

**Submission
No 71**

**INFRASTRUCTURE FOR ELECTRIC AND ALTERNATIVE ENERGY SOURCE
VEHICLES IN NSW**

Organisation: Endeavour Energy

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Parliament of New South Wales
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Endeavour Energy response to the Legislative Assembly Committee on Transport and Infrastructure Inquiry on infrastructure for electric and alternative energy source vehicles in NSW

Endeavour Energy appreciates the opportunity to provide this response to the Legislative Assembly Committee (the Committee) on the Transport and Infrastructure Inquiry into infrastructure for electric vehicle (EV) and alternative energy source vehicles in NSW (the Inquiry).

Endeavour Energy is one of Australia's best performing electricity distribution network service providers (DNSP), powering Australia's third largest economy and sustaining jobs and lifestyles of 2.7 million Australians. The NSW Government is our biggest single shareholder and as such, Endeavour Energy seeks to partner with the NSW Government to achieve its climate positive position by 2040.

Net zero requires fundamental changes to the way we generate and use electricity. It requires new technology, investment and infrastructure and policy and regulatory reform, delivered quickly. The take-up of EVs is key to the energy transition and meeting the NSW Government's Net Zero Future emissions reductions targets. AEMO's 2024 Integrated System Plan forecasts 97% of all vehicles will be battery EVs by 2050 under its most likely 'Step Change' scenario.

We consider that all customers stand to benefit significantly from EV ownership and electrification more broadly by better utilising existing capacity within distribution networks to put downward pressure on electricity bills. By way of illustration, the CSIRO, in partnership with Energy Consumers Australia (ECA), notes¹:

Electric vehicle ownership is expected to be the largest cost saving from 2030 at around \$1400 a year.

In its associated "Stepping Up" report, the ECA recommends structural policies to enable change to make sure all households can electrify and obtain these benefits. Specifically, the ECA recommends that government²:

Improve access to low-cost EVs and charging infrastructure, particularly for those who face barriers to charging their EV at home. As highlighted in the modelling in the accompanying Technical Report, encouraging the switch from petrol or diesel vehicles to EVs will provide the most value in terms of individual household benefits for all electricity consumers.

Accessible and affordable EV charging infrastructure (EVCI) with both slow and fast charging options will be a critical enabler for EV take-up. To enable this to occur, we recommend relatively simple regulatory reforms which would minimise customer costs, expedite delivery time frames and improve access and

¹ CSIRO & Dynamic Analysis, Consumer impacts of the energy transition: modelling report, July 2023, page vi (accessible online at <https://publications.csiro.au/publications/publication/Plcsi:EP2023-0538>).

² Energy Consumers Australia, Stepping Up – A smoother pathway to decarbonizing homes, August 2023, page 19 (accessible online at <https://energyconsumersaustralia.com.au/our-work/research/stepping-up>).

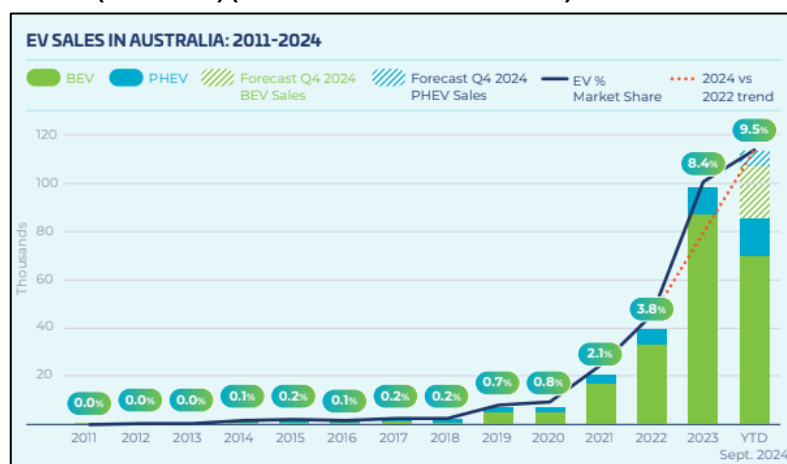
equity for all NSW electricity customers. We have provided further details, including relevant background context, below.

The public EVCI rollout in NSW, and Australia, is lagging other developed counties and not meeting the expectations of customers

There has been a remarkable surge in the adoption of EVs worldwide in recent years. Several factors are driving this trend, including customer concerns about climate change, advancements in battery technology which is lowering costs, governments offering financial incentives and vehicle manufacturers shifting their focus to produce more EV models.

