NSW Net Zero Commission

Submitted online.

31 July 2026

NSW Decarbonisation Pathways

The Australian Energy Council ('AEC') welcomes the opportunity to make a submission to the NSW Net Zero Commission's ('Commission') consultation on its *NSW Decarbonisation Pathways*.

The Australian Energy Council is the peak body for energy retailers and generators operating in competitive markets. Our members generate and sell energy to over 10 million homes and businesses and are committed to delivering a reliable, affordable and decarbonised energy system for consumers. The AEC supports net zero by 2050 and recognises the electricity sector's role in reducing Australia's emissions. Our members are major investors in renewables, firming and storage technologies that are critical to ensuring customers continue to receive reliable and sustainable energy supply as we navigate the energy transition.

The Commission's 2026 Annual Report states that NSW is not on track to meet its interim emissions reduction targets and the NSW Net Zero Emissions Dashboard now projects 37-44 per cent emissions reduction by 2030, down from 46 per cent previously.

The Annual Report and Dashboard provide transparent and granular insight into NSW's decarbonisation trajectory and the assumptions applied. One reason for the Dashboard's revised projections is the use of a constrained scenario which reflects assessments of electricity reliability contained in AEMO's Electricity Statement of Opportunities. The AEC recommended this during the previous consultation as it better projects the current probable speed of transition.

In this call for evidence, the Commission has committed to developing sector-specific pathways to better track progress and inform policy development. For the electricity sector, where there is already a plethora of roadmaps and analysis, this may be a "reinventing the wheel" exercise.

The Commission should consider how its electricity sector pathway can add value to the analysis and data that is already out there, as well as mitigate the policymaking risks that come with siloed action.

Specifically, sector-specific pathways can result in political capital getting attached to meeting certain sectoral targets regardless of whether it represents the cheapest abatement option. One way to reduce this risk is to include a cost to abate curve or carbon value in the sector pathways so the Commission can retain vision over where abatement is most efficient.

Jurisdictional sector pathways carry additional risk for electricity because they often run against the economic design of the National Electricity Market ('NEM'). The NEM's interconnectivity allows the buildout of renewable resources to be localised to areas that best maximise their value, enabling a lower cost build for all electricity customers. Jurisdictional policies with fixed technology targets can detract from this advantage by limiting the ability of renewable resources to be deployed where they can operate most efficiently and cheaply for customers.

Level 13, 575 Bourke Street
Melbourne 3000
GPO Box 1823 Melbourne Victoria 3001

P +61 3 9205 3100
E info@energycouncil.com.au
W energycouncil.com.au

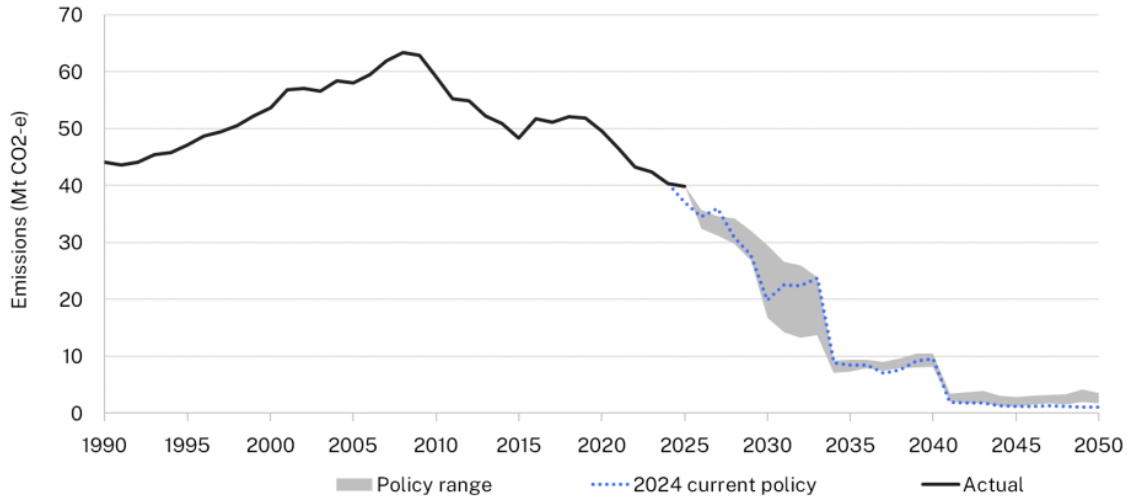
ABN 92 608 495 307
©Australian Energy Council 2026
All rights reserved.

