Submission No 28

INFRASTRUCTURE FOR ELECTRIC AND ALTERNATIVE ENERGY SOURCE VEHICLES IN NSW

Organisation: Energy Consumers Australia

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Submission to the Inquiry into infrastructure for electric and alternative source vehicles in NSW

Submission to the Legislative Assembly Committee on Transport and Infrastructure

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Summary

Energy Consumers Australia (ECA) appreciates the opportunity to provide input to the Inquiry into infrastructure for electric and alternative energy source vehicles in NSW. We encourage the Legislative Assembly Committee on Transport and Infrastructure to consider that public electric vehicle charging infrastructure (EVCI) is essential to support the uptake of electric vehicles (EVs) and to provide significant energy cost savings for all electricity consumers, including those who do not own an EV. Any policy, however, must take into account the diversity of consumer circumstances. ECA has the following key recommendations for the Committee, summarised from our submission.

Recommendation	Page details
Public EV charging infrastructure must cater for diverse cohorts of consumers. A large number of Australian households either don't have off-street parking, or if they do, they don't have easy access to electricity where they park. Public EV charging can enable these consumers to buy and easily charge their cars. These cohorts of consumers (renters, apartment dwellers, and regional and rural communities) are likely to be more reliant on public chargers, and this factor must be thoroughly considered when planning EV charging infrastructure.	4
There is a need to increase the amount and reliability of public high power EV charging stations, along with a clearer definition of the roles and responsibilities of all parties involved in providing and maintaining this critical infrastructure. Convenient access to public fast-charging infrastructure is essential to support EV uptake and alleviate most of the barriers to EV adoption and usage. While we commend the expansion of the public EVCI network, several issues currently affect the reliability of charging stations.	5
ECA is launching a stakeholder process to define the roles and responsibilities for EV charging and intends to work closely with the NSW Government. ECA is in the early stages of undertaking a stakeholder process to outline the roles and responsibilities for public EV charging in the best way for the Australian consumer and intends to work closely with the NSW Government on this project.	6
Government funding has been essential in supporting EV uptake, but all tiers of government have a role to play, especially while the public EV charging market remains immature. Electric vehicle adoption and the availability of public chargers is an ongoing dilemma within the EV space. While support at the state government level is essential, we also believe that EVCI rollout could benefit from increased involvement from local councils.	6
It may be appropriate to alleviate ring-fencing arrangements through trial waivers in some circumstances to test their impact. ECA supports DNSPs using trial waivers and regulatory sandboxes to test whether easing the ring-fencing restriction of DNSPs owning EV infrastructure forms part of the appropriate mix of a public EV charging rollout.	7

Introduction

ECA welcomes the opportunity to provide input to the Inquiry into infrastructure for electric and alternative energy source vehicles in NSW. As the national voice for residential and small business energy consumers, ECA advocates for a future Australian energy system that works for, and benefits, the households and small businesses that rely on it.

EVs offer perhaps the greatest opportunity for consumers in the energy transition by significantly reducing their energy costs. Our Stepping Up Report shows that by 2030, households who own an EV will save \$1,440 per year, compared to \$330 for all electricity consumers.¹ A CSIRO modelling —which ECA commissioned— also suggests that the uptake of EV will reduce electricity bills for all consumers, not just those who made the switch.² The reason for this is that, currently, electric cars tend to be charged at times of low energy demand,³ resulting in better network utilisation. As we highlighted in our submission to the 2024 Inquiry into the transition to electric vehicles,⁴ this is well-evidenced in California,⁵ where additional EVs have increased demand for electricity without significantly increasing the need for additional local grid infrastructure, which reduces the unit cost of the network. With around 31% of households being renters,⁶ EVs may present a more accessible option for those unable to participate in stationary electrification, provided that they have convenient access to charging infrastructure, ultimately leading to cost savings for everyone.

