Submission No 85

INQUIRY INTO ELECTRICITY SUPPLY FOR ELECTRIC VEHICLES

Organisation: Victorian Greenhouse Alliances

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Legislative Council Economy and Infrastructure Committee
Inquiry into Electricity Supply for Electric Vehicles
Via e-submission: https://www.parliament.vic.gov.au/get-involved/inquiries/electricvehicleinquiry/submissions/

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Re. Inquiry into Electricity Supply for Electric Vehicles

The Victorian Greenhouse Alliances welcome the opportunity to make a submission to this Inquiry. The Alliances are regional partnerships of local governments and statutory agencies that have driven coordinated climate action across Victoria's municipalities for over 20 years. Collectively we represent over 60 Victorian councils.

Local governments have been early initiators and implementers of electric vehicle (EV) charging infrastructure through initiatives such as *Charging the Regions* and continue to play a critical facilitation role through the development of regional public charging frameworks[1], roadmaps[2], fleet transition strategies[3], EV integration projects and trials[4], and community EV transition plans[5], with a focus on access and equity.

While these initiatives have been successful in addressing barriers to the early adoption of EVs, policy and planning leadership and coordination from state and federal governments is needed to accelerate EV demand, supply, and charging infrastructure while managing the impact on electricity supply.

Strategies to reduce EV charging during periods of peak demand and increase charging during periods of peak supply

Recommendation 1. Collaborate with local governments, distribution network service providers (DNSPs) and other key stakeholders to enable equitable access to grid-friendly EV charging in rural and regional townships, as well as in urban areas with limited off-street parking. This should leverage low-cost solar energy and utilise spare network capacity during periods of peak supply.

The rapid adoption of EVs presents opportunities and challenges for Victoria's electricity network. Networks in both rural and urban areas are limited in their EV hosting capacity. These issues are most pronounced in rural Victoria, where grid strength is typically lower and low voltage transformer issues can appear with as little as 20% EV penetration, including significant customer voltage drops and LV conductor issues. In urban areas, low voltage transformer issues start to appear at 40% EV penetration.[6]

Accommodating widespread EV charging will require a mix of direct and indirect management strategies. These include, but are not limited to:

- Staggered time-of-use tariffs;
- Targeted investment in distribution network upgrades;
- Support for installing AC charging infrastructure at locations where vehicles are parked during the day (e.g. workplaces, train stations, supermarkets, and long-stay car parks);
- Rollout of bi-directional charging technologies, supported by clear guidelines and processes to enable councils and businesses to participate;
- Incentives to encourage uptake of battery energy storage systems; and
- Strategies and incentives to promote consumer participation.

[1] https://www.cvga.org.au/ctr3.html
[2] https://sensibletransport.org.au/wp-content/uploads/2023/02/SECCCA-EV-Charging-Roadmap-Report-2023.pdf
[3] https://eaga.com.au/wp-content/uploads/2022/09/Business-Case-and-Transition-Plan-EAGA-Regional-Report-IST-20220620_v3.pdf
[4] https://arena.gov.au/projects/wyndham-city-council-local-council-bev-integration-project/
[5] https://www.northerncouncils.org.au/post/release-of-nca-s-community-electric-vehicle-transition-plan

Aligning EV charging with periods of peak solar generation can reduce curtailment, improve grid utilisation, and lower overall costs for consumers. Time-of-use tariffs can encourage off-peak charging while maintaining consumer flexibility. Battery energy storage systems can help shift EV charging to any desired time. And bi-directional charging offers additional resilience in areas vulnerable to extreme weather and grid outages. The Victorian Government will have a key role to play working alongside the Federal Government to harmonise National Energy Market rules to support ARENA's detailed roadmap to integrate vehicle-to-home and vehicle-to-grid charging into the system.

Strategies to utilise low cost solar for charging should include cheap solar soak tariffs, installation of AC chargers at train stations and other areas with high day-time parking and grants for the installation of AC chargers at workplaces and shopping centres. Rebates and incentives can further support homeowners to install batteries and charging infrastructure. With appropriate resources and support, local councils can be a key partner in supporting equitable access to grid-friendly EV charging—particularly for lower-income households, renters, and strata residents—for example, through the promotion of state-funded programs and the facilitation of place-based solar PV, residential electrification, and related initiatives.

