Submission No 108

INQUIRY INTO ELECTRICITY SUPPLY FOR ELECTRIC VEHICLES

Organisation: Springmount Advisory

Date Received: 28 November 2025

28 November 2025

Committee Secretary
Legislative Council Economy and Infrastructure Committee
Parliament House
Spring Street
EAST MELBOURNE VIC 3002

Attention: Parliament of Victoria's Legislative Council Economy and Infrastructure Committee
Submission to the Inquiry into Electricity Supply for Electric Vehicles

Dear Committee members,

Springmount Advisory welcomes the opportunity to contribute to the 2025 Inquiry into Electricity Supply for Electric Vehicles. We are a specialist consulting practice who provide high-quality policy, research and strategy support on mechanisms to drive rapid emissions reduction and scaled deployment of clean technology solutions.

Our submission draws heavily from research we undertook in producing the *Supercharging our Supermarkets - how Australian retailers can deliver convenient and cheap EV charging for Australia (2023)* report which focussed on how to expand EV charging infrastructure while concurrently addressing grid connectivity and load consideration. The report has been uploaded as an additional file to this submission for your consideration as required.

While we applaud the Victorian government for initial support for the electric vehicle (EV) transition under its Zero Emissions Vehicle Roadmap, we note that the target for 50% of all new light-vehicle sales to be EVs by 2030 is likely too low to achieve a fully decarbonised road-transport sector by 2045[1]. Typically, only 5% of the fleet is turned over each year, meaning it takes 20 years for a full turn over of the state fleet. Achieving 100% of new vehicle sales as soon as possible is crucial to ensure the 2045 target can be met.

Response to Committee's questions

We have focussed on providing feedback to the Committee on the first two lines of enquiry being explored as this is where we have specialist knowledge.

(1) Strategies to reduce EV charging during periods of peak demand on the grid and increase charging during periods of peak supply

Ensuring vehicle charging infrastructure is widely available and accessible in locations where vehicles are parked during the day is critical to better match EV charging demand with peak solar production, and to avoid overlaying EV charging on top of the existing evening electricity demand peak.

[1] https://www.energy.vic.gov.au/renewable-energy/zero-emission-vehicles

A smart strategy to solve this is intentional mass installation of 'Level 2' chargers (see appendix for charger types) at locations including supermarkets, train stations, carparks and other destinations where vehicles are parked for long durations during the day. This would increase demand during peak daylight hours and subsequently reduce demand during the evening peak.

Mass deployment of Level 2 chargers is relatively affordable compared to the much more expensive build out of Level 3 chargers used to build the very fast charging highway network to date.

The *Supercharge Our Supermarkets* report showed this is both feasible and cost-effective. At a national level an estimated investment of $244 million could equip over 4,000 supermarkets with an average of six chargers each (roughly $10,000 per unit). Given 25% of Australian vehicles are in Victoria, this would equate to $61 million for 1,000 supermarket sites in the State delivering a transformative and accessible boost to EV infrastructure.

Level 3 chargers are exceptionally fast, but this also results in large spikes in demand for electricity for short periods of time. Level 2 chargers in contrast have significantly lower peak power demand, and draw power at a constant rate for a longer period. A mass rollout of level 2 chargers is easier to achieve with current grid infrastructure and is likely to result in lower overall capital upgrade costs.

Daytime charging can be further incentivised through the provision of lower prices for charging during the middle of the day when solar production drives down the wholesale price of electricity. This would encourage both public and private charging during hours of peak renewable energy supply.

(2) Whether public charging infrastructure is being installed at a sufficient rate in different parts of Victoria, including older suburbs where most people do not have access to off-street parking

Australia has a shortage of EV charging infrastructure. When we wrote *Supercharge the Supermarkets*, there was on average only one public charger for every 17 EVs[2], compared with a global average of one for every 10[3]. Since then the situation has deteriorated with the national electric vehicle fleet growing to 370,000 vehicles but the number of public chargers only increasing to 4,182 nationwide[4] - a ratio of one charger for every 88 EVs.

The key gap is the 'missing middle' of a mass deployment of Level 2 chargers. While Australia now has a strong EV fast charging backbone along major highway routes complemented by home charging - there is still a huge gap in charging availability in the places where people park their cars like supermarkets and train stations.

[2] Electric Vehicle Council, Australian Electric Vehicle Industry Recap 2022. Available at: https://electricvehiclecouncil.com.au/2022-australian-electric-vehicle-industry-recap
[3] https://www.iea.org/reports/global-ev-outlook-2022/trends-in-charging-infrastructure
[4] https://electricvehiclecouncil.com.au/wp-content/uploads/2025/10/State-of-EVs_2025_141025-2.pdf

Supermarkets offer ideal charging sites: nearly half of Australians live within 1.5 kilometres of one, and these sites are easily accessible, well-lit and equipped with existing power infrastructure. Installing an average of six chargers at 1,000 supermarkets in Victoria could add up to 6,000 new charging points.

A widespread rollout will allow Victorians to charge their car while they shop - offering both convenience and a time saving, particularly for people without access to off-street parking.

Victoria can replicate and adapt proven approaches from locations like the UK and establish chargers in everyday retail locations. This will enable the state to deliver on its commitment to expedite charger deployment across regional and metropolitan settings (as seen in the Destination Charging program).

The federal government is targeting 3.8 million EVs on the road by 2030 which will require approximately 380,000 public chargers to match the global average. Victoria is home to roughly a quarter of the national fleet[5] which means on average Victoria should expect to have 950,000 EVs on the road by 2030, requiring 95,000 chargers across the State.

Recommendations

1. Integrate retail and commuter-based charging infrastructure within Victoria's charger-deployment programs under the Zero Emissions Vehicle Roadmap, enabling retail operators to access grants and incentives currently targeted at public-charging infrastructure.

2. Encourage retail and commuter carparks within Victoria to set specific rollout targets for charger installation (e.g., 2025–2028) and align with Victoria's grid-integration planning (recognising the increased EV penetration and associated network demand).

3. Coordinate with distribution network service providers and regional planning bodies to prioritise retail and commuter carpark charging sites in locations lacking off-street charging access.

Thank you for the opportunity to make a submission to this inquiry. We urge the Committee to recommend the inclusion of supermarket and carpark focused charging deployments as a priority within Victoria's public-charging strategy. This will increase accessibility, encourage daytime charging behaviours and affordably expand the state charging infrastructure network.

Yours sincerely,

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5 https://www.carsguide.com.au/car-advice/how-many-cars-in-australia-93438#:~:text=How%20many%20cars%20in%20Victoria,2022%20and%2031%20January%202023.

Appendix: Electric vehicle charging types

Charger type	Level 1 / Slow Chargers	Level 2 / Fast Chargers	Level 3 / Rapid & Ultra Rapid
			
Location	Home	Home & Public	Public
Explanation	Level 1 chargers are the slowest form of charging and plug into a standard powerpoint. They provide about ~10 km of range per hour of charging.	Level 2 chargers are dedicated chargers and are the most common type of charging for homes and public locations. They provide between 40-100km of range per hour of charging.	Level 3 chargers use DC (direct current) to charge EV batteries at very fast rates. They can provide anywhere from 200 to 1000km of range per hour of charging.
Output (kW)	~1.8	7-22	50-350
Current	AC	AC	DC
Km of range/h	10	40-120	200-1000
Cost (2023)	$500	~$10k	$50k-$100k+