



ELECTRICITY INFRASTRUCTURE ROADMAP

Infrastructure Safeguard (Part 6 of the Electricity Infrastructure Investment Act 2020)

Policy paper



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Shortened forms

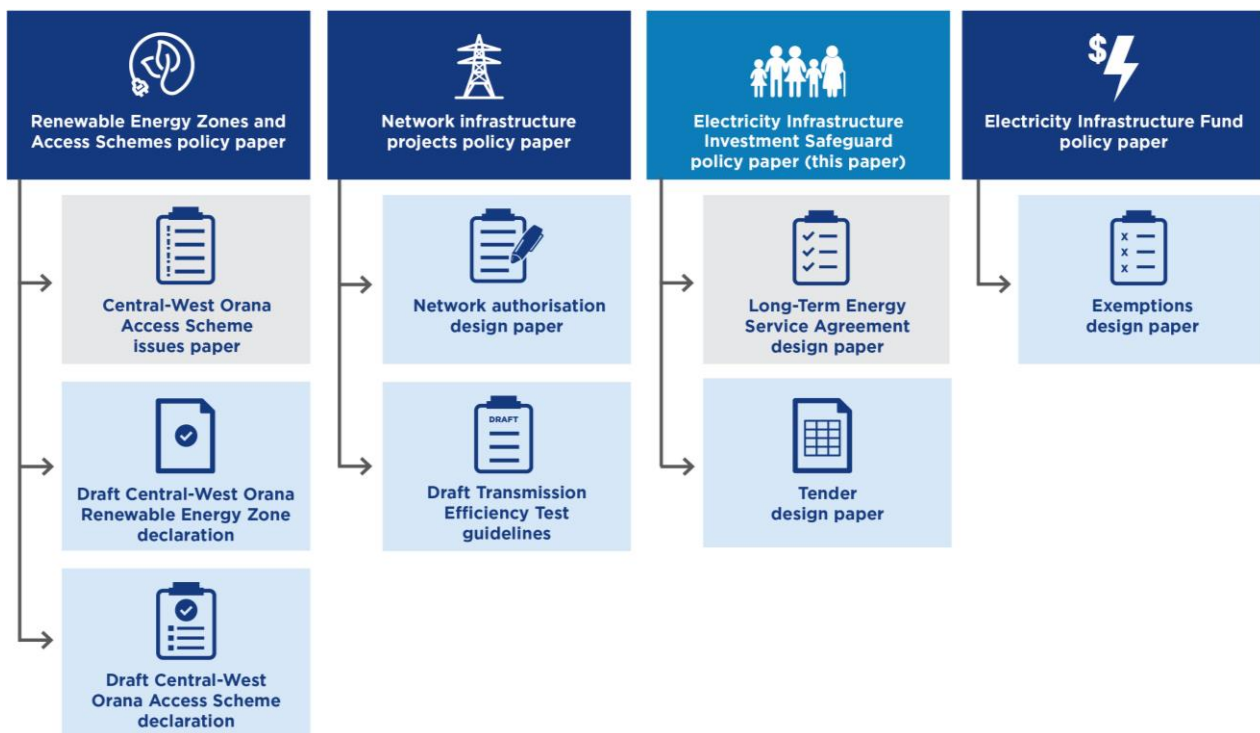
Term	Meaning
ACCC	Australian Consumer and Competition Commission
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
CWO REZ	Central-West Orana Renewable Energy Zone
Department	NSW Department of Planning, Industry & Environment
EII Act	<i>Electricity Infrastructure Investment Act 2020</i>
ESB	Energy Security Board
ESS	essential system services
FCAS	Frequency Control Ancillary Services
IASR	AEMO's Inputs, Assumptions and Scenarios Report
IIO Report	Infrastructure Investment Objectives Report
LTES Agreement	Long-Term Energy Service Agreement
NEL	National Electricity (NSW) Law
NER	National Electricity Rules
the Roadmap	the Electricity Infrastructure Roadmap
REZ	Renewable Energy Zone
RRO	Retailer Reliability Obligation

Executive summary

The Electricity Infrastructure Roadmap (the Roadmap) is the NSW Government’s plan to transform our electricity sector into one that is affordable, clean and reliable. It is enabled by the *Electricity Infrastructure Investment Act 2020* (EII Act), which passed the NSW Parliament in December 2020. The Roadmap will facilitate the declaration of Renewable Energy Zones (REZ), authorise new network infrastructure, and encourage private investment in new generation, long duration storage and firming infrastructure.

The Department of Planning, Industry and Environment (the Department) is developing recommendations for regulations needed under the EII Act in three tranches throughout 2021. The first tranche of regulations, specific to the Renewable Energy Sector Board, were made in March 2021. The Department consulted on tranche two, relating to urgent and mechanical policy details, in May 2021. The third tranche (to which this paper belongs) will seek feedback to inform the development of regulations under the EII Act.

Figure 1 Policy papers within the tranche three consultation round



To see how this paper fits within the Department’s consultations on the Roadmap, see the Overview Paper.

Part 6 of the EII Act relates to the Electricity Infrastructure Investment Safeguard (the Infrastructure Safeguard). The Infrastructure Safeguard is the primary mechanism to encourage private infrastructure investment under the Roadmap. This paper seeks feedback on the regulations to support the Infrastructure Safeguard. Feedback received from other design papers may also inform the regulations.

Summary of the Infrastructure Safeguard

The Consumer Trustee is required to prepare an Infrastructure Investment Objectives (IIO) Report every two years and as soon as practical after July 2021. The IIO Report includes two components: the *20-Year Development Pathway* and the *10-Year Tender Plan*.

The 20-Year Development Pathway sets out a plan to construct generation, long duration storage and firming infrastructure over a 20-year period to meet the infrastructure investment objectives. The 10-Year Tender Plan then sets out the tender schedule for when Long-term Energy Service Agreements (LTES Agreements) may be tendered to give effect to the 20-Year Development Pathway. Following the planning process, the Consumer Trustee will run competitive tenders for LTES Agreements and for access rights.

The Consumer Trustee will appoint a Financial Trustee to administer a Scheme Financial Vehicle, which will be the counterparty to LTES Agreements with projects. The Consumer Trustee will need to implement effective governance, risk management and consumer cost control practices. It will also develop a risk management framework to enable the Scheme Financial Vehicle to manage liquidity and undertake derivatives trading within defined parameters to protect the financial interests of NSW electricity consumers.

Summary of questions for stakeholders

This paper includes questions for stakeholder feedback on policy issues relating to the Infrastructure Safeguard. These are collated below.

Questions related to planning for private sector infrastructure investment

Question 1: What requirements for stakeholder consultation on the IIO Report should be implemented to ensure the Consumer Trustee's report is informed by the best available information?

Question 2: How should changes in technology, consumer behaviours, customer investment in generation (e.g. distributed energy resources) and demand uncertainty be treated to determine the requirements for large-scale infrastructure investment?

Question 3: What assumptions, scenarios or approaches could be prescribed by regulation to encourage an independent Consumer Trustee to make appropriate decisions regarding the treatment of future risks and uncertainties in planning for infrastructure investment?

Questions related to policy considerations for LTES Agreements

Question 4: What role could demand response play as 'firming infrastructure' under the EII Act and are any special considerations required in LTES Agreement design?

Question 5: Other than those prescribed in the EII Act, are further LTES Agreement design principles required to support spot, contract and system service market operation and greater consistency across jurisdictional schemes and, more broadly, innovation over time?

Questions related to tendering for and recommending LTES Agreements and access rights

Question 6: What do you think is important to include in a regulation to define 'outstanding merit'?

Question 7: Are there further matters that should be considered when setting and using REZ access fees?

Questions related to Infrastructure Safeguard governance and controls

Question 8: How should stakeholders be engaged in key processes so as to ensure the ongoing success of the Infrastructure Safeguard according to the objectives of the EII Act?

Question 9: Where could the regulations provide guidance to the Consumer Trustee in relation to the risk management framework, to increase transparency and confidence for stakeholders?

Question 10: When should the Scheme Financial Vehicle enter hedging contracts?

Question 11: What capabilities will the Consumer Trustee or Financial Trustee need to manage net exposures under hedging contracts and LTES Agreements?

Question 12: What parameters, principles and structures should be regulated to limit net basis risk exposures for consumers?

Call for submissions

The Department invites submissions on the Infrastructure Safeguard policy paper.

Please provide your feedback as direct responses to the questions in this paper. This will help us incorporate your responses into our policy development process. You are encouraged to provide evidence to support your feedback.

Preferred option: You can respond to questions in the Infrastructure Safeguard policy paper by using the online form on the [Electricity Infrastructure Investment Regulations webpage](#).

Alternative options: You may fill in and return the submission form (Word document) available on the [Electricity Infrastructure Investment Regulations webpage](#). The Department also welcomes free form submissions, instead of, or in addition to, the submission form. Please email your submission form and/or free form submission to Electricity.Roadmap@dpie.nsw.gov.au with ‘**Your Name – Part 6 policy paper – Submission**’ in the subject line.

Please identify if you would like your submission to be confidential or anonymous.

Please note that providing a submission is entirely voluntary, is not assessable, and does not in any way include, exclude, advance or diminish any entity from any future procurement or competitive process in regard to REZs or LTES Agreements under the Infrastructure Safeguard, or any other NSW Government program.

