29 October 2025

Lodged via email to: The Economy and Infrastructure Committee,
Inquiry into how Victoria can best harmonise electric vehicles (EVs) with electricity supply and demand.

**The Economy and Infrastructure Committee Inquiry - How Victoria can best harmonise electric vehicles (EVs) with electricity supply and demand.**

The Australian Energy Council ('AEC') welcomes the opportunity to make a submission to the The Economy and Infrastructure Committee Inquiry (the Committee) on how Victoria can best harmonise electric vehicles (EVs) with electricity supply and demand.

The AEC 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 understands that the Committee will inquire into, consider and report, on how Victoria can best harmonise electric vehicles (EVs) with electricity supply and demand. Its reference is to consider:

(1) strategies to reduce EV charging during periods of peak demand on the grid and increase charging during periods of peak 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;
(3) the best role for electricity distribution businesses in rolling out EV charging infrastructure, and how distribution network tariffs should be set for EV chargers;
(4) strategies to facilitate the take-up of EV ownership, including the facilitation of bidirectional charging;
(5) whether old EV batteries could have a second life as household or community batteries after removal from vehicles;
(6) the barriers and opportunities to the manufacture, reconditioning and recycling of EV batteries, or other elements of the EV supply chain, in Victoria; and
(7) any other related matters the Committee considers relevant

The AEC responds to each of these in turn.

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1. **Strategies to reduce EV charging at grid peak / increase charging at times of high supply**

The key strategy here is to enable and encourage market based smart charging via time varying prices, with consumer facing signals, and interoperable data systems. Targeted, temporary demand management should only be a last resort consideration - and only where network constraints require it. EV charging should be driven by market signals and good consumer information rather than by blunt mandates. There is a pressing need for better electricity market and consumer data so retailers and aggregators can offer programs that shift charging to low-cost, high-supply periods.

Victoria already has most of the building blocks needed to let EV charging be driven by market signals and good consumer information. In addition, Victoria is rapidly adding low to zero marginal cost energy that EVs can soak up. Market signals can direct this surplus supply through signals that reward charging in high renewable periods. High smart meter coverage and interval data already in homes are a ready layer for the dynamic price offers and retailer/aggregator services that shift charging.

A clear forward case that reduces investment (stranding) risk and makes retailer/aggregator/charge point operator (CPO) business cases for managed charging easier to assemble and not subject to stranding by distributor led charging infrastructure rollout is required.

Hosting capacity maps that the market can act on are also required. A requirement for DNSPs to publish hosting capacity maps and to streamline connection approvals for chargers so commercial providers can deploy quickly.

Good consumer information means public education about plans and smart charging to ensure consumers understand the bill impacts and opportunities. Consumer engagement depends on consumer confidence and clear information.

Because Victoria combines strong renewable growth, near and universal interval metering it can realistically introduce strategies to reduce EV charging at grid peak and to increase charging at times of high supply. Strategies enabling data access, providing hosting capacity maps and faster network planning will unlock private investment.

Practical actions / policy options:

- Regulators should remove barriers that prevent retailers from offering ToU plans tied to EV charging behaviour.
- Improved EV data to inform markets and planning, including network level locational incentives rather than blanket restrictions.
- Providing hosting capacity maps and faster network planning obligations.

Expected outcomes: These measures maximise consumer choice, stimulate private investment while shifting aggregate charging away from peaks, both supporting renewable integration and reducing need for network reinforcement.

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2. **Is public charging being installed fast enough in different parts of Victoria (including older suburbs without off-street parking)?**

Public charging installations are increasing nationally, but coverage remains uneven. Whilst NSW has the largest stock of public chargers, Victoria leads in growth of fast chargers. Fast charge stations are of particular importance in older, inner-urban suburbs where off street parking is constrained as well as in outer suburban regions where off street parking is constrained by narrow residential streets and almost total car dependency also meaning many cars are parked on the street.

Public and kerbside charging programs must address the need for redundancy (multiple chargers) at charging sites, especially with public fast chargers, to ensure availability. Security and convenience concerns also need to be addressed, as well as any propensity for long term occupation of an unsupervised charging bay. This tends to point to work locations, shopping centres and fuel station concourses as more ideal public charging alternatives when home charging of EVs is not practical, and the pressing need to address the barriers to their installation.

Practical actions / policy options for Victoria:

- Undertake a spatial needs assessment (map likely EV adoption, multi-unit dwellings, rental tenure, existing off street parking) to prioritise public and kerbside chargers in older suburbs where redundancy, security and convenience considerations can be met.
- Accelerate charging with local councils to permit fast local rollouts, standardise consent, and remove planning barriers. Offer co-funding for public chargers on private concourses in areas with high proportions of apartments and renters.
- Require or incentivise EV-ready upgrades for public carparks, shopping centres, workplaces and housing re/developments in those suburbs.
- Streamline grid connection processes for public chargers

Expected outcome: The combined package of measures suggested is essentially about making charging accessible, equitable and efficient in the hardest to serve urban areas - older suburbs with little off street parking and newer suburbs with more cars than off street parking.

