



2021 Infrastructure Investment Objectives (IIO) Report Summary



Consumer
Trustee

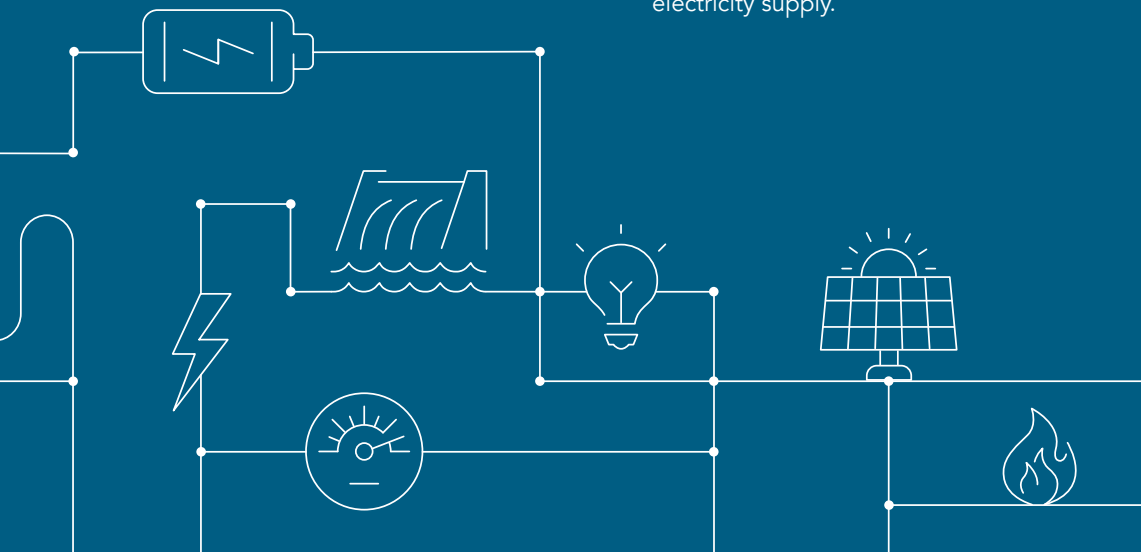
In November 2020, the NSW Parliament passed the Electricity Infrastructure Investment Act 2020 to deliver the NSW Government's **Electricity Infrastructure Investment Roadmap**.

The Roadmap, delivering at least five Renewable Energy Zones (REZs), coordinates investment in network, generation, storage and firming infrastructure in NSW to replace four coal-fired power stations set to retire within the next 15 years.

AEMO Services was appointed as the NSW Consumer Trustee, an independent statutory role with various planning, advisory and procurement functions which it must exercise in the long-term financial interests of NSW electricity customers.

In its role, AEMO Services published the **2021 Infrastructure Investment Objectives (IIO) Report**, a key milestone in the NSW Government's Roadmap that will support around \$32 billion in investment in NSW's power system over the next 20 years, commencing with the first tender in Q2 2022.