The Department is committed to an open and transparent process, and all survey responses and submissions will be made publicly available, except those requested to be kept confidential. **The Department will redact personal details from submissions made by individuals to protect personal information.** If a submission author considers any content in their submission to be revealing of protectable corporate intellectual property, they should clearly note and define this in their submission. In the absence of an explicit declaration to the contrary, the Department will assume that the information provided is not considered intellectual property of the respondent.

If you wish for your written submission to remain confidential (except to Department project staff and advisors, who are subject to appropriate confidentiality arrangements), please clearly state this in your submission, and only your organisation’s name will be published.

The Department may disclose confidential information provided by you to:

- NSW Government departments, NSW Ministers and Ministers’ Offices
- the NSW Ombudsman, Audit Office of NSW or as may be otherwise required for auditing purposes or Parliamentary accountability
- the Energy Security Board, Australian Energy Market Operator, Australian Energy Market Commission, Australian Energy Regulator, Independent Pricing and Regulatory Tribunal or the Australian Competition and Consumer Commission
- TransGrid, Ausgrid, Endeavour Energy, Essential Energy, the Clean Energy Finance Corporation or the Australian Renewable Energy Agency
- the entities appointed or to be appointed as Consumer Trustee, Financial Trustee, Scheme Financial Vehicle and Regulator under the EII Act
- other parties where authorised or required by law to be disclosed.

Where the Department discloses information to any of these parties, it will inform them that the information is strictly confidential. The Department may publish or reference aggregated findings from the consultation process in an anonymised way that does not disclose confidential information.

Context, policy intent and scope of this policy paper

Context of the Electricity Infrastructure Investment Safeguard

The NSW Electricity Infrastructure Roadmap (the Roadmap) sets out the NSW Government's plan to modernise our electricity system, including by building transmission, generation, long duration storage and firming infrastructure.

The State needs this infrastructure to replace the four coal fired power stations that are scheduled to close within the next 15 years, starting with the Liddell power station in 2022–23. These power stations currently provide around three-quarters of the State's annual electricity supply. If they are not replaced before they close, there will likely be substantial wholesale electricity price rises. The investment required in replacement infrastructure is unprecedented in both its scale and the relatively short timeframe over which it must be made.

The purpose of the Roadmap is to coordinate private sector investment in large-scale generation, storage, firming and network infrastructure to maintain a reliable, secure and affordable electricity supply.

The Electricity Infrastructure Investment Safeguard (the Infrastructure Safeguard) is the Roadmap's primary mechanism to support private investment in:

- generation infrastructure that is at least 30 megawatts and uses a renewable energy source (e.g. wind, solar, biogas)
- long duration storage infrastructure that is scheduled in the central dispatch process of the Australian Energy Market Operator (AEMO) and can store and discharge electrical energy at its registered capacity for at least eight hours (e.g. pumped hydro, compressed air or battery energy storage)
- firming infrastructure that is scheduled in AEMO's central dispatch process (e.g. gas, battery energy storage and some forms of demand response).

The *Electricity Infrastructure Investment Act 2020* sets out overall objectives for the amount of each of these types of infrastructure and sets minimum objectives for the construction of generation and long duration storage infrastructure by 31 December 2029.

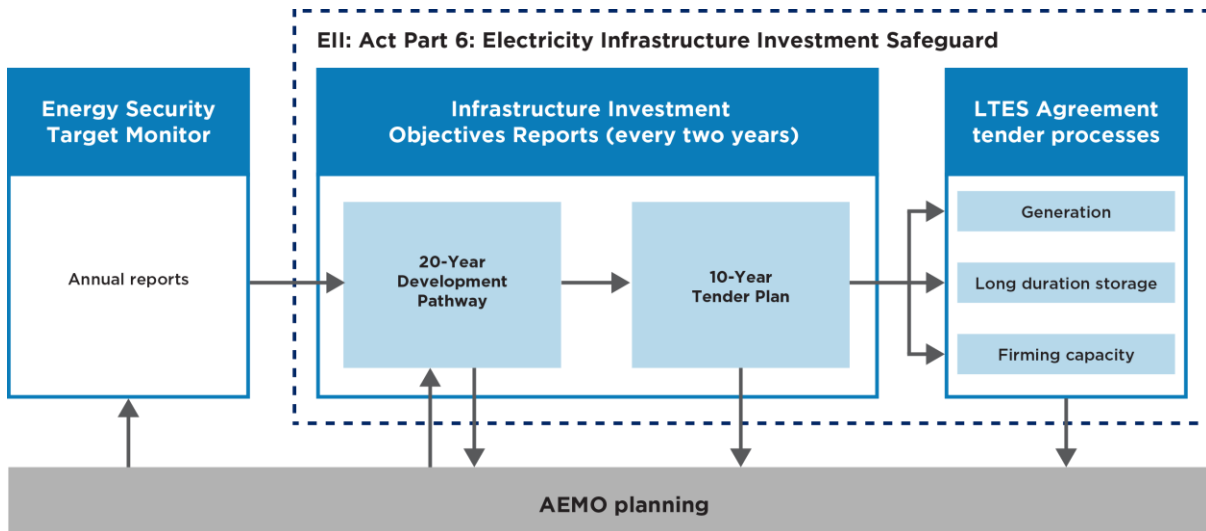
The Consumer Trustee is required to prepare an IIO Report every two years and as soon as practicable after July 2021. The IIO Report includes two components: the 20-Year Development Pathway and the 10-Year Tender Plan.

The 20-Year Development Pathway sets out a plan to construct generation, long duration storage and firming infrastructure over a 20-year period to meet the infrastructure investment objectives.

The Energy Security Target Monitor will separately prepare an annual report to advise the Minister on whether it considers firm capacity is sufficient to meet the energy security target over the next 10 years. The Energy Security Target Monitor's annual reports are an input into the 20-Year Development Pathway and assist the Consumer Trustee to identify the need for or timing of long duration storage infrastructure and firming infrastructure.

As shown in **Figure 2**, the 10-Year Tender Plan then sets out the tender schedule for when LTES Agreements may be tendered to give effect to the 20-Year Development Pathway. Administrative arrangements will be developed to ensure Consumer Trustee planning is effectively integrated with AEMO's Integrated System Plan and Electricity Statement of Opportunities processes and work to address potential system strength and inertia shortfalls across the National Electricity Market. Adjustments to AEMO planning approaches and assumptions will be required to reflect the NSW Roadmap.

Figure 2 EII Act Part 6 – Planning and investment processes under the Infrastructure Safeguard mechanism¹



The Consumer Trustee will publish tender rules to detail requirements for the conduct of tenders to identify the best projects to offer LTES Agreements, including eligibility and merit assessment criteria. The Consumer Trustee’s primary consideration in these tenders will be the financial value to NSW consumers; however, it must also consider how tenders contribute to each of the objectives of the Act.

Box 1 – AEMO Services Limited has been appointed as the Consumer Trustee

On 23 July 2021, the Minister for Energy and Environment announced that the newly formed subsidiary of the AEMO, *AEMO Services Limited* will be the Consumer Trustee under the EII Act.² This followed an evaluation and consultation process to determine an outcome that supports the interests of NSW electricity consumers and integration of the Roadmap policy with the broader National Electricity Market.

The Consumer Trustee will have discretion over the timing and scale of competitive tenders and whether to recommend an LTES Agreement if it considers doing so would be in the best interests of consumers. For example, the Consumer Trustee could adjust scheduling to account for REZ network infrastructure commissioning timeframes, decline to recommend contracts if prices are too high, or recommend more contracts in a competitive process round to capture the economies of scale presented by a project with a low bid price.

Each type of infrastructure (i.e. generation, long duration storage, firming) will be offered different kinds of LTES Agreements. The Consumer Trustee will set terms and conditions of the LTES Agreements, with a dedicated Scheme Financial Vehicle as the counterparty.

The Scheme Financial Vehicle will be a credit worthy counterparty for private investors as it has powers to recover payments under these LTES Agreements by on-selling energy derivative

¹ In relation to firming, the Minister instructs the Consumer Trustee to undertake an LTES Agreement tender process (based on the information provided by the Energy Security Target Monitor).

² [New Electricity Consumer Trustee to put energy consumer first](#), 23 July 2021.

products or with funding contributions from distribution network businesses. Distribution network businesses will pass these costs on to consumers through network charges. This is discussed further in the *Electricity Infrastructure Fund Policy Paper*.

The Consumer Trustee will develop a risk management framework to protect the financial interests of consumers from risks associated with the management of financial liabilities associated with LTES Agreements. This risk management framework may assign functions to the Consumer Trustee, Financial Trustee, the Scheme Financial Vehicle and Regulator.

Scope of this paper

This paper is one of many the Department is releasing to support the detailed policy design and implementation of the Roadmap. Please note that although this paper has a focus on the Infrastructure Safeguard, it does not seek stakeholder feedback on detailed design aspects of the LTES Agreements or tenders involved in the Infrastructure Safeguard. This is because:

- The Department has separately sought stakeholder feedback on LTES Agreement design elements such as legal and pricing terms in the [Long-term Energy Service Agreement Design consultation paper \(PDF 1.2MB\)](#).
- The Department will seek stakeholder feedback on issues such as tender staging and assessment criteria in a future tender design consultation paper.