3. **Best role for distribution businesses (DNSPs) in rolling out EV charging, and how should tariffs be set for EV chargers?**

The best role for Distribution Network Service Providers (DNSPs) in rolling out EV charging is as a network facilitator and infrastructure provider, rather than a commercial charging operator. DNSPs should be focusing on grid upgrades (or on avoiding them), connection management, and providing data to support a competitive market. Their core functions should be to ensure the network can safely and reliably handle increased EV loads, to streamline connection processes for charging providers, and to offer essential grid data and hosting capacity information to empower third party innovation and market competition.

While remaining within the regulatory framework, DNSPs should enable and facilitate planning, network augmentation where needed, and provide transparent connection services rather than directly crowding out competitive commercial charging providers. DNSPs, due to their regulated monopoly status, should not use their position to compete directly with third-party charging providers. Regulatory frameworks that exist to prevent DNSPs from using their significant market power to harm competition in the provision of charging services should be upheld.

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DNSPs have the expertise and infrastructure to ensure the underlying electricity network is stable and capable of supporting EV charging, which is a fundamental requirement to foster a competitive market. By providing network access and data, DNSPs allow a competitive market of third-party operators to flourish, leading to better consumer outcomes and innovation.

Practical actions:

- The DNSP role is to lead network planning and hosting capacity mapping, and fast, transparent connection processes, and this may require resourcing DNSP connection teams to shorten timelines.
- Tariff principles can in theory set cost-reflective, locational and temporal tariffs for high capacity public chargers so prices reflect the real network cost of hosting rapid charging. But we suggest transitional arrangements to avoid stalling public fast charger rollout such as changes to customer contributions to supply upgrades, and demand charge smoothing mechanisms be considered.

Expected outcomes: Efficient network outcomes while allowing competitive deployment of chargers that serve consumers.

4. **Strategies to facilitate EV uptake, including bi-directional charging**

Combining consumer incentives, information, standards, and regulatory pathways for vehicle-to-home (V2H) / vehicle-to-grid (V2G) so early value streams can be realised without confusing or burdening consumers is important. The AEC supports enabling technologies that allow EVs to be grid interactive, but we emphasise that effective market arrangements, consumer protections and clear data flows are needed before any large scale bi-directional charging is relied upon.

ARENA and others are already promoting roadmaps for V2G to remove barriers in retail/wholesale frameworks so EVs can participate in flexibility markets. Setting certification and interoperability standards for bidirectional chargers and vehicles by clarifying metering, settlement and accreditation rules will be the next technical & market enablers.

Government support could include:

- Requiring EV sales campaigns to explain the total cost of ownership benefits in grid interactive EVs. This may help facilitate EV uptake if it is a net positive.

Expected outcomes: New flexibility sources for the grid, and possible household bill savings where V2G is economic.

5. **Second life for old EV batteries (household / community storage)**
6. **Barriers and opportunities to manufacture, recondition and recycle EV batteries (and other elements of the EV supply chain) in Victoria**

This is not a specific area of policy expertise for the AEC. We would contribute that second life applications are technically feasible and could be valuable, but the economics, safety standards and warranty concerns about any remaining life must be addressed. Repurposing batteries can likely defer recycling costs and potentially deliver distributed storage value as household batteries, but scale will depend on cost competitiveness with new batteries and on clear standards.

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Practical actions:

- National standards and testing protocols for assessing battery state of health (SoH), to enable reuse with confidence and to uniformly address safety, insurance, and warranties.
- Support second life projects in low income and community energy projects.
- Create national reconditioning and recycling pathways with clear end of life rules so the second life is traceable.
- Use government procurement to create demand for tested second life batteries thus improving economics for reconditioning businesses.

Expected outcomes: Reduced upfront costs for lower income households participating in storage, extended asset life, and a smoother circular pathway before final recycling.

**Conclusion**

The AEC's published positions on EV charging infrastructure have emphasised market based, consumer centric approaches that are underpinned by much better EV related data flows and transparent planning by networks. Victoria should prioritise data-driven spatial planning for chargers, work to enable price signals for chargers, and clarify the roles for DNSPs as the planning and neutral enabler to build confidence in charging infrastructure investment. We generally support targeted government interventions on second life market creation.

Please contact David Markham at david.markham@energycouncil.com.au should you wish to discuss further.

Yours sincerely,

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