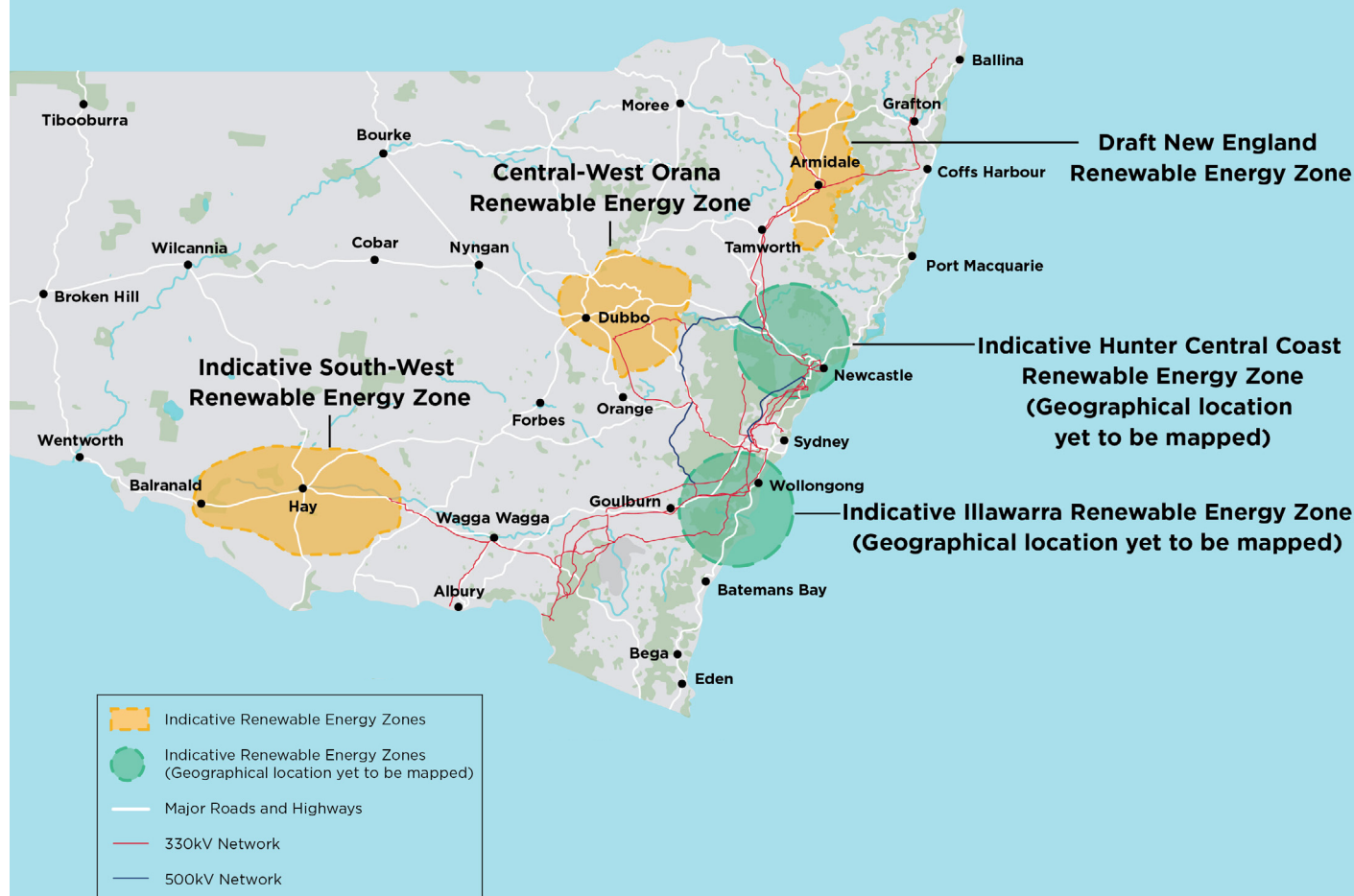
The IIO Report is a plan for building generation projects to provide 33,600 gigawatt hours (GWh) of electricity per year and 2 gigawatts (GW) of long-duration storage by the end of 2029, while minimising costs for NSW consumers and maintaining reliable electricity supply.



The IIO report sets out:

- the 20-year development pathway for renewable generation and long-duration storage infrastructure in NSW; and
- a 10-year tender plan to award Long-term Energy Service (LTES) agreements that provide minimum revenue certainty to support the development of eligible projects.

Indicative locations of NSW Renewable Energy Zones:



Roadmap key facts¹:

- Attract \$32 billion of private sector investment by 2030 in large-scale generation, storage and transmission.
- Support an expected 6,300 construction jobs and 2,800 ongoing jobs (benefits to regional NSW)
- \$1.5 billion in estimated lease payments to landholders in regional NSW by 2042
- Reduce NSW's carbon emissions by 90 million tonnes of CO₂e (MtCO₂e) by 2030.

\$32b
of investment

6,300
construction jobs

2,800
ongoing jobs

¹ NSW Electricity Infrastructure Roadmap November 2020, Building an Energy Superpower Detailed Report

About the Development Pathway

The NSW Consumer Trustee has designed a managed build that is intended to be logistically feasible for industry to deliver. This build trajectory avoids peaks and troughs in investment by smoothing the rate of investment over the next decade.

To select this pathway, the NSW Consumer Trustee modelled and assessed four alternative development pathways.