It should be noted that EV charging will have to be planned carefully to ensure that consumer benefits are fully unlocked, and without putting our power system at risk. This is particularly important as the 2024 Integrated System Plan (ISP) Step Change scenario assumes that in 2030 there will be 18 times more electric vehicles on the road than today, and that 97% of all vehicles will be battery EVs by 2050.⁷ Similarly, the Draft 2025 IASR goes as far as to forecast that the total number of electric vehicles could range from 15 to 26 million by 2050.⁸

Therefore, ECA is supportive of government policies that enable all NSW residents to access the benefits of electric vehicles and deliver good outcomes for consumers. ECA noted that some distribution network service providers (DNSPs), notably those in NSW, have expressed a desire to play a more prominent role in the ownership of public EV charging, offering outlines of the roles they could play in helping accelerate the rollout of chargers. We believe that there are multiple roles and responsibilities in supplying public electric vehicle charging, and we have recently launched a stakeholder process to most effectively determine these roles. We intend to collaborate with the NSW Government and other relevant stakeholders to clarify these roles and to ensure that there is equitable access to public charging infrastructure.

We strongly believe that an EV transition will be equitable only if all consumers are able to conveniently charge their EV, which requires a public EV charging network that prevents certain community segments and demographics from being excluded.

¹ Energy Consumers Australia, 2023 – <u>Stepping Up Report</u> p. 12

² CSIRO, 2023 – <u>Consumer impacts of the energy transition: modelling report</u>

³ CSIRO, 2023 – Electric vehicle projections 2023: update to the 2022 projections report

⁴ Energy Consumers Australia, 2024 – <u>Submission to the Inquiry into the transition to electric vehicles</u>

⁵ NRDC, 2022 – Electric Vehicles Are Driving Electric Rates Down

⁶ Australian Bureau of Statistics, 2024 – Home ownership and housing tenure

⁷ AEMO, 2024 – Integrated System Plan p. 50

⁸ AEMO, 2025 – <u>Draft 2025 Inputs, Assumptions and Scenarios Report p. 88</u>

As electric vehicle adoption grows, consumers will expect to be able to conveniently charge their electric vehicles. Building a robust network of fast EV charging is essential – not only to meet and support demand, but also to reduce "range anxiety", which remains a meaningful contributor to consumers reluctance to invest in an electric car.⁹

While public charging infrastructure is expanding, with 294 fast and ultra-fast public charging locations available in NSW,¹⁰ a balance must be found between insufficient and excessive public charging infrastructure to maximise consumer benefits while ensuring optimal charger utilisation rates.¹¹



Ratio of EVs to EV chargers in Australia and in more mature markets. 12, 13, 14

Recommendations

1. Public EV charging infrastructure must cater for diverse cohorts of consumers.

There are still a number of barriers that hinder EV usage and adoption, and many consumers find themselves locked out because of their living and/or financial circumstances. A large number of Australian households either don't have off-street parking, or if they do, they don't have easy access to electricity where they park. Previous research reveals that 32% of Australians identified the lack of charging points near their homes as a barrier to buying an EV.¹⁵ Additionally, 13% of Australians are

⁹ NRMA, 2024 – <u>Changing Gears: The road ahead for EV adoption in Australia p. 15</u>

¹⁰ Electric Vehicle Council, 2024 – <u>State of Electric Vehicles</u> p.21

¹¹ International Energy Agency, 2024 – <u>Trends in electric vehicle charging</u>

¹² Statista, 2024 - Number of light-duty electric vehicles per charging points worldwide in 2023, by selected countries

¹³ Sustainability by Numbers, 2023 – <u>Which countries have 'enough' public chargers for electric cars?</u>

¹⁴ Korea Herald, 2025 – Korea has one charger for every 1.7 electric cars

¹⁵ CPRC, 2022 -- The barriers and potential enablers of electric vehicle uptake in Australia p. 5

unable to install charging infrastructure at their properties because they are renting, and 10% are unable to do so because they live in an apartment building.¹⁶ This means that they may need to rely on Level 1 charging, which involves plugging their vehicle into a standard wall outlet and is significantly slower.¹⁷

Further, 31% of renters in the private market and 21% renters in public or community housing and reported access to charging infrastructure as a barrier to buying an EV – a figure that drops to 4.5% for people who owned their place or were paying off their mortgage.¹⁸ Based on the Australian Bureau of Statistics 2021 Census of Population and Housing data, this means that out of the 9,8 million households recorded, 744,000 in the private market, 58,275 in state or territory housing, and 279,000 home-owning households, considered limited access to charging infrastructure a barrier to buying an EV.¹⁹ One solution is for these consumers to use public charging stations near their home or where they work.

