

Department of Infrastructure, Transport, Regional Development, Communications and Arts
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Transport and Infrastructure Net Zero Consultation Roadmap

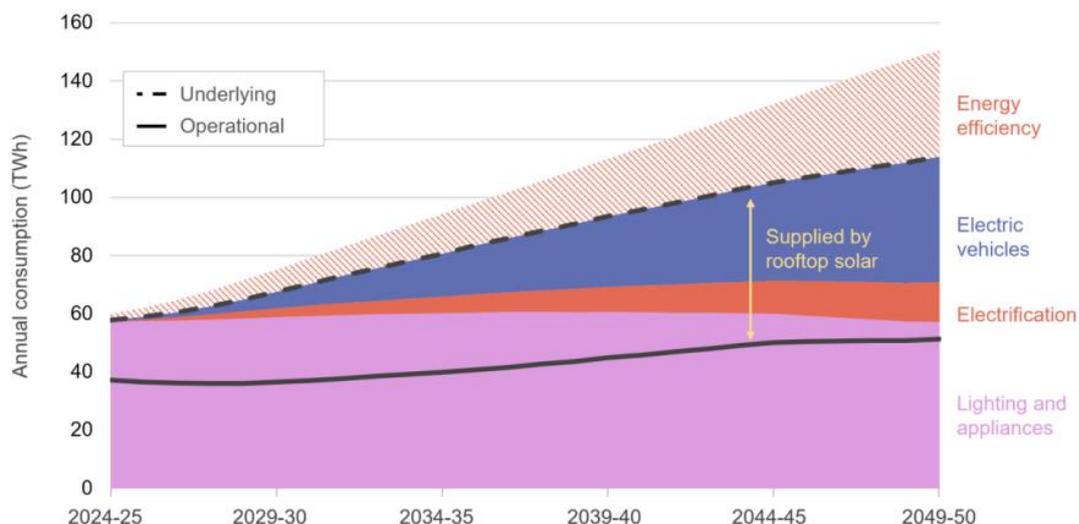
The Australian Energy Council ('AEC') welcomes the opportunity to make a submission to the Department of Infrastructure, Transport, Regional Development, Communications, and Arts (the 'Department') consultation on the *Transport and Infrastructure Net Zero Consultation Roadmap* ('Consultation Paper').

The Australian Energy Council is the peak industry body for electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. AEC members generate and sell energy to over 10 million homes and businesses and are major investors in renewable energy generation. The AEC supports reaching net-zero by 2050 as well as a 55 per cent emissions reduction target by 2035 and is committed to delivering the energy transition for the benefit of consumers.

The AEC has been involved in the development of the sector pathways to date, making submissions to the [agriculture](#) and [electricity](#) roadmap consultations, and the Climate Change Authority's sectoral pathway [review](#). A key theme from these submissions is the need for greater consideration of cross-sector impacts and how the respective pathways will be integrated together to form an economy-wide Net Zero Plan.

This "integration question" is especially pertinent here because the Department has said 'the primary method for reducing transport emissions will be through electrification, which is dependent on the decarbonisation of the electricity grid'. The electrification of transport will have substantial impacts on the electricity grid, with the figure below (taken from AEMO's latest Integrated System Plan) showcasing how starkly residential electricity consumption will increase due to the electrification of light transport and the role rooftop solar is expected to play to cover it.

Figure 1: Residential electricity consumption, NEM (TWh 2024-25 to 2049-50, Step Change)



Source: AEMO [2024 Integrated System Plan](#), p26.

For this scenario to materialise, there is a range of policy, regulatory, and technical reforms that need to be implemented well ahead of time, particularly within the electricity sector. This includes:

- Managing peak and minimum demand – effective and fair CER orchestration will be needed to ensure customers are not all charging their electric vehicles at the same time of the day. If this were to happen, the electricity grid would need to build significant capacity to meet peak demand, increasing costs of the transition. Likewise, there will still need to be enough synchronous, grid-connected electricity generation online at all times to maintain essential system security services. If the electricity transition becomes disorderly or too expensive, this might dissuade customers from purchasing an electric vehicle.
- Leveraging retailers to deliver CER orchestration – as the customer-facing actor in the electricity system, retailers will play an increasingly important role in helping customers manage and control their CER technologies. This will require some innovation in tariff reform to encourage behaviours like vehicle-to-grid charging and two-way price signaling to incentivise load shifting at different times of the day. The recently published [National Consumer Energy Resources Roadmap](#) will be important for identifying these reform areas.
- Speed of decarbonisation – the decarbonisation of light transport will depend not only on the rate of uptake of electric vehicles, but also how quickly the electricity sector transitions to a lower emissions grid. Promisingly, even at current emissions intensity levels, electric vehicles [produce](#) lower emissions compared to ICE vehicles. But meeting emissions targets, especially post-2030, will require a higher penetration of renewables than there is now.

With the timelines for the sector pathways being stretched out, there should be engagement with stakeholders between now and the second tranche of consultation about how these integration elements will be reflected in the final Net Zero Plan.

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,

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