

**Submission
No 73**

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

Organisation: Australian Electric Vehicle Association Ltd

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INFRASTRUCTURE FOR ELECTRIC AND ALTERNATIVE ENERGY SOURCE VEHICLES IN NSW

**Inquiry by the Legislative Assembly Committee on Transport and Infrastructure
SUBMISSION BY AEVA, 30 APRIL 2025**

INTRODUCTION

Dear Sir/Madam,

This submission is provided by the Australian Electric Vehicle Association Ltd (AEVA). Thank you for the opportunity to make this submission to the Legislative Assembly Committee on Transport and Infrastructure

Since 1973, AEVA has been active in advocating for electric propulsion technology. AEVA represents the users and drivers of electric vehicles (EVs) and the enthusiasts for electromobility more broadly, including electric bikes, motorcycles and scooters, cars, vans, utes, trucks, buses, trams, trains, boats and aircraft.

Over the years AEVA has served many roles, including (but not limited to) assisting members of the public with advice on converting vehicles to electric drive; public education and information sessions on EV battery technology, motors and charging; and advocating to governments for more electric transport-friendly policies.

RECOMMENDATIONS FOR CHARGING INFRASTRUCTURE

Appendix 1 sets out AEVA's general recommendations for public charging infrastructure. We ask the Committee to note, in particular, our recommendations for:

- availability, security and signage (recommendations 1-2, 11)
- accessibility to people with a disability (recommendation 3)
- CCS2 and CHAdeMO support (recommendation 5)
- location of slower chargers (recommendations 7-9)
- payment methods and pricing model (recommendation 10, 12).

THE HUME HIGHWAY

The Hume Highway is one of Australia's prime transport arteries, and it should be plentifully supplied with available, reliable chargers. Yet, during January to April 2025 there have been numerous reports of broken chargers and unacceptably long wait times south of Yass and north of Albury.

Albury is well served by 16 Tesla Superchargers, open to non-Tesla cars. And Yass is well served by 12 Tesla Superchargers, open to non-Tesla cars. But in between:

- Holbrook has an NRMA charger which has been unreliable recently, plus 9 Tesla Superchargers that are Tesla-only. An Ampol charger is planned, and an EV driver (Geoff, driving a BYD Seal) commented on Plugshare on 26 March 2025: "Looking forward to the

planned [Ampol] charger. NRMA broke all the time and 9 "Tesla Only" stalls at the club. A third option will be very helpful". In AEVA's view, this will still be insufficient unless Tesla can be persuaded to open its site to non-Tesla cars.

- Tarcutta has two Evie chargers, one of which has been unreliable recently and the other is subject to high demand, with reports of wait times exceeding two hours during the Easter weekend of 2025.
- Olivers (Dog on Tuckerbox) has 3 Chargefox chargers which have been "under repair" for a very long time, plus 6 Tesla Superchargers which are Tesla-only.
- Jugiong has one NRMA charger which has been unreliable and is now listed on Plugshare as "under repair".

In response to this situation, AEVA attempted without success to reach out to Tesla Australia to ask if it would be willing to open the Tesla Superchargers at Holbrook and Olivers to non-Tesla cars, at least temporarily until the other chargers mentioned above are working reliably.

AEVA is aware that the NSW Government has committed funds to two Tesla Supercharger installations in this region, and we assume these will be open to non-Tesla cars:

- 12 Tesla Superchargers are planned at the Gundagai Library. Initially this station was required to be constructed by September 2024, but on Plugshare it is still listed as "coming soon".
- 10 Tesla Superchargers are planned to be installed at Tarcutta under NSW Government Fast Charging Master Plan.

These are welcome improvements which cannot come fast enough. We urge the NSW Government to ensure that the recent shortcomings on the Hume Highway are never repeated.

NORTH AND WEST NSW

A review of recent check-ins on Plugshare has revealed issues with the availability, reliability and security of chargers in western and northern NSW. Examples include:

- The Council charger at Broken Hill "shuts down every 5 minutes for overheating" according to a comment from a BMW ix3 driver (Komali) on 27 March 2025
- The NRMA charger at Bourke had numerous reports since December 2023 that only one of the two plugs was working
- A Tesla Model Y driver (Jason Khan) reports that "I am regularly let down by failed chargers in Wilcannia, Walgett and Cobar"
- The NRMA reported that the charger at Walgett was "deliberately damaged" in April 2024, and it still has not been repaired. One EV driver commented about the vandalised chargers in Brewarrina and Walgett, and called for the installation of security cameras.
- The absence of a fast charger in Yunta, SA is holding back EV travellers from using the Barrier highway to travel to Adelaide. While this is a matter for SA, limiting key thoroughfares is not ideal.