A key factor in the selection of the development pathway was the significant uncertainty regarding the precise timing of future coal plant withdrawals. Given this uncertainty, and the potential price impacts of such withdrawals, the development pathway does not seek to forecast or respond to withdrawals. Rather, the development pathway sets out a proactive build to ensure necessary infrastructure is in place to replace coal plants when they withdraw.

The selected pathway also aims to mitigate the risk of higher costs associated with global supply chain constraints and disruptions, and provides opportunities to develop sustainable local supply chains.

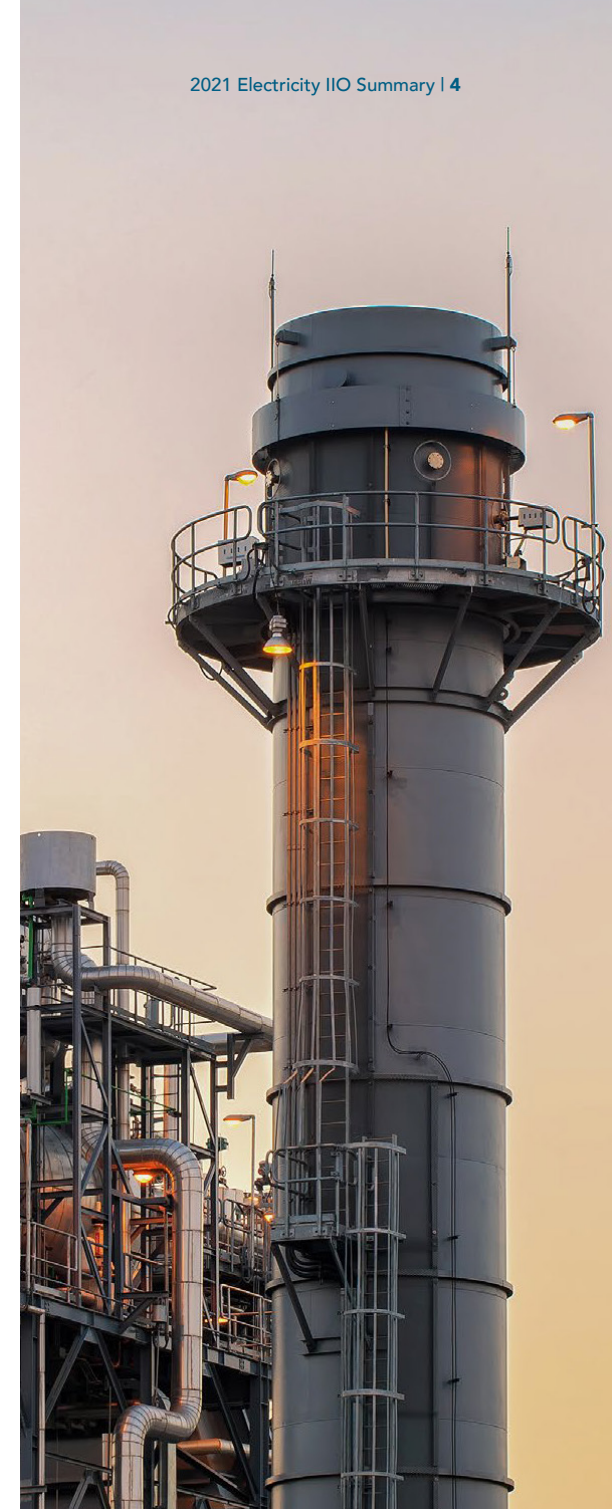
Modelling under the Development Pathway estimates a significant reduction to \$36 billion in the 20-year cost to supply wholesale energy services to NSW consumers. Similar modelling in the development of the Roadmap estimated the 20-year cost to be more than \$50 billion in the absence of the Roadmap.

The annual build limit results in a steady increase of generation entry to 2030, with additional generation constructed in the next decade to minimise costs to consumers.