The NEM recently underwent review and is now implementing reforms to integrate jurisdictional targets into its design via the Electricity Services Entry Mechanism ('ESEM'). The Commission should keep this front of mind when contemplating further policies to accelerate electricity decarbonisation.

Electricity sector decarbonisation is lumpy rather than linear

The NSW Net Zero Emissions Dashboard projected range of 37-44 per cent emissions reduction by 2030 primarily reflects a constrained versus successful delivery scenario of the NSW Electricity Infrastructure Roadmap. Even under the constrained scenario, electricity sector emissions are expected to decline by at least 53 per cent by 2030 and then 85 per cent by 2035. This "constrained" trajectory is captured in the dotted line in the figure below.

Figure 1: Electricity generation emissions as inventoried (1990 to 2023) with policy scenario emissions projection range (2024 to 2050)



Source: NSW DCCEEW, NSW Greenhouse Gas Emissions Projections 2025, p23.

As can be seen, electricity emissions are projected to starkly decline in lumps, first in 2029 when Eraring coal-fired power station is scheduled to close, and then in 2033-34, when Bayswater and Vales Point coal-fired power stations are scheduled to close.

The lumpy trajectory is because electricity is an essential service – coal-fired generation cannot be shut down until there is enough firmed renewable generation to replace it. This invariably creates complications for time-sensitive climate targets which are set according to political ambition rather than prevailing market and supply chain movements.

Although government subsidies through the Commonwealth Capacity Investment Scheme (CIS) and NSW Long-Term Energy Service Agreements (LTESAs) can bring forward capital investment, it is not entirely supplementary to "other" private investment because prospective developers do not want to compete against underwritten projects. This caution is especially enlivened due to the increasing costs of renewable equipment and other electrical infrastructure.

In any event, demand-side incentives are only half the equation. The other side is supply-side constraints which are the prevailing roadblock to faster renewable deployment in the near-term. These roadblocks include:

Level 13, 575 Bourke Street
Melbourne 3000
GPO Box 1823 Melbourne Victoria 3001

P +61 3 9205 3100
E info@energycouncil.com.au
W energycouncil.com.au

ABN 92 608 495 307
©Australian Energy Council 2026
All rights reserved.

- Supply-chain limitations on the complex equipment required to build and connect largescale renewables.
- Skill shortages, particularly with respect to electrical networks.
- Land-use resistance to the buildout of renewable generation and network infrastructure.
- Long and delayed approval and permit processes, complicated by tension between climate and environmental/biodiversity objectives.
- Even after receiving approval, longer than expected build times for connection assets, stabilisation equipment, system security services, long-distance transmission and pumped-hydro storage.
- Slow progress in developing the necessary tools to understand the complex phenomena resulting from deep penetration of inverter-based resources on a large electrical grid.

There are considerable policy efforts underway, both at the federal and state level, to resolve these constraints but it is not straightforward. It is probable then there will be slippage in the delivery of the NSW Electricity Infrastructure Roadmap's renewable generation and storage targets.

Further policy action should encourage market-based signals

While there may be political pressure to compel full delivery of the Roadmap, further government intervention will probably have little near-term effect other than increase transition costs. Studies already suggest that the NSW Roadmap is resulting in higher energy bills for NSW consumers.