Ultimately, reducing EV charging during peak demand and increasing it during peak supply will require an integrated, whole-of-system approach. This must engage all key stakeholders and consider factors including consumer behaviour, incentives, vehicle supply and manufacturing, charging and electrical infrastructure, market signal management, retailer tariffs, and regulation. Achieving this will depend on coordinated leadership from both federal and state governments.

Whether public charging infrastructure is being installed at a sufficient rate in different parts of Victoria

Recommendation 2. Develop a statewide EV charging strategy and implementation plan in consultation with key stakeholders—including local governments—and provide funding for infrastructure and capability development in areas where installation is more complex or commercially unviable.

Public charging infrastructure is not being installed at a sufficient rate across Victoria. Despite growing investment from both government and the private sector, the rollout remains fragmented. The absence of a coordinated statewide strategy has resulted in inconsistent delivery, unclear responsibilities, and issues with maintenance and reliability. In some areas, demand already exceeds supply—leading to queues and lost economic opportunities—while others remain underserved. These gaps are especially evident in rural and regional Victoria, as well as in urban areas where residents lack access to off-street parking.

In the absence of a coordinated statewide approach, and despite limited resources, many councils have taken proactive steps to support EV uptake. They have developed evidence-based regional charging frameworks and strategies that identify optimal public charging sites on council land, improving accessibility, equity, and local economic outcomes. However, the installation and management of public EV charging infrastructure is not the core business of local government. Many councils are therefore seeking to limit their ongoing role to one of facilitation.

As Energy Consumers Australia note, councils are uniquely placed to assess and approve charging sites from both land-use and community access perspectives.[7] Councils that are facilitating access to public carparks for private CPOs to develop charging stations are required to pay land tax to the state government for every privately commercially leased public EV carpark. This cost is not covered in lease agreements that many councils have with CPOs, so it comes out of Council's pocket. Local governments are supporting the expansion of charging networks for public benefit by facilitating access to suitable parking spaces and should be exempt from paying land tax on behalf of private CPO's using these public carparks. In high-density activity centres, council-owned off-street commercial car parks are an optimal location for public EV charging to support more equitable access for residents and businesses with limited off-street parking. However, these areas are also being targeted by the State Government's proposed congestion levies to discourage car use. Emerging conflicts between taxation policies and the need to increase access to EV charging must be reconciled in State policies.

[7] https://energyconsumersaustralia.com.au/sites/default/files/2025-07/website-doc-report-houstonkemp-creating-accessible-affordable-public-ev-charging-networks-australia.pdf

While the National Construction Code now mandates EV-ready infrastructure in new apartment buildings, existing multi-dwelling developments face significant barriers, including limited power supply, high connection costs, and complex governance arrangements. Similarly, households without off-street parking require convenient alternatives, such as chargers in the public realm, at workplaces, or at commercial destinations like shopping centres. Where councils take a more active role—for example, in planning and delivering charging solutions for residents without off-street parking—targeted capital and capability funding is needed to ensure sufficient staffing and technical capacity. There are opportunities to learn from successful models in other jurisdictions, such as the UK Government's Local Electric Vehicle Infrastructure (LEVI) program.[8]

To address the opportunities and challenges outlined above, a more coordinated and equitable rollout of EV charging infrastructure led by the Victorian Government is required. This should include:

- A statewide EV charging strategy and implementation plan developed collaboratively with all key stakeholders;
- A focus on access and equity for regional and rural communities, existing apartment buildings, and households without off-street parking;
- Financial support for retrofitting existing apartments and investment in on-street and community-based charging solutions;
- Accessibility and reliability standards for public chargers, including minimum uptime and flexible payment options;
- Training and workforce development programs to address skills shortages in EV charger installation, servicing, and maintenance; and
- Capability funding for councils to ensure adequate staffing and local delivery capacity where relevant.

The best role for electricity distribution businesses in rolling out EV charging infrastructure

Recommendation 3. As part of a statewide EV charging strategy and implementation plan, the Victorian Government should undertake further analysis to identify the most efficient, effective, and equitable models for the rollout of EV charging infrastructure. This should include clarifying the optimal role of Distribution Network Service Providers (DNSPs), which may involve owning or operating chargers in certain circumstances, and ensuring transparent and efficient data sharing and connection processes to support equitable deployment.