Stakeholders are encouraged to read this paper with this context in mind.

This Infrastructure Safeguard policy paper addresses matters related to higher-order policy implementation and seeks stakeholder feedback on these matters. This policy paper is structured as outlined below:

- **Guiding principles** – Outlines the principles to be used by the Department when it considers policy positions relating to the Infrastructure Safeguard.
- **Planning for private sector infrastructure investment** – Sets out the processes related to the Electricity Infrastructure Investment Report including the 20-Year Development Plan and the 10-Year Tender Plan for tendering for new capacity and potential consultation requirements and controls. It outlines the intention to closely integrate with AEMO planning processes and the need for transparency and stakeholder scrutiny of planning approaches and assumptions.
- **Policy considerations for LTES Agreements** – Sets out the broad design and operational considerations for LTES Agreements with a focus on public interest issues such as alignment with National Electricity Market incentives and supporting national consistency between jurisdictional schemes.
- **Tendering for and recommending LTES Agreements and access rights** – Sets out the intended process for competitive auctions for LTES Agreements and access rights. It introduces the concept of REZ access rights and how they will be allocated through competitive tender processes.
- **Infrastructure Safeguard governance and controls** – Sets out intentions and considerations for the establishment of the Consumer Trustee including in relation to corporate governance and risk management functions. It outlines key risks that need to be managed and a range of transparency, governance and consumer cost control measures for stakeholder consideration and feedback.

The Department would like to hear your thoughts on the issues raised in this policy paper. Refer to the *Call for submissions* section above for details on providing feedback.

Guiding principles

This section lists the principles to be used by the Department when it considers policy positions relating to the Infrastructure Safeguard (Part 6 of the EII Act). In assessing the issues and options raised, one or a number of these guiding principles may be applicable.

Principle	Key requirements
Robust frameworks	<ul style="list-style-type: none"> ensure approaches are fit-for-purpose and reflect industry best practice
Flexibility	<ul style="list-style-type: none"> allow the Consumer Trustee to innovate to serve consumer interests and respond to changing market conditions
Transparency	<ul style="list-style-type: none"> transparency of functions and processes relating to the Infrastructure Safeguard
Well integrated with the National Electricity Market frameworks	<ul style="list-style-type: none"> alignment with AEMO processes (e.g. scheduling and dispatch) and supporting efficient markets
Social licence	<ul style="list-style-type: none"> ensure transmission and project infrastructure development is well coordinated and achieves local community support
Governance and risk management	<ul style="list-style-type: none"> oversight of the Consumer Trustee and managing key risks

Planning for private sector infrastructure investment

This section relates to the planning and reporting processes set out under Part 6 of the EII Act. Please note these are additional matters to those:

- covered in the [Tranche 2 regulations issue paper \(PDF 805KB\)](#), including the matters the Consumer Trustee must take into account when preparing the IIO Report
- being consulted on in relation to Network Infrastructure Projects (Part 5 of the EII Act), including with respect to the function of the infrastructure planner, requiring the Consumer Trustee to provide information to the infrastructure planner, and public consultation requirements.

Box 2 – Regulations on the IIO Report

In the Tranche two regulations to support the Electricity Infrastructure Roadmap issues paper, the Department noted that the EII Act includes high level information about the IIO Report and there would be benefit in providing additional information, to clarify what the Consumer Trustee is to include in these reports. The Department proposed regulations that set out a proposed list of matters the Consumer Trustee must take into account in the first and subsequent IIO Reports.

Note that the functions of the Consumer Trustee will be exercised by the Secretary of the Department (as per section 60(2) of the EII Act) until AEMO Services Limited is fully operational and ready to formally take on the role of Consumer Trustee in accordance with a transition process.

Process for preparing and publishing the IIO Report

The IIO Report is somewhat analogous to AEMO's central planning processes via the Integrated System Plan and Energy Statement of Opportunities. They each set out a long-term plan for investment in electricity infrastructure, considering various scenarios and future uncertainty.

However, there will be some key differences in objectives and approach. The IIO Report will outline the new generation, long duration storage resources and firming infrastructure required to meet the explicit Roadmap objectives at lowest cost to NSW consumers. The Integrated System Plan is not tasked with mapping an optimal cost pathway for NSW consumers nor with prescribing intervention to ensure resource adequacy.

While the 20-Year Development Pathway and 10-Year Tender Plan will set out a preferred timing and scope for tendering, investment decisions will be subject to information received through each tender process. The Consumer Trustee could recommend more or less infrastructure for LTES Agreements or a different mix of infrastructure types depending on information received through each tender process (such as pricing, operational capabilities and development timeframes). The Consumer Trustee will also use market information to inform further IIO Reports.

In future, it is intended the 20-Year Development Pathway, and aggregated market information received through tender processes, will become an input into the AEMO Integrated System Plan and Electricity Statement of Opportunities process. Close collaboration with AEMO will allow inputs, scenarios and assumptions to be aligned, while allowing for differences to meet different policy intents.

AEMO’s latest [Inputs, Assumptions and Scenarios Report \(IASR\)](#) (PDF 5.3MB) sets out how the 2022 Integrated System Plan will take account of the 2021 IIO Report:

AEMO will apply a development trajectory at least as fast as the trajectory of energy generating and storage capability specified in the Consumer Trustee’s 2021 Infrastructure Investment Opportunities (IIO) Report over the period until the minimum objective is met, provided the report is published in time to be incorporated in the modelling. AEMO will add details of this trajectory to the IASR Assumptions Book that accompanies the IASR once the report is available.

AEMO’s process for preparing its Integrated System Plan is set out in the National Electricity Rules and involves consultation and the publication of its Inputs, Assumptions and Scenarios Report, and draft and final Integrated System Plan reports. Indicative timing of AEMO and Consumer Trustee reporting is summarised in **Figure 3**. The Integrated System Plan forms one of a number of AEMO planning processes that work to ensure resource adequacy and the security of the power system, and these will also be aligned over time.

Figure 3 Indicative timing of Integrated System Plan and IIO consultation and reporting



AEMO is required to establish a formal Integrated System Plan Consumer Panel and have regard for its expert advice in preparing the Integrated System Plan. The Integrated System Plan Consumer Panel provides independent expert advice with the aim of giving consumers confidence that the Integrated System Plan has appropriately considered the risk of over and under investment in the power system.

The inclusion of the Integrated System Plan Consumer Panel may represent a best-practice approach for the energy sector, as it has given weight to information provided by consumers and their representatives. For example, the Australian Energy Regulator considers that distribution network businesses’ five-yearly regulated revenue proposals are more likely to be in the long-term interests of consumers where they ‘*have been developed with the influence of consumers, and their preferences*’.³ Energy businesses have also signed up to the voluntary [Energy Charter](#), which was developed by industry and consumer representatives to ‘*progress the culture and solutions needed to deliver more affordable, reliable and sustainable energy system[s] for all Australians in line with our community’s expectations.*’

There are a range of matters on which the Consumer Trustee could benefit from direct consultation with consumer groups such as in relation to how it defines consumer interests in modelling, tender processes and the design of LTES agreements (see sections *The Consumer Trustee’s approach to risk* and *Consumer protections* on page 21). We are investigating how to do this, including using AEMO’s Consumer Panel or establishing a new NSW-specific approach focused specifically on the implementation of the Infrastructure Safeguard.

The EII Act provides regulation-making powers to require the Consumer Trustee to take matters into account in developing the report. This could include stakeholder feedback received in relation to the first Infrastructure Investment Objectives Report. Given the importance of the 20-Year

³ Australian Energy Regulator 2021, *Overview – Draft Decision – AusNet Services 2021–26*, p.44.

Development Pathway in guiding decisions across the Roadmap, some level of stakeholder engagement will be appropriate to ensure:

- additional inputs and assumptions not directly sourced from the Integrated System Plan have been tested with stakeholders to ensure they are credible
- the risks taken by the Consumer Trustee on behalf of NSW consumers are informed by stakeholder views.

Question for stakeholders

1. What requirements for stakeholder consultation on the IIO Report should be implemented to ensure the Consumer Trustee's report is informed by the best available information?

Modelling and planning assumptions

In using AEMO forecasts, the Consumer Trustee will adopt certain expectations regarding the closure of power stations, the development of inter-regional network infrastructure, changes in technology costs and other market developments. These expectations inform the 20-Year Development Pathway that provides the basis for planning investments under the EII Act. Expectations of new network, generation and storage investment supported under the EII Act may also inform the Integrated System Plan.

The Infrastructure Investment Objectives Report identifies when new generation and long duration storage infrastructure is required in New South Wales to optimise price and reliability outcomes for NSW consumers. The modelling approach may assume the required projects have access to LTES Agreements; however, LTES Agreements will only be tendered to the extent that neither the private sector nor other interventions provide the required generation.

The EII Act does not prescribe how any specific type of energy, capacity or demand side activity is assessed or treated. The Consumer Trustee is tasked with assessing the impacts of cost reductions, new technologies and commercial models (e.g. distributed generation, household batteries and new deep storage technologies) and determining how this impacts the need for new generation and long duration storage.