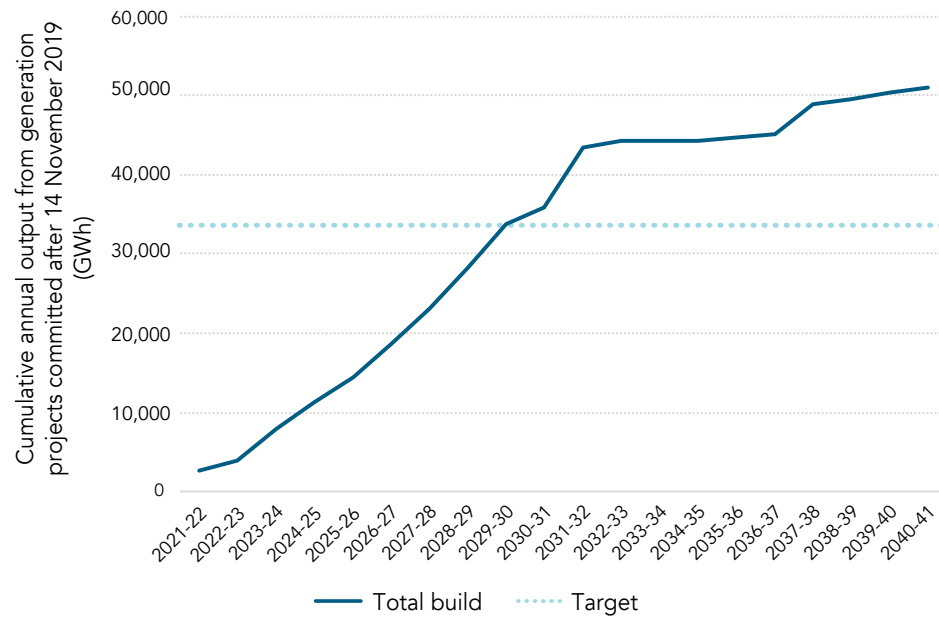
Differences in modelling assumptions

There are differences in the modelling assumptions between the 2021 IIO and AEMO's forthcoming draft 2022 ISP. The NSW Consumer Trustee does not consider that the differences in assumptions impact the validity of the modelling for this report. Further, the NSW Consumer Trustee will have regard to the latest information when exercising its procurement functions in relation to LTES agreements and network infrastructure project authorisations.

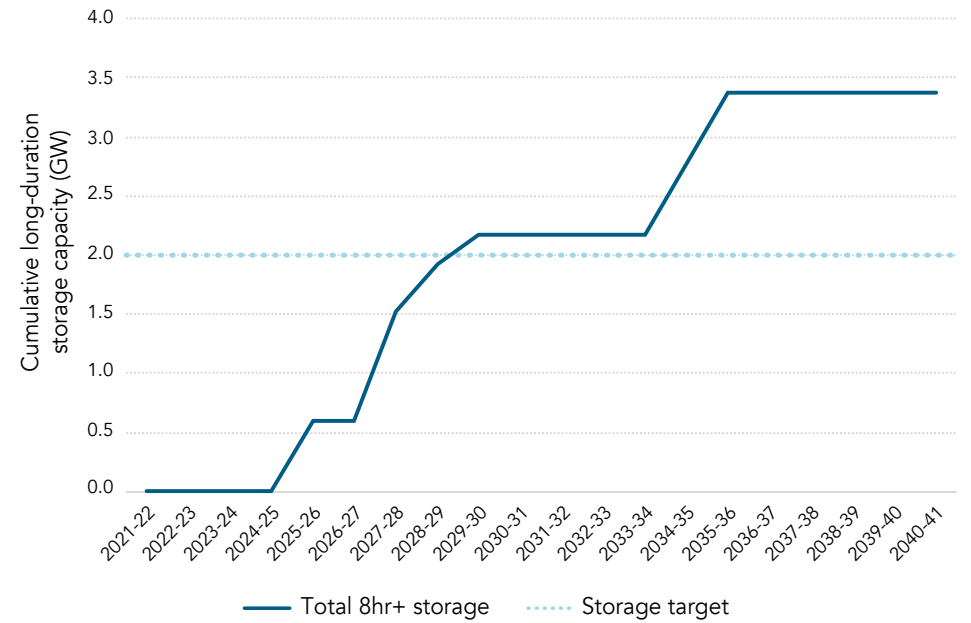
Four of the five NSW coal power stations, accounting for three quarters of NSW's electricity supply, are expected to close in the next 15 years.