Grid constraints continue to present a major barrier to network expansion, particularly in rural Victoria, growth corridors, and in high-demand regional and urban areas. Councils have faced significant challenges facilitating and installing charging infrastructure on council land due to limitations of aging network infrastructure and restricted capacity.

Reliability of electricity supply and charging infrastructure is also a critical concern in regional and rural townships—particularly during extreme weather events and extended outages. Grid reliability issues must be addressed alongside the expansion of EV charging infrastructure, with batteries a key opportunity to stabilise grids and provide backup power.

DNSPs have a vital enabling role in the transition to electric vehicles. This includes maintaining reliable electricity supply, implementing targeted network upgrades, providing transparent network data, and working proactively with governments and industry to expand charging networks. DNSPs should publish and maintain up-to-date data on network capacity and pole suitability to support planning, and ensure connection processes, pricing, and access arrangements are clear and consistent.[9] They should also offer practical support to councils—particularly in overcoming high connection costs and navigating the design and delivery of complex network upgrades—to enable the rollout of charging infrastructure for both light and heavy vehicle fleets.

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[8] https://www.gov.uk/guidance/apply-for-local-ev-infrastructure-levi-funding

[9] See submission to the *Standing Committee on Climate Change, Energy, Environment and Water on the Inquiry into the transition to electric vehicles (EVs)* by the Victorian Greenhouse Alliances (No.24), Energy Consumers Australia (No.25); and the Electric Vehicle Council (No.92) at: https://www.aph.gov.au/Parliamentary_Business/Committees/House/Climate_Change_Energy_Environment_and_Water/Electricvehicles/Submissions

There may be cases where DNSP ownership or operation of chargers is beneficial—such as in rural or commercially marginal areas[10]—but robust analysis by the State Government is needed to determine the most efficient and equitable models for infrastructure deployment, ownership, and management. This analysis should clarify the respective responsibilities of DNSPs and all three levels of government.

As progress continues toward grid decarbonisation, any electricity supplied by DNSPs to EV chargers should be required to come from renewable sources or be fully offset to support Victoria's broader emissions reduction goals.

Strategies to facilitate the take-up of EV ownership, including the facilitation of bidirectional charging

Recommendation 4. Expand purchase incentives and financing support for low- and middle-income households, small businesses, and heavy fleets, while leveraging state government purchasing power to accelerate fleet transitions and build market confidence.

Victoria still has significant ground to cover to increase EV ownership. There are valuable lessons to be learned from international best practice—particularly from European nations where between 25% and 85% of new car sales are fully electric. While Victoria's Zero Emissions Vehicle Roadmap and the national New Vehicle Efficiency Standard will help improve EV supply, affordability and desirability remain major barriers to increasing demand.

A recent poll found that even among higher-income earners—those eligible for fringe benefit waivers and tax discounts through workplace leasing schemes—only 15% expressed interest in buying an EV, compared with 9–10% among low- and middle-income earners. This highlights the need for stronger federal and state measures to stimulate demand if we are to meet our emissions reduction targets.[i]

The Victorian Government should invest in public awareness and education campaigns to counter misinformation and build consumer confidence. This could include funding for community events and the development of consistent, evidence-based communications that address persistent myths and outdated perceptions about EVs. Behaviour-change methodologies—such as social norming—can help make EV ownership the mainstream choice.

Frameworks are also needed to ensure equity and accessibility for low and middle-income households and vulnerable groups. Without this, higher-income households and businesses will continue to capture most of the benefits. Programs should be co-designed with communities that face barriers to EV adoption—such as renters, social housing residents, and rural populations—and all state-funded EV initiatives should include equity impact assessments to identify who benefits, who is excluded, and how programs can be adjusted to address spatial or socio-economic disparities.

Local governments, despite their strong community links and local knowledge, currently lack the resources, funding, and authority to meaningfully influence equitable EV uptake. State and federal policies must recognise all communities in the transition—particularly First Nations peoples, regional towns, and low-income households. These groups often face the highest energy and transport costs, yet there is little evidence that the second-hand EV market alone will improve affordability at scale. Embedding energy and transport justice into all EV and electricity strategies would operationalise equity provisions in the *Climate Action Act 2017* and help ensure the benefits of electrified mobility are shared across all Victorians, not just those with higher capital access.