While parking spaces in apartment buildings are not always equipped with individual power outlets,²⁰ further investigation is required to understand at a more granular level how many households would purchase an electric vehicle, if they were able to access a chargepoint near their home. This will help evaluate how large this problem is and therefore how many public chargers are needed and where they should be located.

Similarly, and while we commend the NSW Government's ambition to increase EV charging coverage, including in areas with limited off-street parking and along major highways,²¹ it is crucial to also account for consumers living in regional and rural areas. A 2022 study shows that about 40% of people living in regional and rural areas are concerned about EV range, compared to 26% for those living in urban areas.²² Regional and rural Australians also expressed concerns about the lack of charging infrastructure near their home (regional 37%, rural 39%) and about having access to charging infrastructure when traveling (regional 40%, rural 38%).²³

Public EV charging — both 'level 2' (AC) and 'level 3' (DC) — can enable these consumers to buy and easily charge their cars. Public EV charging can also help those who have not yet considered purchasing an electric vehicle recognise that the technology is available and at least as easy as refuelling at a petrol station. These cohorts of consumers (renters, apartment dwellers, and regional and rural communities) are likely to be more reliant on public chargers, and this factor must be thoroughly considered when planning EV charging infrastructure.

2. There is a need to increase the amount and reliability of public high power EV charging stations, along with a clearer definition of the roles and responsibilities of all parties involved in providing and maintaining this critical infrastructure.

Convenient access to public fast-charging infrastructure is essential to support EV uptake and alleviate most of the barriers we discussed above. While public charging infrastructure is expanding, with 294 fast and ultra-fast public charging locations available in NSW²⁴ and the first round of the NSW kerbside charging grant providing \$4.1 million for the installation of 671 charging ports,²⁵ efforts need to be

¹⁶ CPRC, 2022 -- The barriers and potential enablers of electric vehicle uptake in Australia

¹⁷ EVSE – <u>Navigating Electric Vehicle Ownership in Australian Apartments</u>

¹⁸ Ibid.

¹⁹ Australian Bureau of Statistics, 2024 – Home ownership and housing tenure

²⁰ EVSE – <u>Navigating Electric Vehicle Ownership in Australian Apartments</u>

²¹ NSW Government, 2022 – <u>NSW Electric Vehicle Strategy</u> pp. 21-22

²² Consumer Policy Research Centre, 2022 -- The barriers and potential enablers of electric vehicle uptake in Australia p. 6

²³ Ibid.

²⁴ Electric Vehicle Council, 2024 – <u>State of Electric Vehicles p. 21</u>

²⁵ NSW Climate and Energy Action, 2024 – Electric vehicle kerbside charging grants

maintained to ensure the network offers enough charging stations across the state. Further, research by the Electric Vehicle Council (EVC) shows that the availability of public fast charging points remains a major concern for consumers.²⁶ An other report from the EVC highlighted that "public high power EV charging is [...] not quite at the level of reliability that it needs to be".²⁷ Several issues currently affect the reliability of charging stations, and include equipment faults, difficulties to authenticate to the Charge Point Operator (CPO), power outages at the charging site,²⁸ and sometimes vandalism.²⁹

In Victoria, three distribution network services providers (DNSPs) — CitiPower, Powercor, and United Energy — have submitted a ring-fencing waiver application to the AER which would enable them to install and maintain kerbside electric vehicle charging infrastructure in their distribution areas.³⁰ In NSW, some DNSPs have expressed a similar desire to play a meaningful role in the ownership of public EV charging, particularly kerbside charging, offering outlines of the roles they could play in helping accelerate the rollout of kerbside chargers. However, there are multiple roles and responsibilities in supplying public EV charging, which may involve a number of players.