The EV market has been gradually expanding in Australia, despite a slow start. Sales of electric vehicles have been increasing, albeit from a relatively low base compared to other developed countries, such that EVs now account for 9.5% of all new car sales in Australia, marking an increase from 8.4% in 2023 and a 150% increase in market share compared with 2022. This is illustrated in **Figure 1** below.

Figure 1: EV Sales in Australia (2011 - 2024) (Source: Electric Vehicle Council)



Australia faces unique challenges which risk hindering widespread EV adoption. These include limited charging infrastructure and concerns about range anxiety, particularly in the context of Australia's vast geography and long distances between cities. Addressing these challenges is likely to involve investment in expanding the national charging network and increasing the amount of local public charging sites.

These challenges were also highlighted in a recent behavioural study we commissioned regarding customer impediments to purchasing an EV, which found that:

- 30% of customers in Western Sydney are open to purchasing an EV for their next vehicle (in-line with the national average); and
- of the remaining portion of hesitant customers (i.e. those not likely to purchase an EV as their next vehicle), the main reasons for not purchasing an EV included: limited driving range, inadequate public charging options and inability to install an EV charger at home (i.e. no available off-street parking), as well as cost and cybersecurity concerns.

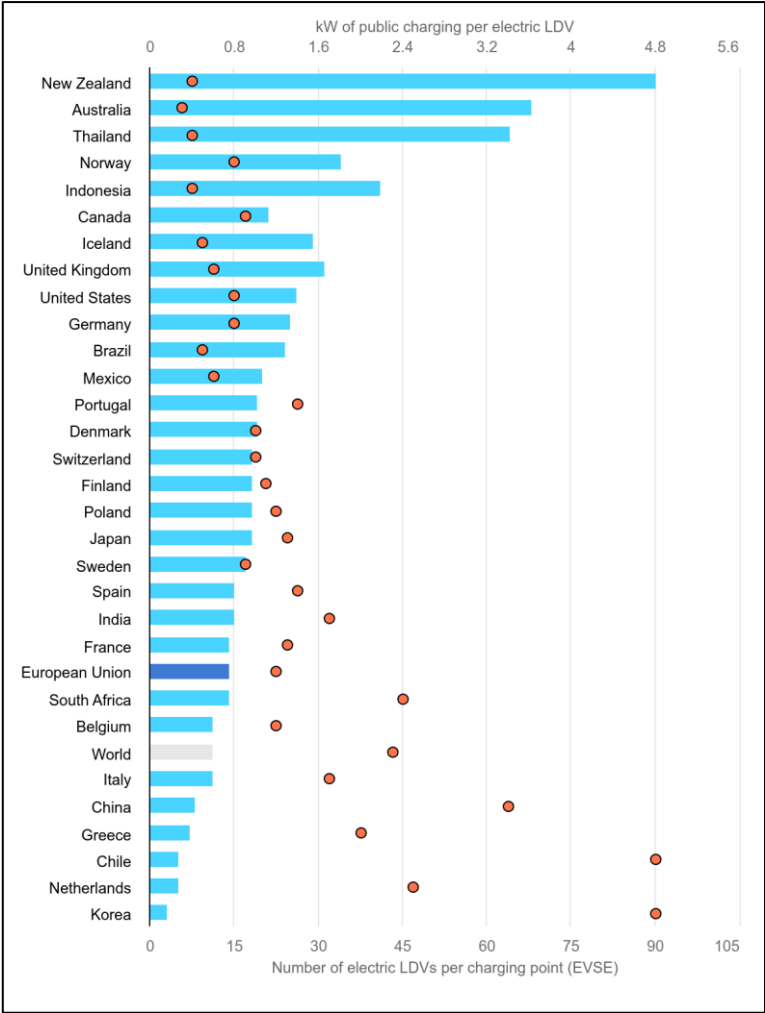
When asked specifically about whether they thought there were enough charging stations to support EV ownership, respondents overwhelmingly agreed and similarly indicated they would be more likely to purchase an EV if there were to be more convenient and easily accessible public charging infrastructure.

In light of this, it is concerning that Australia ranks poorly relative to other countries in terms of EVs to EV charging points, and total charging capacity per EV, as illustrated in Error! Reference source not found. below. Consistent with the concerns of potential EV customers in Australia, this suggests that there is insufficient public charging infrastructure.

We therefore encourage Governments to continue to support growth in public charging infrastructure, with a particular focus on opportunities to provide charging opportunities to Australians without access to off-street parking and those living in multi-storey buildings. In particular, we note that the EV kerbside charging

grants co-funded by the NSW Government represents a positive step towards improving access to reliable EV charging to NSW residents, and we encourage the expansion of this scheme working in conjunction with a flexible delivery model which would allow DNSPs to lend their resources and expertise to support a scaled deployment at low cost.