Expanding targeted purchase incentives and financing programs will be essential to overcoming affordability barriers. Coordinated fleet procurement across federal, state, and local governments can deliver economies of scale, accelerate supply, and build consumer confidence.

Specific initiatives are also required to support the electrification of freight and heavy vehicle fleets. This includes targeted support for councils and businesses operating large vehicles, and financial assistance for installation of charging

[10] https://www.parliament.nsw.gov.au/ladocs/other/22050/Answers%20to%20supplementary%20questions%20-%20Energy%20Consumers%20Australia%20-%2028%20July%202025.PDF

infrastructure and depot electrification—the costs of which are often prohibitive for councils, particularly due to the need for substantial electrical upgrades. The State Government should draw on international best practices to guide these initiatives.

Finally, to avoid disincentivising EV uptake, any future reforms to road user charges should recognise the broad social and economic benefits of transitioning from internal combustion engine (ICE) vehicles by incorporating externalities related to emissions, alongside other factors such as vehicle weight, congestion and road wear. Reform of road user chargers also presents a critical opportunity for a fairer distribution of revenue to local governments that maintain a majority of Victoria's road networks.

Barriers and opportunities to the manufacture, reconditioning and recycling of EV batteries, or other elements of the EV supply chain, in Victoria

Recommendation 5. Incorporate circular economy principles into all stages of EV policy—from material sourcing to end-of-life management—and work with federal and local governments to establish a National EV Battery Recycling Program and Product Stewardship Scheme, including safety guidelines, training, and financial support for local governments.

Only around 10% of EV batteries are currently recycled in Australia, despite being up to 95% recyclable.[11] Without urgent action, projections indicate over 30,000 tonnes of used EV batteries entering the waste stream annually by 2030.[12] This represents both a significant environmental challenge and an economic opportunity for job creation and innovation. By investing early, Victoria can position itself as a national leader and hub for EV battery reconditioning, recycling, and circular supply chain innovation.

A comprehensive stewardship and recycling framework should:

- Promote research, innovation, and industry collaboration on battery recycling and second-life applications (such as stationary energy storage);
- Establish a national code of practice and safety guidelines for battery collection, transport, storage, and processing; and
- Provide funding, training, and technical support for local governments to work with waste/recycling contractors to ensure safe collection, handling and transport of end-of-life EV batteries.

The Victorian Government should advocate for EV batteries to be designated as a Priority Product under the National Product Stewardship Act. This would enable the development of a comprehensive, mandatory Product Stewardship and Recycling Scheme to ensure consistent national standards and accountability. Industry collaboration and leadership will be essential in designing systems that encourage improved battery design, manufacturing efficiency, reuse, and safe end-of-life management.

EV batteries have significant second-life potential, particularly in applications such as distributed energy storage. Incorporating circular economy principles throughout the product lifecycle—from sourcing and design to recycling and reuse—will help to minimise waste, reduce emissions, and support energy resilience.

Community awareness and participation are also critical to the success of any Product Stewardship Scheme. Lessons from existing Product Stewardship programs—such as the TV and Computer Recycling Scheme—show that local governments often bear substantial costs for safe handling, storage, and collection. To prevent similar challenges, comprehensive funding, clear guidance, and sustained technical support for local governments will be essential.

By establishing a coordinated national approach to EV battery stewardship and recycling, Victoria can not only mitigate future waste and safety risks but also seize the opportunity to drive economic growth, innovation, and circular manufacturing capability within the state.

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[11] https://www.csiro.au/en/research/technology-space/energy/decarbonising-industry-transport/energy-in-the-circular-economy/battery-recycling

[12] https://reneweconomy.com.au/australian-battery-recycling-start-up-given-8-million-to-scale-battery-recycling-tech/

Any other related matters the Committee considers relevant

Recommendation 6. Foster ongoing collaboration between all levels of government and industry to increase investment in public and active transport, ensuring that the EV transition occurs as part of an integrated transport strategy that meets community needs.