There is uncertainty regarding the future volume and shape of electricity demand. Continued improvements in energy efficiency and the broader adoption of demand management approaches could materially reduce aggregate demand and demand peaks. Conversely, electrification of industry, space heating and transport and new hydrogen production industries could materially increase demand.

The EII Act does not prescribe in detail how these risks and uncertainties should be assessed. The Consumer Trustee is required to adapt to any external changes and improved forecasts as they develop. Scenarios are expected to change materially over time and the Consumer Trustee will need to ensure planning decisions are based on the best available information.

Questions for stakeholders

2. How should changes in technology, consumer behaviours, customer investment in generation (e.g. distributed energy resources) and demand uncertainty be treated to determine the requirements for large-scale infrastructure investment?
3. What assumptions, scenarios or approaches could be prescribed by regulation to encourage an independent Consumer Trustee to make appropriate decisions regarding the treatment of future risks and uncertainties in planning for infrastructure investment?

Policy considerations for LTES Agreements

This section provides a high-level overview of aspects of LTES Agreements, to illustrate how they fit into other parts of the Infrastructure Safeguard, and to elicit stakeholder feedback on specific design principles that could encourage consistency with the National Electricity Market and other jurisdictional schemes.

Further details on the potential terms and conditions for LTES Agreements can be found in the [Long-term Energy Service Agreement Design consultation paper \(PDF 1.2MB\)](#) released on 9 August 2021.

What is an LTES Agreement?

LTES Agreements are a central element of the Roadmap and will offer an option to access price guarantees for eligible generation, long duration storage and firming projects.

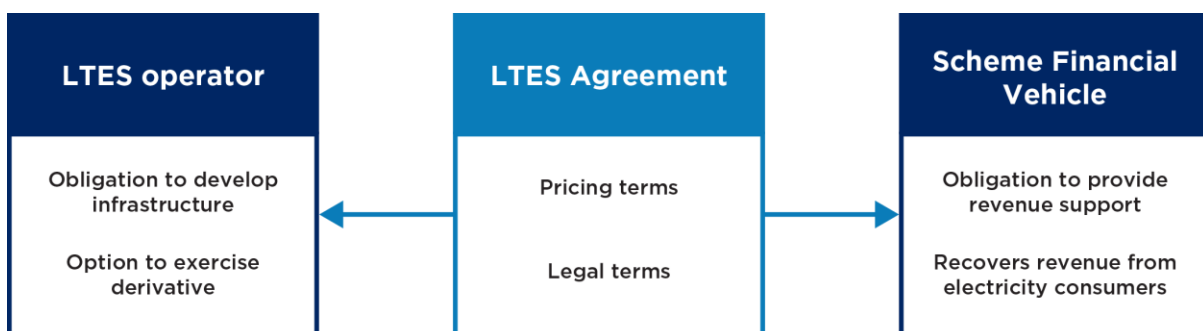
LTES Agreements are option contracts intended to achieve the following objectives:

- incentivise investment in New South Wales by providing an insurance mechanism for projects against low wholesale electricity prices
- protect the financial interests of NSW electricity consumers by supporting sufficient (but not excessive) generation, long duration storage and firming projects
- encourage projects' participation in the National Electricity Market and wholesale contracts markets such as power purchase agreements and markets that emerge as a result of the Energy Security Board's post-2025 review process
- achieve an efficient risk allocation between projects and NSW electricity consumers. The outcome of an efficient risk allocation is expected to be investors providing low-cost capital to fund projects
- be highly coordinated with the rollout of REZs and access rights for them. It is anticipated that projects will generally obtain both access rights and LTES Agreements if they wish to build in a REZ.

The LTES Agreement's design is intended to encourage projects to supplement by one or more Power Purchase Agreements, spot market sales or other wholesale contracts. It is a fallback for projects and is not intended to constrain more profitable contracting by projects in the wholesale market.

As shown in **Figure 4**, an LTES Agreement is an agreement between the Scheme Financial Vehicle and the LTES operator. The Scheme Financial Vehicle is supported by a statutory right to recover its costs from NSW electricity consumers via distribution network charges. This is discussed further in the *Electricity Infrastructure Fund Policy Paper*.

Figure 4 Parties and obligations under an LTES Agreement



Section 46 of the EII Act provides that an LTES Agreement is to require the LTES operator to build a physical infrastructure asset and, if the LTES operator does this, give the LTES operator an option to exercise a derivative arrangement to support its minimum revenue. The Consumer Trustee will consider how to best structure agreements to ensure obligations can be managed effectively.

The Consumer Trustee's role is to identify the best combination of LTES Agreement price and legal terms to optimise cost and risk outcomes for NSW consumers and to make recommendations on the award of LTES Agreements to the Scheme Financial Vehicle.

The regulations can prescribe additional requirements, design principles, and terms and conditions for LTES Agreements. In some circumstances, it may be in consumers' interest to allow proponents to propose alternative and innovative features of the LTES Agreements and these could be considered through the tender assessment process.

Types of LTES Agreements

Section 43(1) of the EII Act provides for LTES Agreements to be offered for certain generation, long duration storage and firming infrastructure.

For example, a **fixed shape and fixed volume** contract could be offered to provide an incentive for a generator to manage its output to be more in line with power system needs and to enable the Scheme Financial Vehicle to more easily trade its exposure when the option is exercised (see *The risk management framework* in the section on *Infrastructure Safeguard governance and controls*). Fixed shape and fixed volume contracts would result in reduced risk for consumers but would likely lead to higher bids for LTES Agreements.

Alternatively, developers have suggested that variable generators, like wind and solar, may be most effectively supported through a **generation following** arrangement. If exercised, the LTES Agreement would settle based on differences between the spot market and an agreed strike price and in accordance with the generator's dispatched electricity in the spot market. These contracts transfer most shape and volume risk from investors to consumers, and substantially increase the difficulty of risk managing contracts. These matters need to be weighed against any benefit in the form of lower bids for LTES Agreements. For this reason, the Long-Term Energy Service Agreement Design consultation paper discounts this form of contracting; the NSW Government has a strong preference for fixed shape and fixed volume contracts for generation. The Department's position is to recommend the regulations require the terms of generation LTES Agreements to include 'fixed-shape fixed-volume' swap structure unless these risks can be managed on behalf of consumers. This matter is discussed further in the section titled *Infrastructure Safeguard Governance and Controls* at the end of this paper.

LTES Agreements for long duration storage projects may be structured to receive an annuity payment to top-up net operational revenues achieved by the project, up to a net revenue threshold. A percentage of total net operational revenues above the net revenue threshold may be repaid to the Scheme Financial Vehicle through the repayment mechanism.

Firming services, if provided by **synchronous generators** or some forms of **demand response**, may have unique characteristics that need to be catered for in bespoke LTES Agreements. For example, demand response may have conditions regarding how frequently it can be called in a given year or synchronous generators may have contracts linked to National Electricity Market wholesale markets (e.g. caps market). Any firming project would need to comply with all provisions of the EII Act and regulations including the requirement to participate in AEMO central dispatch (e.g. registered as a scheduled load or demand response service provider).

Further detail about the form and conditions of LTES Agreements for different infrastructure types is canvassed in the [Long-Term Energy Service Agreement Design consultation paper \(PDF 1.2MB\)](#). Stakeholder feedback from that paper will contribute to determining whether regulatory guidance or controls are required.

Question for stakeholders

4. What role could demand response play as 'firming infrastructure' under the EII Act and are any special considerations required in LTES Agreement design?

Design principles for LTES Agreements

The Infrastructure Safeguard mechanism will operate in a complex and rapidly changing market context. A critical design consideration for LTES Agreements is ensuring processes and requirements complement National Electricity Market arrangements and can take advantage of technology, policy and commercial innovation over time.

Section 50(5) of the EII Act provides that in determining the terms and conditions of an LTES Agreement, the Consumer Trustee is to take account of principles, including:

- to align the financial incentives offered under LTES Agreements with the changing needs of the electricity system
- to adopt, to the maximum extent possible, the conventions and standards in relation to similar agreements in the National Electricity Market
- to ensure LTES Agreements allow for future changes in the National Electricity Market
- to ensure LTES Agreements are consistent with the risk management framework.

These are guiding principles which the Consumer Trustee must interpret when setting LTES Agreement terms and conditions. This section outlines the policy intent behind these principles and seeks feedback on what additional detail may be required in regulation.

Aligning financial incentives with the needs of the electricity system

LTES Agreements can align financial incentives with the changing needs of the electricity system over time by ensuring the price signals from the National Electricity Market are not removed. For example, the electricity spot market signals to generation to be available when the power system most needs it. The price signals respond to dynamic real-time supply and demand balances and this mechanism cannot be replaced by contracting terms.

There are two particular price settings that signal the changing needs of the system. Negative prices tend to signal that there is too much supply to meet consumer demand and supply resources that can reduce their output (or demand that can increase) should do so. High prices tend to signal that supply is limited and signal to generators to increase production or load to reduce.

Prolonged periods of high prices indicate to the market that further investment in generation, or operational changes, are needed, and may be profitable. It is essential therefore that a sufficient proportion of supply and demand side resources are exposed to these signals to ensure the supply and demand can be balanced at the lowest cost to consumers.