Figure 2: International comparison of public charging facilities (Source: IEA - Global EV Outlook 2024)



Endeavour Energy and the NSW DNSPs can rollout kerbside EVCI faster, more equitable and at lower cost across NSW to accelerate the transition to EVs

Endeavour Energy and the NSW DNSPs have been in discussions with the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) to accelerate the EVCI rollout in NSW via a DNSP-led approach for kerbside charging. This follows a recommendation in the National CER Roadmap released by Federal DCCEEW to redefine roles for market options, including to:³

Define the role of DNSPs to achieve equitable two-way market operations, including in owning/operating community batteries and kerbside EV chargers, and other distributed resources.

Similarly, the NSW Consumer Energy Strategy examined options to accelerate the rollout of EVCI in NSW and included a recommendation to investigate opportunities for DNSPs to deliver kerbside EVCI, noting:⁴

³ National Consumer Energy Resources Roadmap – Powering Decarbonised Homes and Communities, July 2024, page 21 (accessible online at <https://www.energy.gov.au/sites/default/files/2024-07/national-consumer-energy-resources-roadmap.pdf>).

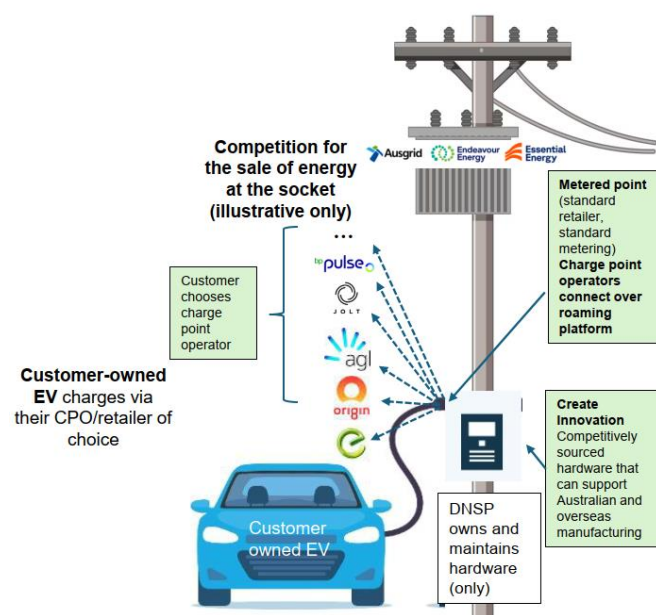
⁴ NSW Consumer Energy Strategy – Powering our people and communities, September 2024, page 58 (accessible online at https://www.energy.nsw.gov.au/sites/default/files/2024-09/NSW_Consumer_Energy_Strategy_2024.pdf).

Distribution networks can have a role to play in supporting this roll-out. They already own the power poles on our streets and have the knowledge of where EV charging infrastructure can be most efficiently integrated into the electricity network. They also have teams out in the community to provide maintenance and support for infrastructure. However, current legislation prevents them from owning kerbside chargers.

We will work to identify opportunities to facilitate the delivery of kerbside charging infrastructure by distribution networks where appropriate to speed up the roll out of kerbside EV chargers. We want to ensure growth in the EV charging market and will work with charging providers to ensure any outcome promotes competition in the market.

Endeavour Energy, along with our peer NSW DNSPs, support investigating this opportunity and have developed a model that preserves and promotes competition in the market for provision of EV charging services. This would be achieved by limiting the role of Endeavour Energy to owning and maintaining the EVCI hardware while providing an open platform for retailers / charge point operators (CPOs) the ability to sell energy (i.e., EV charging) at the socket. The model is pictured below:

Proposed DNSP-led EVCI kerbside charging model



Endeavour Energy believe a DNSP-led model can deliver better outcomes for customers, including:

- **Least cost:** NSW government grants for kerbside charging indicate an installation cost of up to \$18,000 per port. Through our significant scale and scope efficiencies, we have proposed a rollout at an approximate cost of \$6,000-8,000 per charger to the NSW Government. Our relatively low cost of capital and ability to recover these costs over a large customer base (noting alternate cost recovery options are under consideration) can substantively reduce the price of public EV charging for NSW EV owners and improve the value for money for the NSW Government and, as a result, all tax payers.
- **Diversified:** A rollout of EVCI that is concentrated on more demand intensive options such as DC fast charging may require more costly network upgrades that will either increase EV charging costs and/or network electricity charges. Ensuring there are a broader range of EV charging options across our network will make better use of existing network hosting capacity and reduce the risk of more costly network upgrades being required.
- **Faster rollout:** To date, we have been working with third parties to rollout EVCI. This has been slow paced and we consider our large workforce and coverage will allow us to roll out many more EV chargers per week across our franchise area from project commencement.