To maintain public confidence, it is important that least-cost policy levers are used and these are best pursued through market mechanisms. The delivery of the NSW Roadmap should be carried out with consideration of the state's position within the NEM. The NEM Wholesale Market Settings Review, undertaken last year and now being implemented, is designed to encourage future market settings to promote investment in firmed, renewable generation and storage capacity to meet Australia's climate targets.

One area where market mechanisms could be improved is system security. System security has traditionally been provided by synchronous generation, namely coal. It is needed for the electricity grid to operate safely and Eraring's recent extension due to 2029 was partly due to shortfall concerns identified in AEMO's Transition Plan for System Security.

Current frameworks are placing reliance on networks procuring synchronous condensers over having market signals that allow competitive procurement between all technology options. This framework exists despite financeability and supply chain risks jeopardising the timely delivery of synchronous condensers, which ultimately slows down the energy transition and increases its cost. Transgrid, for example, has sought government underwriting support for up to $700 million in financing required to purchase five synchronous condensers.

The Commission should consider policy reforms that create investment signals for competitive, technology neutral procurement of system security services in NSW (and preferably across the NEM).

Consider how certificate schemes can be harmonised

In line with recognising NSW's place within the NEM, the Commission should consider the efficiency of the growing number of jurisdictional energy certificate programs. In NSW, there is the Energy Savings Scheme (ESS), Peak Demand Reduction Scheme (PDRS), and Renewable Fuel Scheme (RFS). There are similar retail certificate schemes in Victoria and South Australia, which

Level 13, 575 Bourke Street
Melbourne 3000
GPO Box 1823 Melbourne Victoria 3001

P +61 3 9205 3100
E info@energycouncil.com.au
W energycouncil.com.au

ABN 92 608 495 307
©Australian Energy Council 2026
All rights reserved.

all sit underneath the various certificate obligations at the Commonwealth level (e.g. LGCs, STCs, ACCUs).

In NSW, the RFS is currently under policy review mainly due to the slow growth of green hydrogen, while the PDRS targets have been significantly scaled back in response to the Commonwealth's Cheaper Home Batteries Program (CHBP).

On the one hand, these policy responses are sensible and have avoided needless penalty costs that would impact electricity bills. On the other hand, it calls into question the efficacy of having so many certificate schemes and whether a harmonised, technology-neutral policy approach across jurisdictions could be taken.

For example, the August 2025 ECMC Communique stated that Ministers have endorsed "options for a National Renewable Gas policy". There has not been any meaningful public progression on this policy since then even though it represents a lower-cost pathway to incentivising renewables fuels and gases than the current patchwork framework. The Commission lending its support for its progress is a more durable policy solution than continuing to tinker with the RFS.

The electricity sector already has many decarbonisation roadmaps

Acknowledging that the Commission has already committed to developing sector pathways, it should consider how it will be different to the existing analysis to avoid simply "reinventing the wheel".

The most prominent roadmap in the electricity sector is AEMO's Integrated System Plan (ISP) which provides decarbonisation pathways for generation, storage and network investments to meet net-zero by 2050. Other roadmaps include the Commonwealth's Electricity and Energy Sector Plan, and the Climate Change Authority's (CCA) Sector Pathways Review Project (the CCA is also currently consulting on development of sectoral Reference Pathways).

Sitting behind these roadmaps is comprehensive technical analysis, namely AEMO's Electricity and Gas Statement of Opportunities (ESOO/GSOO), the Clean Energy Regulator's (CER) Quarterly Carbon Markets report, the AEC's Energy 2050 vision, and many others.