Consumer interests do not require all generation to have the same level of exposure to these signals. In particular, variable renewable energy generators can often contribute to increased supply and reduced prices for consumers while varying their output in response to resource availability.

Marginal loss factors are the National Electricity Market's current signal for the location of new generation investment. Exposing projects to this signal will also be an important part of aligning financial incentives with the changing needs of the electricity system.

Adopting conventions used by industry in similar agreements

The National Electricity Market has existing conventions for electricity contracts that help market participants manage price risk and new generation investment. There are three types of contracts that have their own conventions and are potentially relevant for the Consumer Trustee to consider. These include:

- long-term power purchase agreements used by market customers and generators to underpin new investment, provide long term price certainty and certificates (i.e. Large-scale Generation Certificates) the market customer needs for regulatory compliance
- futures contracts (e.g. swaps and caps) used by market customers and generators to manage their exposure to spot price risk
- firm contracts used by market customers (mainly retailers) to comply with the Retailer Reliability Obligation (RRO).

Although LTES Agreements have different purposes from those above, the Consumer Trustee should consider these conventions in setting LTES Agreement terms and conditions. For example, generation LTES Agreements could require projects to provide Large-scale Generation Certificates if they exercise an option.

Allowing for future changes in the National Electricity Market

The adoption of low-cost inverter-based generation has revealed the importance of essential system services (ESS) that have not previously been valued (e.g. system strength, inertia and primary frequency control have been provided as a bi-product of synchronous generation) and the need for new technical controls.

Other services, such as fast ramping and the eight Frequency Control Ancillary Services (FCAS) markets may increase in value as electricity supply and demand have become more variable and harder to forecast. Over the 20-year planning timeframes of the EII Act, these types of services are likely to further increase in value relative to bulk energy supply.

Market bodies are considering a range of reforms to ensure adequate supplies of ESS over the long term and in real time. For example, the Australian Energy Market Commission (AEMC) is currently considering how best to procure and schedule synchronous services that are not provided through spot markets (e.g. system strength and inertia). The AEMC has also recently introduced two new FCAS markets that focus on providing sub 2-second frequency control ancillary services.

In its final advice to the Energy National Cabinet Reform Committee in July 2021, the Energy Security Board (ESB) proposed changes to the RRO to support resource adequacy. The reforms may mean new and existing projects may be eligible to create a new kind of certificate that retailers will be required to purchase and surrender.

The Consumer Trustee will need to review these reforms as they emerge to determine whether the initiatives reduce or increase the need for action by the Consumer Trustee to minimise cost and risk to NSW consumers. For example, resource adequacy initiatives such as a reformed RRO will be assessed by the Consumer Trustee to determine whether they need to be supplemented to achieve intended outcomes.

Consistency with the Infrastructure Safeguard's risk management framework

The Roadmap's objectives for new generation and storage may result in a significant portion of NSW generators having LTES Agreements at some point in the future. If these generators choose to exercise their options in the same year, it could reduce the number of short-term contracts available, and make it harder for market customers to manage price risk and meet their obligations under the RRO.

The RRO requires liable entities to demonstrate they have sufficient qualifying contracts to cover their share of a one-in-two-year peak demand. The RRO can be triggered when forecast reliability is below the reliability standard.

A key consideration for the Consumer Trustee will be to ensure that LTES Agreement design, and the Infrastructure Safeguard mechanism more broadly, does not increase RRO compliance costs, undermine retail innovation and competition, or prevent consumers and retailers from managing their risks.

The Infrastructure Safeguard can support the contract market to the extent that the aggregate market position of the Scheme Financial Vehicle can be re-packaged into products offered to electricity market customers. This function is provided by section 52 of the EII Act – *Risk management contracts*.

There may also be the potential for the Scheme Financial Vehicle to sell contracts to smaller retailers, through the RRO market making (Market Liquidity Obligation) provisions, promoting greater retail competition.

The Consumer Trustee may also determine that it is in NSW consumers’ best interest to actively hedge the future payments to be made under LTES Agreements so there is certainty about the cost of the scheme in the following year. If the Consumer Trustee were to make this decision, it would be important for the risks associated with LTES Agreements to be able to be hedged (i.e. not open ended). These considerations bear on the design of LTES Agreements. LTES Agreements need to be structured in ways that enable hedging.

Enhancing the legislated design principles

Section 50(5) of the EII Act sets up the principles the Consumer Trustee must take into account when developing an LTES Agreement. The legislated principles are set at quite a high level and require the Consumer Trustee to interpret their policy intent. The regulations could make this interpretation simpler by prescribing additional principles at a greater level of policy detail.

A nationally agreed set of contract design principles could also underpin the development of greater consistency across jurisdictional investment schemes. These could build on the existing provisions of the EII Act to target specific policy integration outcomes at the national level.

Examples of potential principles are provided in **Figure 5**. It is important, however, that any principles set out in regulations do not constrain the Consumer Trustee’s ability to respond to changing policy and market conditions and comply with the EII Act. Accordingly, the regulations need balance providing parameters and principles for the Consumer Trustee in exercising its functions and ensuring the Consumer Trustee has sufficient flexibility to discharge its duties.

Figure 5 Potential National Electricity Market integration principles and design features

a) Align financial incentives	b) Adopt contract conventions	c) Allow for future market reform	d) Consistent with risk management
<ul style="list-style-type: none"> • Maintain sufficient spot exposure • Preserve existing locational price signals • Maintain exposure to ESS incentives 	<ul style="list-style-type: none"> • Enable on-selling of RRO compliant contracts • Acquire rights to future capacity credits or other windfall gains 	<ul style="list-style-type: none"> • Acquire rights to future certificate or other windfall gains • Maintain exposure to ESS incentives 	<ul style="list-style-type: none"> • Enable on-sold or back-to-back products • Enable risks to consumers to be effectively managed

Question for stakeholders

5. Other than those prescribed in the EII Act, are further LTES Agreement design principles required to support spot, contract and system service market operation and greater consistency across jurisdictional schemes and, more broadly, innovation over time?

Tendering for and recommending LTES Agreements and access rights

This section provides a high-level summary of likely tender processes noting that a separate consultation paper on tender design is also being prepared. In the context of this paper, stakeholder views are sought on any policy matters that could be addressed by regulations to build confidence in tender processes under the Infrastructure Safeguard.

Section 47 of the EII Act requires the Consumer Trustee to conduct competitive tenders for LTES Agreements (unless otherwise authorised by the regulator). A competitive tender must be carried out in accordance with any requirements prescribed by the regulations and the rules made by the Consumer Trustee.

The EII Act requires that tender bids must include information about how the proposal will create employment and support industry in New South Wales (unless exempt by the regulations).

The EII Act requires the Consumer Trustee to take account of the *Guidelines for Consultation and Negotiation with First Nations Communities* and the *Plan for the NSW Renewable Energy Sector* in carrying out its functions (sections 4(4) and 9(1) of the EII Act, respectively). This has implications for preparing the LTES Agreement terms and conditions, the tender rules, and the conduct of competitive tenders.

It is expected the Consumer Trustee will assess a proposal's contribution to achieving the *Plan for the NSW Renewable Energy Sector* and the *Guidelines for Consultation and Negotiation with First Nations Communities*, to be issued by the Minister.

Before conducting a tender, the Consumer Trustee must make rules to deal with matters including:

- the eligibility criteria for making a tender bid
- the notification of the opening of the competitive tender
- the procedure for making a tender bid, including the information required to be included in a bid
- the fee payable for making a bid and requirements for bonds or other security
- the assessment of a tender bid by the Consumer Trustee
- other matters the Consumer Trustee considers necessary
- other matters prescribed by the regulations.

The tender rules will be gazetted prior to the commencement of tender processes. These tender rules will be informed by the *Plan for the NSW Renewable Energy Sector* to maximise opportunities for local supply chains and employment, and the *Guidelines for Consultation and Negotiation with First Nations Communities*. The method for evaluating tenders against various eligibility and merit criteria will be further explored in the forthcoming tender design consultation paper.

A further opportunity to comment on potential regulations, as well as the detailed design of tender processes, will be provided via the proposed tender design consultation paper. The matters anticipated to be covered in that paper are illustrated in **Figure 7**.