2.1. ECA is launching a stakeholder process to define the roles and responsibilities for EV charging and intends to work closely with the NSW Government.

ECA is in the early stages of undertaking a stakeholder process to outline the roles and responsibilities for public EV charging in the best way for the Australian consumer, and intends to engage with Australian regulators, governments, DNSPs, EV charging infrastructure providers, EV companies, and CPOs. We intend to work closely with the relevant NSW Government departments and are happy to provide additional details about this project to the Inquiry, if requested.

Currently, access to data about hosting capacity for electric vehicle charging infrastructure (EVCI) is limited and varies depending on the local DNSP, making identifying the best locations for chargers difficult for third parties. ECA's recently submitted rule change request on integrated distribution system planning³¹ aims to change this by requiring DNSPs to move towards increased data transparency and low-voltage network visibility, including publishing online hosting capacity maps that are frequently updated. This would enable third parties such as EVCI companies, councils, and community groups to more easily determine where the infrastructure is best located and reduce the information asymmetry between the DNSPs and other parties.

3. Government funding has been essential in supporting EV uptake, but all tiers of government have a role to play, especially while the public EV charging market remains immature.

Electric vehicle adoption and the availability of public chargers is an ongoing dilemma within the EV space. As highlighted previously, more public chargers are needed to encourage and support electric vehicle adoption – which is precisely what incentivises investment in public charging infrastructure.

We believe that it would be a mistake to "assume that the market will deliver infrastructure for all Australians",³² as it would likely leave out a number of consumers without convenient and adequate public charging options. Certain community demographics, particularly those from low-income backgrounds or

28 Ibid.

²⁶ Electric Vehicle Council, 2024 – <u>State of Electric Vehicles p. 49</u>

²⁷ Electric Vehicle Council, 2023 – Public high power EV charging availability p.1

²⁹ The Courier, 2024 – <u>EV chargers out of action but will it deter car takeup in Ballarat?</u>

³⁰ AER, 2025 – <u>Consultation opens on CPU's ring-fencing waiver application for providing kerbside EV charging infrastructure</u>

³¹ Energy Consumers Australia, 2025 – <u>Integrated Distribution System Planning (electricity) rule change request</u>

³² Consumer Policy Research Centre, 2022 -- The barriers and potential enablers of electric vehicle uptake in Australia p. 13

residing in regional and rural areas, may not be a profitable market segment for an EVCI provider to own and/or operate a charger. Yet, these consumers require additional support to ensure equitable access to EV charging infrastructure and switch to electric vehicles.

Therefore, we commend the NSW Government's investment in the installation of EV charging stations across the state, notably through its EV fast charging and EV kerbside charging grants which should ensure that the public charging infrastructure network is complete and offers enough charging points.^{33,34} While national EVCI rollout has increased over the years, NSW has established itself as a leader, with the state ranking first in the EVC's Energy Infrastructure Scorecard.³⁵

While support at the state government level is essential, we also believe that EVCI rollout could benefit from increased involvement from local councils. Despite varying degrees of resource availability, this tier of government is responsible for planning and development,³⁶ as well as the maintenance of local transport infrastructure, which makes it an important stakeholder in supporting EV transition.³⁷ While several risks arise due to "high initial investment costs, revenue uncertainty, electricity tariffs"³⁸ notably, there are several ways in which they can support the rollout of EVCI, especially around local centres and in high-density residential areas.^{39,40} In this regard, lessons may be learned from Waverley, Woollahra and Randwick councils, which have become the first councils in NSW to offer council-owned,⁴¹ public on-street charging infrastructure.⁴² The three-council 'Leading the Charge' strategy was developed around the needs of the residents, taking into account that 60% of them live in townhouses or apartments, and that more than half are renters.⁴³ Based on estimates that 82% of Waverley residents require access to on-street parking – a figure that 'drops' to 52% in Woollahra and 42% in Randwick – the three councils evaluated that about 40 public charging ports would be needed by 2025.⁴⁴ The rollout of these charging stations was made feasible through the NSW Government EV Kerbside Charging Grant, combined with councils' involvement in site selection, licensing of public land, and deployment of multi-function street poles with integrated chargers.⁴⁵

4. It may be appropriate to alleviate ring-fencing arrangements through trial waivers in some circumstances to test their impact.

