Net Zero Commission

# Pathways Call for Evidence Submission

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31 July 2026

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**NSW DNSP response to NSW Net Zero Commission's Call for Evidence**

Ausgrid, Endeavour Energy and Essential Energy, together the three NSW Distribution Network Service Providers (**DNSPs**), appreciate the opportunity to provide feedback to the NSW Net Zero Commission's Call for Evidence Paper (the **Paper**).

We support the NSW Net Zero Commission's (the **Commission**) important role in monitoring, reviewing and advising on progress towards NSW's emissions reduction objectives. The electricity distribution network will be central to achieving those objectives in a way that is practical, affordable and equitable for customers across NSW. As the connection point between the broader electricity system and households, businesses and communities, distribution networks are increasingly where the energy transition is being delivered in practice.

To support this call for evidence, the DNSPs provide the Distribution System Plan (**DSP**) Opportunities Report, at **Attachment A**, as the primary evidence base for this response. The DSP Opportunities Report was jointly developed by the three NSW DNSPs and provides a coordinated, bottom-up assessment of the role distribution networks can play in supporting NSW's energy transition. It is designed to complement existing transmission and system planning processes by providing more granular insight into distribution network capacity, customer behaviour, consumer energy resources (**CER**), local demand growth and the opportunities to better integrate these factors into whole-of-system planning.

The DSP Opportunities Report aligns closely with the Commission's work, focusing on practical opportunities to support NSW's net zero pathway while reducing cost pressure for households and businesses, de-risking the timely delivery of renewable energy targets and improving social licence and transition equity. It estimates that unlocking distribution-level opportunities across NSW could deliver between **$2.0 billion and $4.3 billion** in economic benefits across modelled scenarios. These benefits arise from better utilisation of available distribution network capacity, improved coordination of CER, electrification of transport and household appliances, distribution-connected generation and storage, and more localised energy solutions.

DNSPs have published technical information and spreadsheets to support analysis within the Report.[1] We draw the Commission's attention to Appendices B, F and G, which provide additional context and information relevant to the questions in the Paper. We would also be happy to meet with Commission staff to discuss the DSP modelling work in more detail.

Beyond the recommendations of the DSP, we encourage the Commission to continue its focus on pathways to decarbonisation in two main areas.

[1] NSW Distribution System Plan – Opportunities Report webpage

**Large electrification opportunities exist within our networks**

Significant opportunities exist across NSW to replace fossil fuels generating stationary emissions across commercial and industrial processes with electric technologies. These opportunities extend across manufacturing, food and beverage processing, agriculture and other industries located within distribution network areas. Most businesses in these sectors have individual emissions footprints that do not meet the threshold for inclusion in the Commonwealth's Safeguard Mechanism; collectively, however, non-Safeguard facilities account for around a third of NSW's industrial emissions[2]. Commercially available solutions include electro-thermal energy storage (**ETES**), heat pumps, electric boilers, and electric water pumping. However, as the Commission's 2026 Progress Report recognises, deployment of many of these technologies is not occurring at the scale needed to support NSW's emissions reduction objectives. Some technologies, such as ETES, are technically mature and commercially available but not yet compelling to deploy from a commercial payback perspective. Other technologies, such as agricultural electric pumps, are mature commercially and technically, and often have short payback periods, but are yet to substantially displace legacy diesel assets.

Large upfront capital costs and unfamiliarity with available technologies inhibit accelerated take up of available electrification technologies. Targeted support for feasibility studies, engineering and design, commercial trials and capital costs help bring forward viable projects and avoid ageing fossil fuel equipment being replaced with new fossil fuel assets that remain in service for decades. Incentives for load shifting to low carbon, low demand periods within new and existing NSW Government policies, such as the NSW Energy Savings Scheme and the Peak Demand Reduction Scheme, can be strengthened to help send market signals that will accelerate electrification.

Electrification can also provide broader system benefits when new loads are connected and managed efficiently. For example, flexible industrial processes using technology such as ETES can operate when renewable generation is abundant, grid emissions are low, and spare network capacity is available. This can reduce emissions associated with existing business processes, make better use of existing distribution assets and spread largely fixed network costs across greater electricity demand.

We agree with the Commission that a key focus area for the NSW Government should be to consider policy arrangements which could accelerate the adoption of flexible electric technologies among commercial and industrial businesses in NSW, including by helping businesses understand and adopt electric options and reforming existing schemes to reduce financial barriers. This would help ensure business electrification contributes to emissions reduction, regional economic development, grid reliability and customer affordability. The NSW DNSPs also note that we have limited access to data on fossil fuel supply and use. This inhibits our ability to plan and prepare for a least cost transition that supports our customers to electrify.

**CER and demand flexibility will be increasingly important to enable NSW's energy transition**

The NSW DNSPs are observing continued growth in CER, including rooftop solar, household batteries, electric vehicles and emerging vehicle-to-grid capabilities. Together, these technologies present a significant opportunity to support NSW's emissions reduction objectives while improving customer participation in the energy transition. As renewable generation increases across the electricity system, CER can help provide flexible demand, local storage and additional hosting capacity that supports more efficient utilisation of both transmission and distribution infrastructure.

However, a number of barriers continue to limit the full value that CER can provide to customers and the broader energy system. These include uneven access to technologies due to upfront costs,

[2] Net Zero Commission, 2026 Annual Progress Report (NSW Government, July 2026), p 86.

limited awareness of available opportunities, barriers to participation for apartment residents and renters, and market arrangements that do not always provide clear incentives for customers to offer flexibility services. An additional challenge remains in accurately accounting for greenhouse gas emissions reductions or avoidance from the increased uptake of CER and shared energy solutions, particularly in how this impacts broader emission factors for the grid.

Community batteries and other shared energy solutions may provide an important pathway for improving access to the benefits of the transition for customers who are unable to install their own distributed energy resources. Local energy precincts (**LEPs**), such as Endeavour Energy's Illawarra Renewable Energy Zone[3] and Ausgrid's Community Power Networks[4], are designated areas within the distribution network that will capitalise on available rooftops and other available land to generate local energy, supported by local storage. LEPs accelerate the deployment of CER in a local network area that both produces and consumes clean energy. Surplus energy generated within the LEP – typically the middle of the day – is stored in batteries to meet demand during non-generation periods. Surplus energy can be exported to the wider NSW network, lowering energy costs for all customers.

The Commission may wish to consider the role that demand-side participation, flexible exports, coordinated electric vehicle charging and community-scale energy solutions can play in future pathway modelling. These resources have the potential to complement large-scale investments in generation, transmission and storage while supporting affordability, reliability and more equitable participation in the transition. NSW DNSPs consider that improved visibility and coordination of CER, as outlined in the attached DSP Opportunities Report, can help unlock substantial value for customers and contribute to a more efficient and resilient electricity system.

**Conclusion**

The NSW DNSP's can be a critical enabler of NSW's net-zero trajectory. By harnessing distribution-level hosting capacity, electrifying industrial and residential heat and coordinating new electric loads with renewable supply and through increased EVCI provision, NSW can achieve faster abatement, lower energy bills and greater regional economic participation in the clean-economy transition.

If the Commission has any questions in relation to this submission, please contact:

- Ausgrid: Simon Moore, Senior Policy Advisor at [redacted]
- [redacted]
- [redacted]

Yours sincerely,

[redacted]

[3] https://www.energyco.nsw.gov.au/our-projects/illawarra-rez

[4] https://www.aer.gov.au/system/files/2025-08/Ausgrid%20-%20Community%20Power%20Networks%20Proposal%2030%20July%202025.pdf