Figure 6 Considerations in making requirements for competitive tenders (indicative)⁴

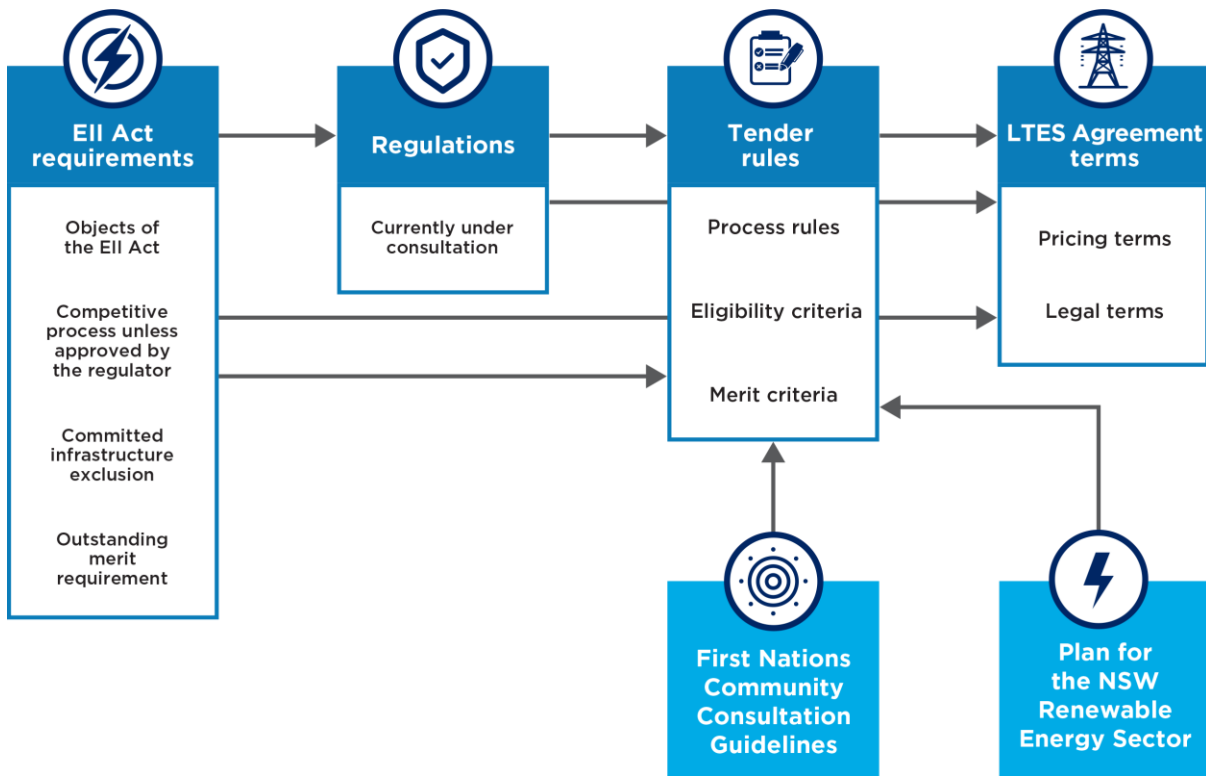


Figure 7 Issues to be covered in the tender design consultation paper



Combining tenders for LTES Agreements and REZ access rights

The EII Act does not require or prevent combined tenders to offer both LTES Agreements and REZ access rights. At this stage the Department expects the Consumer Trustee to conduct combined tenders.

Combined tenders offering both LTES Agreements and REZ access rights are consistent with the policy intent of the Roadmap to better coordinate the new generation and network investment New South Wales needs in a way that reduces costs to NSW electricity consumers while minimising impacts and creating economic opportunity for regional communities. To ensure a seamless interface with the Roadmap for project proponents, we anticipate tenders will be conducted in consultation with the Infrastructure Planner.

⁴ The EII Act provides additional requirements for competitive tenders.

The LTES Agreement and access right products are being designed to ensure complementarity and to maximise value for NSW electricity consumers. Allocating the two products in a combined tender requires consideration of both REZ process dependencies (how REZ network design processes interact with the competitive tender) and allocation pathway dependencies (the implications of allocating one or both products, across multiple competitive tender processes).

As noted above, a forthcoming tender design consultation paper will set out how the two products can be delivered in a single, consistent and effective process. Within these integrated processes, it is anticipated both projects physically located in the REZ and located out of the REZ (non-REZ) will compete for LTES Agreements. Importantly, while it is intended that tender processes will be combined, bidders will be able to bid for an LTES Agreement without seeking an access right. This is necessary to ensure non-REZ or projects within a REZ that may not require an access right (e.g. projects connecting at a load centre), can still compete on merit.

Under section 48(3) of the EII Act, the Consumer Trustee has discretion to recommend a project not inside the geographic boundary of a REZ if it shows ‘outstanding merit’. This issue will be further addressed in the tender design consultation paper.

Section 48(3) states *‘the Consumer Trustee must not recommend the making of an LTES agreement that relates to generation infrastructure specified in section 43(1)(a) that is not, or will not be, part of a renewable energy zone, unless the Consumer Trustee is satisfied that the LTES agreement shows outstanding merit’*.

The Department intends to recommend regulations that define outstanding merit. A starting point for determining whether a non-REZ project shows outstanding merit is to ensure it delivers better outcomes for consumers and communities when compared to similar projects built inside a REZ. Further detail on the proposed position for assessing outstanding merit will also be outlined in the tender design consultation paper.

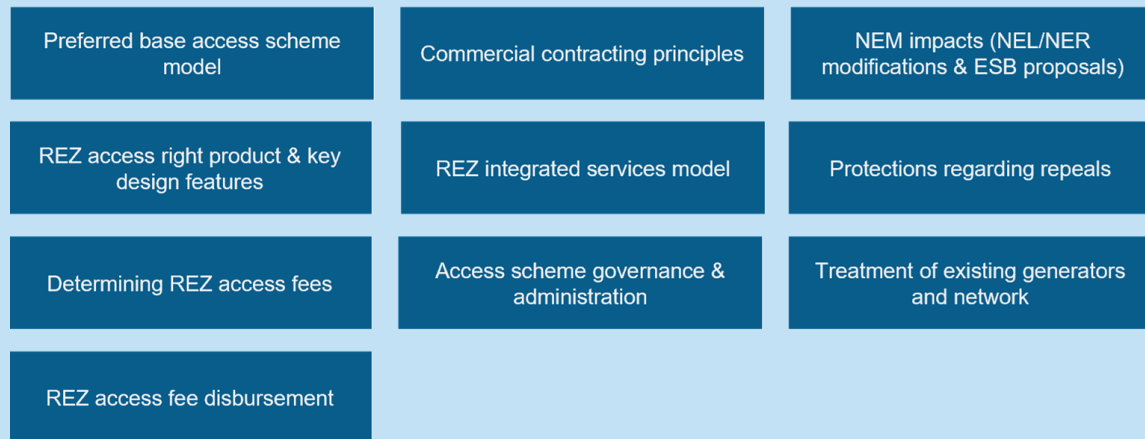
Box 3 – CWO Renewable Energy Zone

Central-West Orana (CWO) is likely to be the first REZ declared under the EII Act. The NSW Government has started on-the-ground consultation with local communities and regional stakeholders in the CWO REZ. This consultation will help inform coordinated strategic planning to ensure the REZ complements existing agricultural and primary land uses, reflects local priorities, and retains existing economic activity and social values within the CWO region. The Department consulted on an [issues paper about CWO Access Scheme design \(PDF 2.9MB\)](#) in March 2021.

Under section 24 of the EII Act, the Minister may declare an access scheme that is to apply in a REZ or part of a REZ. Rights conferred on participants (such as operators of generation and storage infrastructure) in such a scheme may authorise access to, and use of, specified network infrastructure in a REZ. Connection to a REZ will still be subject to connection processes and planning approvals. These schemes are intended to provide some certainty to investors that they will maintain access to transmission capacity within the REZ for the term of the LTES Agreement and this provides some protection against congestion and risks associated with marginal loss factor movements.

A design paper is being prepared on access scheme arrangements covering matters listed in **Figure 8**. It will set out proposed commercial principles for terms and conditions of an access product for CWO REZ. Key considerations include how access arrangements can provide certainty for projects within the CWO REZ while leaving open options to address congestion and related risks across the broader system, and the setting of access fees.

Figure 8 Issues to be covered in the CWO REZ access rights product design paper



Considerations for determining access fees

In return for greater certainty over their connection and continued access to the network, developers of generation and storage infrastructure will pay a fee to the Scheme Financial Vehicle for participating in the REZ access scheme.

Access fees are determined by the Consumer Trustee considering the following principles:

- maximising financial value for NSW electricity customers
- recovering the cost of the operation of the access scheme
- optimising the use of the existing and planned network infrastructure in the REZ.

The EII Act also specifies that the fees must include a component for a ‘community purpose’ and a component for an ‘employment purpose’.

Fees are expected to be set with a consideration of:

- funding of community and employment purposes
- recovering part of the cost of building shared REZ network infrastructure
- recovering administration costs of the access scheme
- the impact on LTES Agreement pricing
- promoting connection to, and utilisation of, REZ network infrastructure
- the overall value of the REZ access right to proponents.

In setting the fees for an ‘employment purpose’, the Consumer Trustee must seek advice from a committee established under section 34W(1)(b) of the *Energy and Utilities Administration Act 1987* (employment purpose committee). The regulations will also prescribe purposes that will be taken to be for a ‘community purpose’ and ‘employment purpose’ and the minimum and maximum amounts or proportions of the access fee that may be designated for these purposes.

In determining fees, the Consumer Trustee will consider the objectives of the EII Act and how fees will promote, de-risk and actively coordinate investment in new generation, storage and network infrastructure.

The Consumer Trustee may set access fees that vary for different types of infrastructure and types of access rights. Certain types or combinations of generation and storage projects may enhance the REZ by providing greater network hosting capacity and utilisation. Projects that provide these

types of benefits could be encouraged through lower access scheme fees. It is expected the financial interests of electricity consumers will be a primary consideration in determining REZ access pricing arrangements.

Questions for stakeholders

6. What do you think is important to include in a regulation to define 'outstanding merit'?
7. Are there further matters that should be considered when setting and using REZ access fees?