Development Pathway (generation)



Development Pathway (long-duration storage)

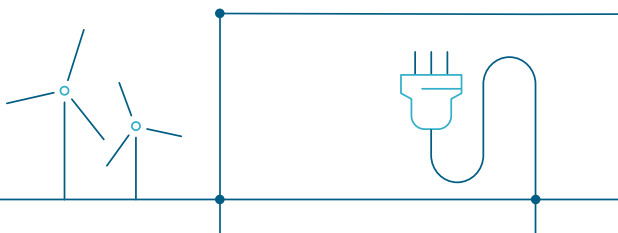


About the 10-year tender plan

The 10-Year Plan sets out the tender schedule and indicative amount of generation and long-duration storage infrastructure for long-term energy service (LTES) agreements. Where directed by the Minister, tenders may also be held in relation to firming infrastructure.

To drive further competition and rapidly build understanding in the market, the 10-Year Plan provides for frequent tenders for LTES agreements. The plan also intends to provide a level of certainty to investors to enable them to plan for participation in upcoming competitive tenders and improve the likelihood of receiving high-value submissions.

LTES agreements will be available to projects that are located within or outside of a REZ, but projects located outside a REZ but must show 'outstanding merit'.



Tenders for LTES agreements in respect of generation infrastructure projects are scheduled to occur biannually over the next 10 years, with an indicative targeted volume of 500 to 2,700 GWh of electricity per year to be delivered by projects from each tender.



LTES agreements explained

LTES agreements are option contracts intended to encourage investment in NSW by providing minimum cash flows for generation, long-duration storage or firming projects in the event of unexpectedly low electricity prices.

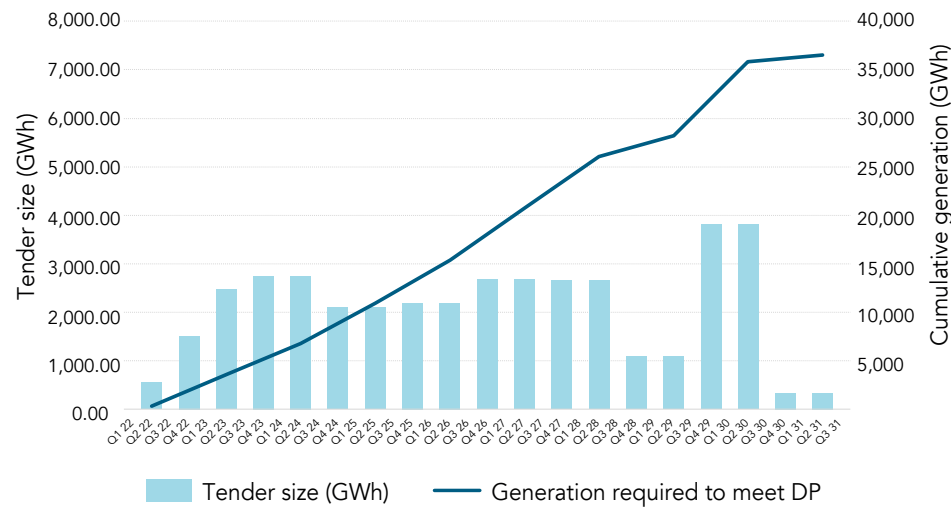
A project that is awarded a LTES agreement will have a fixed number of options to enter a derivative arrangement of a fixed duration during the contract term. The terms and conditions for LTES agreements will be different for each type of infrastructure.

The NSW Consumer Trustee will:

- award LTES agreements through competitive tenders (unless another procurement method is agreed with the scheme regulator).
- decide on the amount and timing for generation and long-duration storage capacity that is tendered.
- only conduct competitive tendering for firming LTES agreements if directed by the Minister in accordance with the EII Act.