FREIGHT AND HEAVY VEHICLES

There have been early developments of Electric Road Systems in France and Sweden, among other countries.

AEVA recommends that the NSW Government undertake an economic analysis of ERS as part of the development of a heavy vehicle charging plan.

In AEVA's opinion, there are positive prospects for conversion of road freight to battery electric drive. Battery electric semi-trailers are now entering the freight vehicle fleet in countries such as the United States, Norway and the Netherlands, with commensurate high power charging infrastructure. Trials concluded that routes in excess of 1,000 km per day were practical, and in a recent real-world test¹ a Tesla electric semi travelled over 1600 km in a single day.

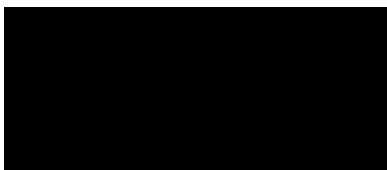
There are significant opportunities to electrify the road freight sector through the conversion of articulated trucks coupled with highway battery-swapping services. We note the promising initiative of Janus Electric² in pioneering the conversion of heavy trucks and battery-swapping services. We see an opportunity for governments (state and Federal) to provide financial assistance to accelerate these conversions, and to facilitate the roll-out of battery-swapping and recharging stations on national highways.

In AEVA's opinion, hydrogen remains economically and energetically unviable for decarbonising heavy road freight, and it represents a significant distraction from general transport electrification and risks delaying the uptake of well-proven battery EVs. Assuming 'green' hydrogen is produced by electrolysis using renewable energy, a fuel cell vehicle requires about three times more electricity³ compared to charging an equivalent battery EV to drive the same distance.

CONCLUSIONS

While NSW has a master plan and allocated funding, a lot more needs to be done to push the implementation of the plan.

Yours sincerely,



Chris Jones
President, Australian Electric Vehicle Association

¹ <https://electrek.co/2023/09/29/tesla-semi-travels-over-1000-miles-in-a-single-day/>

² Janus Electric. <https://www.januselectric.com.au/>

³ Seba, Tony. EnergyPost.eu, 23 October 2015. <https://energypost.eu/toyota-vs-tesla-can-hydrogen-fuel-cell-vehicles-compete-electric-vehicles/>

APPENDIX 1: GENERAL RECOMMENDATIONS FOR PUBLIC CHARGING INFRASTRUCTURE

AEVA makes the following recommendations for good practice in the location and support for charging infrastructure.

- [1] Charging infrastructure should be available 24 hours per day, 7 days a week. Sites should have signs giving directions to the chargers, be well lit and be located in populated areas to improve safety.
- [2] Chargers located in less populated areas, and chargers that have been vandalised in the past, should be monitored by security cameras.
- [3] Public charging infrastructure must be inclusive for all and be fully accessible to people with a disability. In lieu of an Australian Standard, the Royal Automobile Association of South Australia (RAA) Design Guidelines for Accessible EV Charging Stations should be adopted in the interim.
- [4] Chargers should be located near amenities such as toilets and food outlets.
- [5] All DC fast chargers should support the CCS2 standard. New chargers supporting CHAdeMO are not required, but existing CHAdeMO chargers must be maintained to support legacy vehicles.
- [6] Charging sites should cater for a wide range of EVs: not just cars, but also vehicles such as motorbikes, electrically-assisted bicycles and electric scooters. A few standard power points alongside car charging outlets would meet the needs of electric bicycle users, and would also be a back-up of last resort for electric cars.
- [7] There should be a mix of DC fast charging (50kW+) and slower type 2 AC charging (typically 7-11kW). For example, AC charging points should be provided at major shopping centres and popular entertainment and restaurant precincts, with multiple charging points at each location.
- [8] 'Park and Ride' and other long-stay car parks are ideal locations for large banks of AC charging points. Charging points can be networked to share the maximum available power. Slow charging through the day would provide a means to absorb local rooftop solar production.
- [9] Hotels, motels, caravan parks and other accommodation providers should provide parking spaces that support overnight charging by guests, preferably via type 2 charging points but even trickle charging on ordinary 10A or 15A power points using the driver's portable charge cord is sufficient.
- [10] It should be possible for drivers to pay for charging using a credit card. A proprietary app or RFID card should not be the only payment method.
- [11] Charging point providers must demonstrate high availability (e.g. 98%) and prompt restoration.
- [12] The pricing model should discourage charging for longer than 30 minutes at DC chargers.
- [13] There should be at least one DC or more rapid charger and multiple AC charging points in every populated area/town in NSW
- [14] Right to charge legislation should be put in place to support EV owners in units and apartments