Infrastructure Safeguard governance and controls

This section explores the overall framework for the oversight of the functions of the Consumer Trustee and the Scheme Financial Vehicle under Part 6 of the EII Act. It seeks stakeholder feedback on whether the proposed approaches to support the framework are appropriate and sufficient.

Box 4 – The Infrastructure Safeguard puts consumers first

The Infrastructure Safeguard ensures new energy infrastructure optimises benefits for consumers at lowest cost and risk, by reducing the risk of projects and the returns investors require of them. It does this in a number of ways:

- reducing scarcity pricing by ensuring new plant is built before old generation retires
- ensuring a reliable electricity system
- driving down bid prices through the LTES Agreement design and tender process
- using an option contract structure, so consumers are only at risk of making payments if projects put their options contract
- contributions from distribution businesses should only be made if prices are low
- benefit sharing, so if energy prices increase and projects are making strong returns, the projects repay consumers
- an independent Consumer Trustee to plan and coordinate investment across transmission, generation, firming and storage.⁵

Consumer Trustee governance and oversight

Part 8 of the EII Act establishes the process for the appointment of the Consumer Trustee (among other entities) and its functions. On 23 July 2021, the NSW Minister for Energy and Environment announced that AEMO Services Limited will be the Consumer Trustee. AEMO Services Limited is a new subsidiary of AEMO, and has been established as a company limited by guarantee under the *Corporations Act 2001* (Cth).

This followed an evaluation and consultation process that concluded that AEMO Services Limited is best placed to ensure the functions of the Consumer Trustee are conducted effectively and that they are well-integrated with infrastructure planning processes at the national level. The Department considers that AEMO has leading capability in energy infrastructure planning and that this could be complemented with the commercial and stakeholder management expertise to support new infrastructure at the lowest cost (and greatest benefit) to NSW electricity consumers.

Section 60 of the EII Act provides that:

- the Consumer Trustee is to act independently and in the long-term financial interests of NSW electricity customers, and
- in the exercise of functions under the EII Act, the Consumer Trustee is not subject to the control or direction of the Minister.

The Consumer Trustee's independence (and the oversight provided for under the EII Act) creates a risk that decision-making may not, in all cases, be considered by stakeholders to be in the best

⁵ NSW Electricity Infrastructure Roadmap: Building an Energy Superpower Detailed Report (PDF 6.9MB), November 2020

interest of consumers. Indeed, this is probably inherent in its functions – the Consumer Trustee’s role is not to appease stakeholders – it is to make decisions consistent with the objects of the EII Act and principally in the long-term financial interests of consumers.

Examples of factors that could contribute to this are:

- quality of governance and human resources
- modelling or other biases in decision-making (such as preferencing reliability over price outcomes, or failing to recognise the materiality of emerging trends)
- National Electricity Market changes significantly altering or completely removing the need for the Consumer Trustee.

Ongoing transparency and accountability in decision-making by the Consumer Trustee is critical to ensuring the Infrastructure Safeguard continues to be effective and maintains the confidence of all stakeholders.

Section 67 of the EII Act provides for the Regulator to audit the performance of the Consumer Trustee (and other entities), including at the request of the Minister. This may ensure ongoing Consumer Trustee performance.⁶

Regulations could also address accountability by, for example, prescribing processes that constrain decision-making or mandate review and reflection on previous decision-making. There are powers for regulations to be made under the EII Act to guide or constrain the operations of the Consumer Trustee, consistent with the objects of the legislation.

AEMO Services Limited will have an independent board constituted by directors with an appropriate mix of skills and experience.

While AEMO Services Limited will initially be exclusively focused on its obligations as the NSW Consumer Trustee, it may take on other functions over time, including those conferred under statute by other Australian states and territories. It will be important to ensure the range of duties undertaken by AEMO Services Limited are consistent and that perceived or actual conflicts of interests are avoided or well-managed when they are unavoidable.

It is also important for the Consumer Trustee to be empowered to make the major decisions required of its statutory duty. Accordingly the Consumer Trustee should only consult to the extent it informs decision-making and affords stakeholders procedural fairness; that is, the principle should be that consultation is meaningful and occurs only where it can enhance decision making.

⁶ Section 68 of the EII Act allows the Minister to suspend or terminate the appointment through a prescribed process which requires that an audit by the Regulator establishes the grounds for suspension/termination first.

The Consumer Trustee's approach to risk

The Consumer Trustee has commenced comprehensive risk management planning to ensure it can achieve its strategic objectives under the EII Act as well as meet community standards and regulatory requirements in relation to good corporate governance. Key risks that will need to be managed include:

1. investments resulting in inefficient costs for electricity consumers
2. basis risk associated with risk management contracts
3. power system reliability and security risks
4. inappropriate LTES Agreement risk allocation and financial risk management
5. electricity price shocks to the Scheme Financial Vehicle or consumers
6. community discontent with infrastructure projects
7. the lack of effective competition in LTES Agreement tender processes
8. lack of transparency/loss of policy social licence
9. cyber security risks
10. breaches of privacy or confidentiality
11. inefficient use of administration funding
12. inappropriate or illegal conduct by employees or third parties.

Inevitably, some risk will need to be taken to achieve the objectives of the EII Act. This recognises that decisions will need to be taken with some degree of uncertainty, and in some cases, trade-offs will need to be made. An example of this is the risk of over or under-investing in infrastructure. While it is not possible to perfectly estimate future infrastructure requirements, the Consumer Trustee will have to decide how to manage uncertainty on issues such as future demand, the timing of thermal generator retirement and the likely extent and timing of technology cost reductions (or increases). In making decisions, the Consumer Trustee will have to consider a range of likely future scenarios informed by current trends and the best available estimates of future market developments.

Many of the obligations for effective risk management are required by law; for example, under the EII Act or the *Corporations Act 2001* (Cth). However, some risk management activities will need to be guided by reference to 'best practice' (as opposed to only statutory compliance) and broader community expectations.

Consultation with stakeholders to date has identified a broad range of views regarding the extent and relative priority of risks engaged in by the Consumer Trustee. Many of these relate to specific policy design options that are being explored through detailed and more targeted consultations (e.g. on LTES Agreements, tender process design and CWO access rights products).

We are seeking stakeholder views on how overall governance approaches can support consumer confidence in the decisions of the Consumer Trustee, including in establishing its risk appetite and applying it to the various risks and processes for which it is responsible.

Box 5 – Defining consumer interest

The EII Act requires that consumer financial interest be the primary factor the Consumer Trustee is to consider:

Section 60(3): The consumer trustee is to act independently and in the long-term financial interests of NSW electricity customers

Section 48(2): In making a recommendation, the financial value of LTES Agreements is to be the primary consideration for the consumer trustee.

However, the Act also requires the Consumer Trustee to balance the various objectives of the Act as a whole:

Section 3(3): *A person or body exercising a function under this Act must do so in a way that is consistent with the objects of this Act.*

Specific capacity targets are also legislated for 2029:

Section 44(3): *The minimum objectives are—*

- a. *construction of generation infrastructure that generates at least the same amount of electricity in a year as—*
 - i. *8 gigawatts of generation capacity from the New England renewable energy zone, and*
 - ii. *3 gigawatts of generation capacity from the Central-West Orana renewable energy zone, and*
 - iii. *1 additional gigawatt of generation capacity, and*
- b. *construction of long duration storage infrastructure with 2 gigawatts capacity.*

These requirements are similar but somewhat different to other measures of consumer interest. For example, unlike the National Electricity Objective, the objectives of the EII Act are not limited to financial or economic interests. This means that in many cases, trade-offs will need to be made between, for example, the cost of infrastructure projects and their other attributes. While the Consumer Trustee will have some discretion as to how these trade-offs are made when recommending LTES Agreements, the EII Act is clear that the financial value of LTES Agreements is to be the primary consideration. In making these trade-offs, the Consumer Trustee will be constrained in that it must also achieve the minimum investment objectives established under section 44(3).

In acting in the 'long-term' financial interests of consumers, the Consumer Trustee may need to consider how its decisions can directly reduce costs for consumers while promoting longer-term efficiency of the electricity system that may impact its productivity and costs over the longer term. This may include:

- ensuring the overall investment environment for the supply of electricity and other ESS remains attractive
- accounting for the potential role for efficient levels of demand side participation (such as in its infrastructure planning and the design of LTES Agreements for firming infrastructure)
- having regard to how its decisions encourage 'dynamic efficiency'⁷ over time through appropriate risk management
- ensuring its contracting and risk management processes support electricity contract and retail market operation
- reducing volatility in electricity prices.

The EII Act provides the high level framework to guide the Consumer Trustee and other entities to ensure their decisions are aligned with the interests of consumers.

Stakeholder views are sought on how community confidence can be built and maintained and how the implementation of the Infrastructure Safeguard remains aligned with the overall interests of consumers over time.