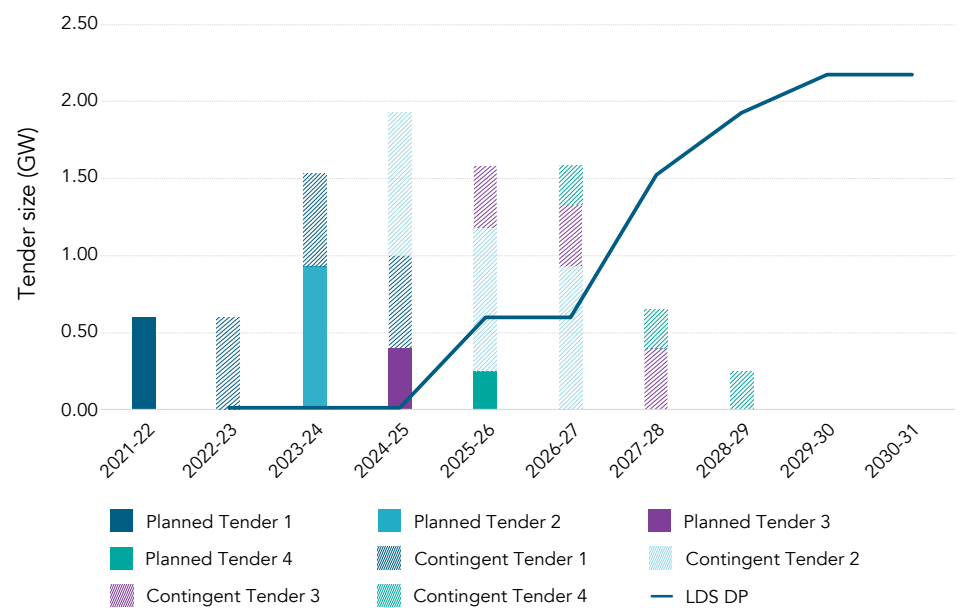


10-year plan for generation tenders



The tender schedule for long-duration storage projects is more flexible, reflecting the uncertainty around the prices and lead-times for these projects. Tenders are scheduled annually to FY29, though whether a tender proceeds – and its indicative size – will be contingent on the preceding tender(s).

10-year plan for long-duration storage (LDS) tenders



Contingent tenders (or contingent capacity) will only be offered where the NSW Consumer Trustee does not elect to fully subscribe the capacity that was planned to be recommended in the preceding tender(s).



Initial tenders

Scheduled to commence in Q2 2022 and Q4 2022, the first two tenders for generation projects are smaller than subsequent tenders to build market understanding and refinement of competitive tenders in the early rounds.

The first tender will also be open to long-duration storage projects.

The NSW Consumer Trustee will only recommend LTES agreements where it assesses that projects will deliver value to NSW consumers.

Notwithstanding, the NSW Consumer Trustee has indicated some volume for this first tender in recognition of two possibilities:

- 1) there may be projects under development outside anticipated REZ boundaries that were committed after 14 November 2019, and

- 2) there may be projects within those REZ boundaries that will connect to existing network infrastructure. Work is continuing on what, if any, access scheme fees will apply to such projects.

Next steps

How to participate in tenders

The NSW Consumer Trustee intends to hold a pilot tender round for LTES agreements in Q2 2022. As part of this, we will seek high-quality bids from project proponents that demonstrate value for NSW electricity customers.

Competitive tenders will be conducted in accordance with rules made by the NSW Consumer Trustee, which will be published in early 2022 via the NSW Government Gazette.

Detailed information regarding participation in the Q2 2022 competitive tender round, including its opening date, selection criteria detail, and the procedure for making a tender bid, will be released via AEMO Services' website.

Develop network strategy early next year

Network augmentations will be critical to deliver a reliable power system with high penetration of variable renewable energy. As such, work will commence to update the IIO Report to reflect new information, including modelling in AEMO's 2022 Integrated System Plan and the Network Infrastructure Strategy prepared by the Energy Corporation of NSW (EnergyCo NSW).

Further, the NSW Consumer Trustee will work with EnergyCo NSW, NSW's electricity transmission business, TransGrid, and AEMO to plan for the optimised development of the NSW network.