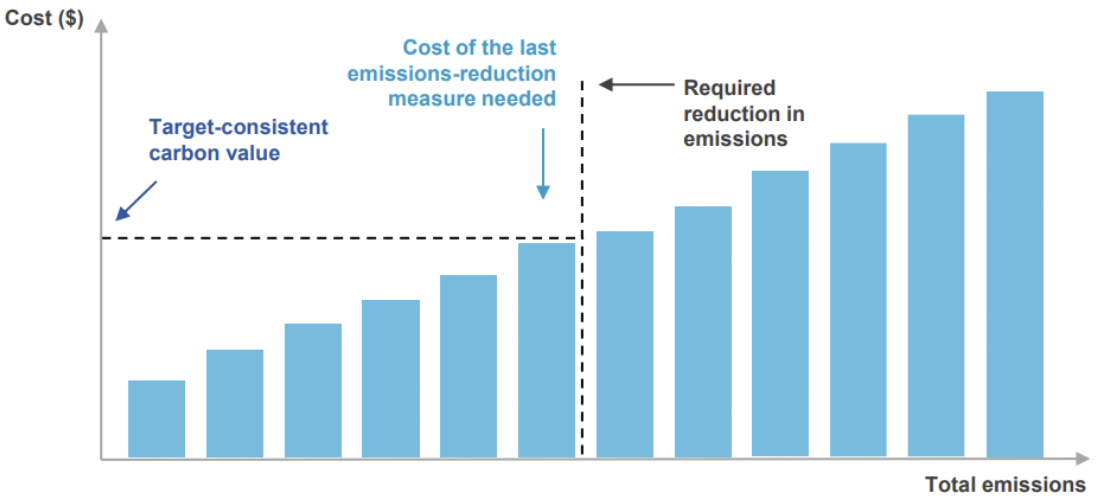
One value add the Commission should consider is incorporating a cost to abate curve or carbon value in the sector pathways to help identify where abatement is most efficient. The NSW Government already has a NSW Carbon Values methodology while the Productivity Commission illustrated how Target-Consistent Carbon Values (TCCV) can influence policymaking in its Five Pillars report last year.

Figure 2: Hypothetical intersection of an emissions target and a marginal abatement cost curve

Level 13, 575 Bourke Street
Melbourne 3000
GPO Box 1823 Melbourne Victoria 3001

P +61 3 9205 3100
E info@energycouncil.com.au
W energycouncil.com.au

ABN 92 608 495 307
©Australian Energy Council 2026
All rights reserved.



Source: Productivity Commission, Investing in cheaper, cleaner energy and the net zero transformation, p31.

Additional comments

- Future annual reports could be improved by using up-to-date emissions data. The current approach of using the National Greenhouse Accounts Inventory has a two-year time lag which affects the accuracy and timeliness of policy advice. It is also not practical going forward as stakeholders and the community will not accept waiting until the end of 2032 to know if the Government met its 2030 targets.
- If the sectoral pathways are not ready until mid-2027 then this leaves little time to influence the state's decarbonisation trajectory out to 2030. Noting how long it takes for policy recommendations to be drafted and implemented, their effect may not start until after 2030.
- There should be better collaboration across departments and agencies within NSW especially when it comes to climate and energy policy. For example, the ability to meet the NSW EPA's greenhouse gas mitigation policies requires navigating planning and approval frameworks, as well as other federal and state policies. This is creating confusing signals for decarbonisation that make abatement less efficient.
- As part of the response to the NEM Review, state jurisdictions agreed to clarify how greenhouse gas emissions targets apply to projects procured to provide firming services. There has been repeated messaging in AEMO's ISP that firming services are essential and needed to meet climate targets at lowest cost. Progressing this work should be a priority as it will help clarify investor signals and provide confidence in firming investment.

The AEC and its members would welcome the opportunity to further engage with the NSW Net Zero Commission as it develops its sector pathways.

Any questions about this submission should be addressed to Rhys Thomas, by email Rhys.Thomas@energycouncil.com.au or mobile on 0450 150 794.

Yours sincerely,

Rhys Thomas
Sustainability Policy Manager
Australian Energy Council

©Australian Energy Council 2026
All rights reserved.