⁷ See for example [Dynamic efficiency – the key to lifting Australia's productivity performance?](#)

Consumer protections

The Consumer Trustee is charged with ensuring the benefits of the Infrastructure Safeguard are not outweighed by the costs. There is a strong public interest in ensuring transparency and accountability on key decisions. Achieving this may be complicated by factors including:

- The Consumer Trustee will operate with a high degree of independence and may, in some cases, be reporting on its own performance. This may create a conflict of interest. The Consumer Trustee must be unencumbered to operate in the consumer interest even if that means changing its past position on key issues.
- The Consumer Trustee may need to determine a counterfactual ‘no Roadmap’ case to measure the benefits resulting from its tender processes. This is likely to be a complex task on which different views might be held as to what the counterfactual should be.
- Decisions made by the Consumer Trustee will have a material impact on the operation of commercial entities that have a financial exposure to the electricity market and their share price. This may create legal incentives or imperatives to control information flows in a way that may, at times, run at odds with transparency principles.
- Trading in financial derivatives may be an effective approach for the Scheme Financial Vehicle to manage financial risk on behalf of consumers if permitted by the risk management framework. Stakeholder concerns may arise where these trades are complex and difficult to communicate, or where the risk management approach departs from the risk appetite of electricity consumers, government and industry stakeholders.

Publicly available information and scrutiny of decision-making by the Consumer Trustee will build public trust. The Department is currently considering a range of approaches and controls to ensure Consumer Trustee decisions remain aligned with the financial interests of consumers while providing flexibility to respond to changes in investment environments over time. In some cases, trade-offs between objectives may need to be carefully considered. Some of the potential ex-ante and ex-post controls to guide key Consumer Trustee activities are summarised in **Table 1**. Feedback is sought, in particular, on how stakeholders can be engaged in key processes to ensure the ongoing success of the Infrastructure Safeguard according to the objectives of the EII Act.

Table 1 Potential controls for key decision-making processes under the Infrastructure Safeguard

Activity	Objectives	Potential ex-ante controls	Potential ex-post controls
Network project authorisation	Determine and enable efficient network development	Maximum capital expenditure is benchmarked against alternatives	Efficiency review with variance analysis against planned expenditure
Access fee determination	Equitable and efficient cost recovery. Support generation investment and timely REZ development	LTES Agreement liability modelling to consider access right / LTES Agreements strike price trade-off. Thorough consultation with potential investors	Comparison of REZ tender outcomes against non-scheme and non-REZ prices over time
20-Year Development Pathway selection	Achieve reliability standards and capacity targets at the lowest cost to consumers	Consultation on critical assumptions modelled with sensitivity analysis	Independent review of modelling methodology and decision-making to support continuous improvement
Tender plan design	Tender plan appropriately balances risks and opportunities of alternatives	Consultation on critical assumptions modelled with sensitivity analysis. Assess alternative options	Evaluate previous Tender Plan outcomes as part of IIO Report every 2 years

Activity	Objectives	Potential ex-ante controls	Potential ex-post controls
LTES Agreement design	Provide an attractive product to reduce cost of capital while ensuring risks are appropriately allocated between parties and supports hedging	Consultation on design elements with investors and experts. Modelling of alternative risk allocation outcomes	Monitor investor behaviour and preferences and market outcomes to refine over time
Tender requirements	Efficient processes that support effective competition in all tender processes	Consultation with the regulator, experts and broader stakeholders on tender rules	Review of tender rules prior to the commencement of each tender round
LTES Agreement recommendation	Ensure alignment with the long-term financial interests of NSW electricity customers	Financial modelling of alternative tender outcomes including risks and sensitivities	Independent review of modelling methodology and decision-making to support continuous improvement
Risk management framework (see next section)	Active risk management by the Scheme Financial Vehicle maximises value to consumers and is aligned with community risk appetite	Regulator review and approval of the risk management framework. Targeted consultation on drafts with experts and key stakeholders	Periodic review of the risk management framework including consultation with experts and broader stakeholders

The risk management framework

Section 51 of the EII Act provides for the Consumer Trustee to prepare a risk management framework to protect the financial interests of NSW electricity customers in connection with the risks associated with LTES Agreements. The framework may provide functions for the Consumer Trustee, the Financial Trustee, the Scheme Financial Vehicle and the Regulator.

The Consumer Trustee must prepare the risk management framework for approval by the Regulator. The Department's preliminary position is that the Consumer Trustee should design the risk management activities and the Regulator should provide independent oversight to ensure the framework is consistent with the Act and any relevant regulations.

Section 52 of the EII Act provides that the Scheme Financial Vehicle may enter into risk management contracts if consistent with the risk management framework. A risk management contract may be a derivative arrangement.

The Department intends to recommend regulations that provide further direction to the Consumer Trustee on risks to be considered by the risk management framework and the circumstances in which risk management contracts may be appropriate.

The Department's preliminary position is to recommend the regulations require the risk management framework to provide for the following four risks, as managing these risks may require the Scheme Financial Vehicle to enter risk management contracts:

1. the risk that enough LTES operators exercise their options to reduce liquidity in the financial electricity contract market, which materially increases costs to retailers from managing wholesale electricity price risk on behalf of their customers
2. the risk that uncertainty in future payments to LTES operators leads to unnecessarily high contributions from distribution network businesses in particular years to provide the Scheme Financial Vehicle with a prudent cash balance
3. the risk that the cash balance of the Electricity Infrastructure Fund is not sufficient to pay for the administrative costs for the Consumer Trustee, Financial Trustee and Regulator required to create LTES Agreements
4. the risk of unexpected increases in the liabilities for payments by the Scheme Financial Vehicle to LTES operators under LTES Agreements.

The first and second of these risks interact with the electricity financial contracts market and may require active risk management or hedging. The second two of these risks concern financial liquidity and may require finance.

The financial liquidity of the Scheme Financial Vehicle is essential to ensuring the proper functioning of the Infrastructure Safeguard, other entities under the Roadmap, and ensuring the Scheme Financial Vehicle is a credit worthy counterparty to investors. First and foremost, this is supported by the Scheme Financial Vehicle's ability to recover costs via the Electricity Infrastructure Fund provided for under Part 7 of the EII Act. However, some circumstances may require the Scheme Financial Vehicle to enter a risk management contract to borrow money to manage its short-term cash position. The risk management framework can provide guidance and controls to ensure risks and costs of this finance are appropriate.

Active risk management contracts may be a valuable tool for the Scheme Financial Vehicle to manage electricity market exposure and impacts arising from the portfolio of LTES Agreements. For example, a risk management contract with another party with an anti-correlated derivative exposure to the electricity wholesale market could reduce market risk for both parties and provide additional revenues to offset costs to consumers. These same contracts could improve liquidity in the electricity financial contract market.

The overriding principle, and the reason for the risk management framework, is to allow prudent risk management that is in the long-term financial interests of consumers. We note that the exercise of judgement required in active risk management does not mean the outcome of hedging will always prove so in hindsight.

The Department considers the risk management framework could set out the systems, processes and capabilities required to execute and manage these active risk management activities, in particular those involving derivative arrangements. The Department's preliminary position is to recommend that the risk management framework provide for the Regulator to verify these are in place before any trading commences.

The Department considers the risk management framework may also need to consider the Scheme Financial Vehicle's net financial exposure to the wholesale energy market from LTES Agreements and active risk management contracts. For example, a cap on net financial exposure could encourage the Consumer Trustee to avoid basis risk, which would create correlated financial exposures to the wholesale market across contract types. The Department's preliminary position is that the risk management framework should set a cap on basis risk exposure, or provide a process for the Consumer Trustee to propose a cap for the Regulator to approve.

Given the Consumer Trustee is intended to design the risk management activities, the risk management framework could prescribe conditions on the Scheme Financial Vehicle's ability to trade active risk management contracts. For example, these conditions could include the Consumer Trustee being satisfied that:

- the risk is likely to occur and needs to be managed
- active risk management is in the long-term interests of consumers
- the risk management contracts are within the cap on the net basis risk exposure to the Scheme Financial Vehicle.

Design of LTES Agreements, such as in relation to contract shaped (e.g. fixed-shape or generation-following) legal and price terms, will have a significant bearing on the types of risk management activities the Scheme Financial Vehicle can enter into, and vice versa. For example, the Scheme Financial Vehicle will be better placed to trade when its market exposure is clear and relatively predictable. These issues are being worked through in detailed LTES Agreement design and the Consumer Trustee must ensure LTES Agreements are consistent with an overall approach managing consumer costs and that this is provided for in the risk management framework.

The Department's position is to recommend the regulations require the terms of generation LTES Agreements to include 'fixed-shape fixed-volume' swap structures unless the risk management framework provides strategies for active risk management of alternative contract structure(s) within the cap on basis risk exposure. The Consumer Trustee would need to be satisfied, informed by an independent peer review, that these active risk management strategies are capable of being effective with the scale of infrastructure projects required to meet the Infrastructure Investment Objectives and in the long-term financial interests of consumers.

Questions for stakeholders

8. How should stakeholders be engaged in key processes so as to ensure the ongoing success of the Infrastructure Safeguard according to the objectives of the EII Act?
9. Where could the regulations provide guidance to the Consumer Trustee in relation to the risk management framework, to increase transparency and confidence for stakeholders?
10. When should the Scheme Financial Vehicle enter active risk management or hedging contracts?
11. What capabilities will the Consumer Trustee or Financial Trustee need to manage net financial exposures under hedging contracts and LTES Agreements?
12. What parameters, principles and structures should be regulated to limit net basis risk exposures for consumers?