ECA supports DNSPs using trial waivers and regulatory sandboxes to test whether easing the ring-fencing restriction of DNSPs owning EV infrastructure forms part of the appropriate mix of a public EV charging rollout – that is, among other EVCI providers – resulting in optimal consumer outcomes.

We believe that this could be a relevant option is some specific situations, such as in the case of EV chargers in regional and rural areas where it is not profitable for an EVCI provider to own and/or operate a charger, but where we would still want to support EV owners. Under these circumstances, it may be appropriate for DNSPs to be allowed to put EVCI on their regulatory asset base (RAB).

³⁵ Electric Vehicle Council, 2024 – <u>State of Electric Vehicles p. 52</u>

³⁷ Dwyer S, Moutou C, Nagrath K, Wyndham J, McIntosh L, Chapman D, 2021 – <u>An Australian Perspective on Local Government Investment in</u> <u>Electric Vehicle Charging Infrastructure</u>

- ⁴² Waverley Council, 2019 Eastern suburbs councils powering ahead with public electric vehicle charging stations
- ⁴³ Woollahra Municipal Council, 2023 <u>Leading the Charge. Eastern Suburbs Electric Vehicle Infrastructure Strategy 2023</u>
 ⁴⁴ Ibid.

³³ NSW Government – <u>Electric vehicle fast charging grants</u>

³⁴ NSW Climate and Energy Action – Electric vehicle kerbside charging grants

³⁶ Parliament of New South Wales – <u>The Roles and Responsibilities of Federal, State and Local Governments</u>

³⁸ Ibid.

³⁹ NSW Climate and Energy Action, 2023 – Kerbside convenience: Councils lead the way with public EV charging infrastructure

⁴⁰ Woollahra Municipal Council, 2023 – Leading the Charge. Eastern Suburbs Electric Vehicle Infrastructure Strategy 2023

⁴¹ Randwick City Council, 2024 – Randwick amping up electric vehicle use with 100 new public charging spaces

⁴⁵ Ibid.



This would of course require the appropriate regulatory oversight from AER and consumer protection to ensure that public EVCI is still rolled out in an appropriate and right-sized way. For example, ensuring that DNSPs may only build EVCI where it is needed so as to not unnecessarily increase the RAB. It would also need to be balanced against the cross-subsidy of network tariffs being increased for non-EV drivers due to the increased RAB. This in turn may be mitigated by the savings to all consumers from the increased network utilisation of increased EV uptake. Regardless, it is crucial to investigate the full range of potential solutions and ensure that consumer outcomes are the measure of success.

Conclusion

ECA thanks the Legislative Assembly Committee on Transport and Infrastructure for the opportunity to provide input to the Inquiry into infrastructure for electric and alternative energy source vehicles in NSW. We encourage the Legislative Assembly Committee on Transport and Infrastructure to consider that public EV charging infrastructure is essential to support the uptake of electric vehicles, and to provide significant energy cost savings for all electricity consumers, including those who do not own an EV. However, it is crucial that any future policies take into account the diversity of consumer circumstances. We firmly believe that:

- 1. Public EV charging infrastructure must cater for diverse cohorts of consumers.
- 2. There is a need to increase the amount and reliability of public high power EV charging stations, along with a clearer definition of the roles and responsibilities of all parties involved in providing and maintaining this critical infrastructure.
- 3. Government funding has been essential in supporting EV uptake, but all tiers of government have a role to play, especially while the public EV charging market remains immature.
- 4. It may be appropriate to alleviate ring-fencing arrangements through trial waivers in some circumstances to test their impact.

We make ourselves available for further discussion and collaboration throughout the inquiry process.

For	any	questions	or	comments	about	our	submission,	please	contact	Pauline	Ferraz	at

Yours sincerely,

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