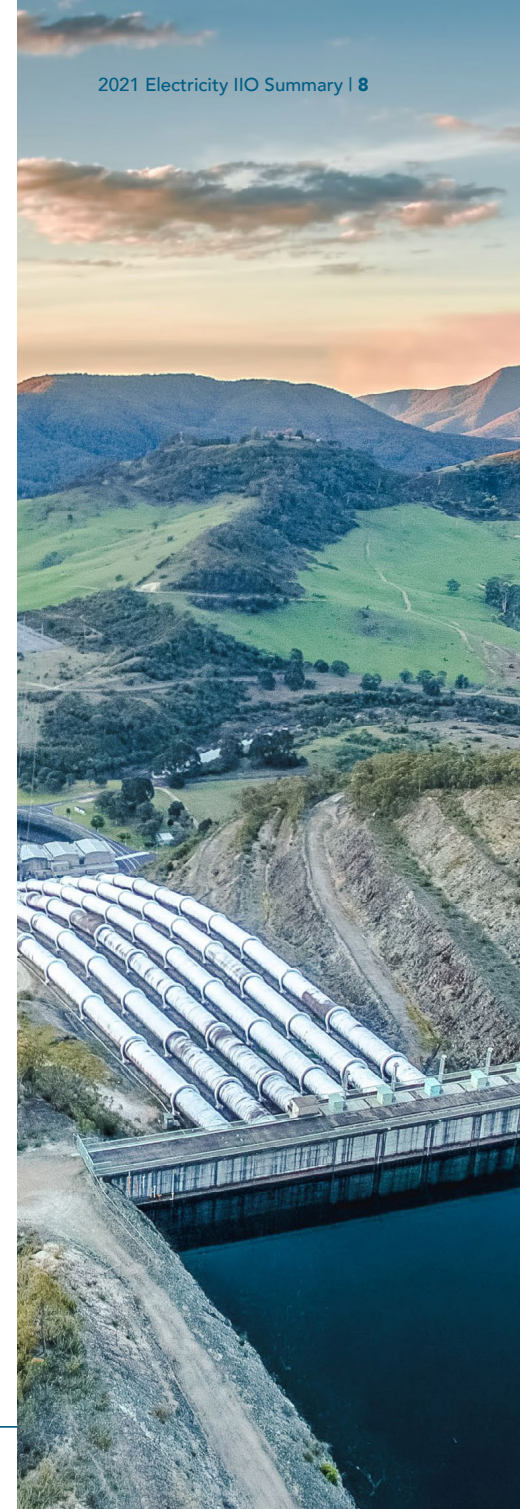
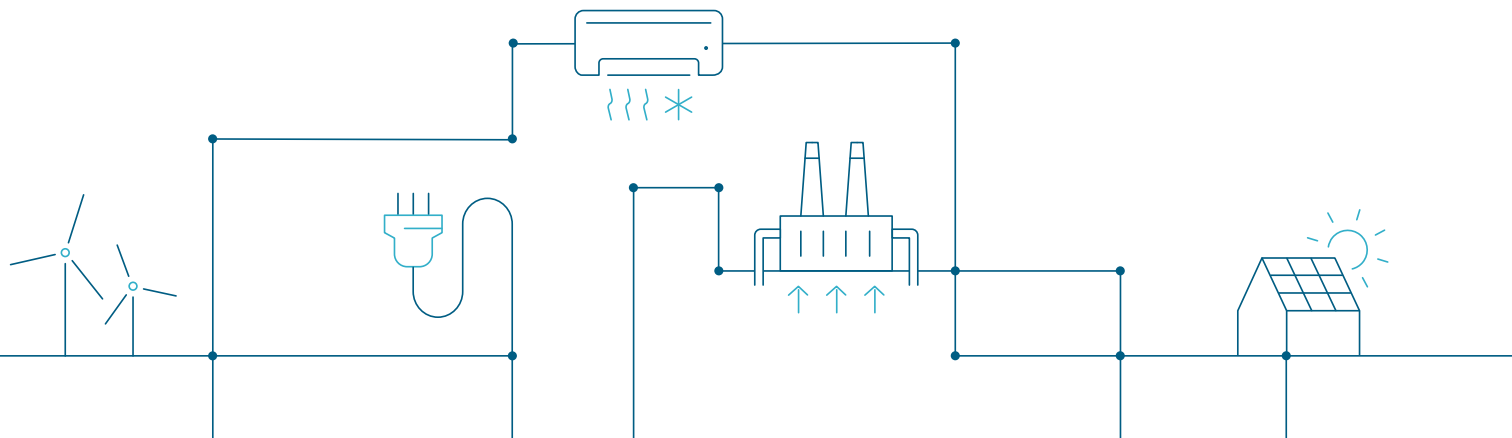
Feedback

The NSW Consumer Trustee is actively seeking feedback on its 2021 IIO Report to inform its preparation of future updates to the Development Pathway.

AEMO Services will host an online session to discuss the 2021 IIO Report on 7 December 2021.

You can register for the session on [AEMO Services' website](#).

Feedback on the 2021 IIO Report can be sent to iioreport@aemoservices.com.au until 31 January 2021.





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