- **Equitable rollout:** To date, the rollout has focussed on commercially viable locations with higher EV ownership (i.e., wealthier suburbs). A DNSP rollout would allow the NSW Government to target lower socio-economic, rural, high rental or dense locations with limited home charging access (or some combination of these criteria) to ensure all customers have access to EVCI and the benefits at a competitive cost to home charging.
- **Promote competition and expand existing charger networks:** Kerbside EVCI is one part of a larger mix of EVCI options that could be accelerated. Through installing and maintaining the EVCI, we could provide retailers and CPOs open access to operate several thousand EV chargers. This provides a significant opportunity CPOs to expand their existing networks and offerings across NSW, in turn enabling retail competition to drive innovation, transparency and lower prices in EVCI service offerings.
- **Encourage Australian manufacturing:** Our procurement practices will mean multiple manufacturers and technologies will be relied upon at scale creating competition at both ends of the supply chain. In addition, the NSW Government could specify a percentage of the deployed chargers to be locally sourced, in turn stimulating the local manufacturing market and workforce and ensuring those chargers are deployed at scale and in line with national and state metering regulations.
- **Reliable:** EV charger uptime is critical to promoting public confidence in EVCI and therefore deciding to make the switch to EVs. Endeavour Energy has extensive and proven experience as high-quality asset managers. We currently manage several million assets across Greater Western Sydney, the Blue Mountains and Illawarra with a 24/7 workforce to a high standard; on average our network is available 99.98% of the time per annum. Our workforce is on the ground rain, hail or shine, ensuring a high level of service.
- **Grid support:** With the NSW Government's plans to implement an emergency backstop for solar, providing DNSPs with the ability to improve solar export management through EVCI locations near solar can enable the government and AEMO to better manage energy security events. For example, EVCI proximate to residential solar can offset the need to trigger a minimum demand event and can mitigate the need to augment a network due to higher solar uptake.

As noted above, the NSW DNSPs have previously proposed to a DNSP-led model for kerbside EVCI to the NSW Government. This model would involve the NSW DNSPs owning and operating the hardware will preserving and promoting competition in the retailing of EV charging stations to the contestable market.

A DNSP-led EVCI hardware replacement, maintenance and reliability model would be fully regulated through existing DNSP functions removing volatility and lack of regulation from that component of the value stack. It would provide greater cost transparency, consultation and control and allow for service quality and/or standards to be more readily imposed as per the existing services we provide.

Endeavour Energy is a reliable asset manager meaning there is a far lower risk of supplier insolvency and/or asset stranding. Our rollout can also be conducted in a more equitable manner to promote public confidence. Our involvement is limited to EVCI on our network infrastructure, which only represents a portion of total EVCI. We have a proven track record of procuring diverse technology types from multiple manufacturers through our well-established procurement practices. Our installation and maintenance of kerbside network attached EVCI provides several thousand devices for EV service providers to access and make use of to offer EV charging to customers on a contestable basis, thereby promoting rather than restricting competition.

Regulatory reforms are required to enable DNSP timely and efficient provision of EVCI

Endeavour Energy, along with other DNSPs, requested the AER classify kerbside-EVCI as a distribution service for the current regulatory control period (FY25-29). However, the AER were unwilling to do so in the absence of a regulatory obligation for DNSPs to provide this service. Therefore, our involvement would require ring-fencing approval from AER. We note that some Victorian DNSPs (Citipower, Powercor and United Energy) have applied to the AER for a ring-fencing waiver to deploy 100 kerbside EV chargers (in partnership with an unregulated third party). Despite the proposal having no bill impact on network customers this application has taken 5 months to publish and a final decision is expected to be made 9 months after the application was submitted.

Our concern is that the ring-fencing waiver process is ill-suited to the speed and certainty required for DNSPs to rollout EVCI at any meaningful scale. It also positions the AER as having to make decisions on public EVCI that may be more suited to policymakers. An alternate pathway is for regulatory reforms to be made in NSW to allow for a DNSP led rollout of kerbside EVCI. This pathway would more readily achieve NSW Government policy aims while ensuring the AER could still perform its regulatory functions of assessing the efficiency and prudence of any expenditure proposed by Endeavour Energy.

We would be happy to discuss the matters in our submission further. If that would be of assistance, please contact Patrick Duffy, Manager Regulatory Transformation and Policy at Endeavour Energy via email at [REDACTED]

Yours sincerely

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