract and retain suitable staff). As discussed in section 4.3.2, as part of this recommendation the NSW Government should consider the appropriate level of independence of EnergyCo including a clear separation between EnergyCo's role in providing advice and making recommendations vs the Minister and NSW government's roles in making policy decisions, particularly on policy decisions that affect EnergyCo's roles and responsibilities and the rules under which it operates.

Appendix B Submissions and stakeholder meetings

Table B.1: Submissions to the consultation paper

Organisation or person	Organisation or person
AGL	Nexa Advisory
Alinta Energy	Origin Energy
Ausgrid	Plenary
AusNet	Rainforest Reserves Australia
Australian Energy Information Commissioner	Snowy Hyrdo
Clean Energy Investor Group	Tilt Renewables
Energy and Water Ombudsman NSW	Transgrid
Global Power Energy	Verta Energy
Iberdrola Australia	Windlab
Jonathan Pickering (Canberra school of politics) & Madeline Taylor (Macquarie Law School)	Windouran Pastoral Co
Justice and Equity Centre	5 private individuals (names not listed for privacy reasons)

Table B.2: Submissions to the options paper

Organisation or person	Organisation or person
ACEN Australia	Iberdrola Australia
ACEREZ	Infrastructure NSW
AEMO and AEMO Services	Justice & Equity Centre
Akaysha Energy	Nature Conservation Council
Ausgrid	Nexa Advisory
AusNet Services	Mal Park
Australian Energy Council	Origin Energy
Australian Energy Infrastructure Commissioner	Rainforest Reserves Australia
BlueScope Steel	RE-Alliance
Clean Energy Council	Snowy Hydro

Organisation or person	Organisation or person
Clean Energy Investor Group	Tesla
Endeavour Energy	Transgrid
EnergyCo	Verta Energy
Energy Users Association of Australia	Windlab
Essential Energy	Zen Energy
Hydrostor	1 other private individual (name not listed for privacy reasons)

Table B.3: Stakeholder meetings on the consultation paper or options paper

Organisation or person	Organisation or person
ACEN	Marsden Jacob Associates
AEMC	Mal Park
AEMO	NSW DCCEEW
AEMO Services	Origin Energy
AER	Queensland Treasury
Ausgrid	Re-Alliance
BlueScope Steel	Rewiring the Nation Office
Clean Energy Finance Corporation	Transgrid
EnergyCo	VicGrid
Energy Network Australia	Workshops with consumer representatives on each of the consultation paper and options paper
Energy Users Association of Australia	Workshops with NSW DNSPs on each of the consultation paper and options paper
Hydrostor	Workshops with generators (invitees included the Clean Energy Council, Australian Council, Clean Energy Investors Group and Smart Energy Council and several of their members) on each of the consultation paper and options paper
Iberdrola Australia	2 other private individuals (names not listed for privacy reasons)
IPART	