Beyond electrification, Victoria's transport future depends on reducing car dependence. Investing in public and active transport, shared mobility, and mode-shift initiatives will deliver significant co-benefits including lower emissions, reduced congestion, improved productivity and public health, and greater community liveability. Importantly, a shift to active and public transport will also help to moderate the impact of EV charging on the grid. Clear timelines and targets are needed to drive supply and demand if we are to achieve the rapid transition to a clean transport system that is needed to meet emissions reduction targets.

Recommendation 7. Enable councils to grant licence agreements to Charge Point Operators (CPOs) for the installation and operation of EV charging stations in council-managed parking bays located on urban arterial roads.

Victoria's arterial road reserves are managed differently depending on whether they are in rural or metropolitan municipalities. In metropolitan areas, car parks often form part of the arterial road network (e.g. parking on service roads), with many located near local shopping precincts. Under the Code of Practice: Operational Responsibilities for Roads (pp. 21–29), metropolitan councils are responsible for all aspects of these car parks—such as line marking, resurfacing, maintenance, parking enforcement, and lighting—except for granting licences to third parties (e.g. CPOs) to use parking bays for EV charging stations. Currently, only the Head of Transport for Victoria has the authority to lease or license sections of arterial road reserves under Clause 9 of the Road Management Act. This restriction prevents councils from licensing car parks on arterial road reserves for EV charging use. As a result, CPOs are effectively excluded from these locations—representing a missed opportunity to expand charging infrastructure in areas close to commercial activity and higher-density housing, while supporting local economic growth in shopping precincts.

Greenhouse Alliances and contacts

Barwon South-West Climate Alliance (BSWCA), Sue Phillips, Executive Officer, sue.phillips@bswca.org

- Colact Otway Shire
- Golden Plains Shire
- City of Greater Geelong
- Surf Coast Shire
- Warrnambool City Council

Central Victorian Greenhouse Alliance (CVGA), Annika Kearton, Chief Executive Officer, ceo@cvga.org.au

- Ararat Rural City Council
- Ballarat City Council
- Buloke Shire Council
- Central Goldfields Shire Council
- Gannawarra Shire Council
- Greater Bendigo City Council
- Hepburn Shire Council
- Loddon Shire Council
- Macedon Ranges Shire Council
- Mildura Rural City Council
- Mount Alexander Shire Council
- Pyrenees Shire Council
- Swan Hill Rural City Council

Eastern Alliance for Greenhouse Action (EAGA), Scott McKenry, Executive Officer, scott.mckenry@maroondah.vic.gov.au

- City of Boroondara
- Glen Eira City Council
- City of Knox
- Maroondah City Council
- Monash City Council
- Stonnington City Council
- Whitehorse City Council
- Yarra Ranges Council

Gippsland Alliance for Climate Action (GACA), Tiffany Harrison, Executive Officer, tiffany.harrison@gccn.org.au

- Baw Baw Shire Council
- East Gippsland Shire Council
- Latrobe City Council
- Wellington Shire Council

Goulburn Murray Climate Alliance (GMCA), Carole Hammond, Executive Officer, eo@gmca.org.au

- Alpine Shire Council
- Benalla Rural City Council
- Campaspe Shire Council
- Indigo Shire Council
- Mansfield Shire Council
- Mitchell Shire Council
- Moira Shire Council
- Murrindindi Shire Council
- Towong Shire Council
- Strathbogie Shire Council
- Wangaratta Rural City Council
- Wodonga City Council
- Alpine Resorts Victoria
- Goulburn Broken Catchment Management Authority
- North East Catchment Management Authority

Northern Alliance for Greenhouse Action (NAGA), Dean Thomson, Executive Officer, dean@naga.org.au

- Banyule City Council
- City of Darebin
- Hume City Council
- Manningham City Council
- City of Melbourne
- Merri-bek City Council
- Nillumbik Shire Council
- City of Whittlesea
- City of Yarra

South East Councils Climate Change Alliance (SECCCA), Helen Steel, Chief Executive Officer, hsteel@seccca.org.au

- Bass Coast Shire Council
- Bayside City Council
- Cardinia Shire Council
- City of Casey
- Mornington Peninsula Shire Council
- City of Kingston
- City of Port Phillip

Western Alliance for Greenhouse Action (WAGA) Fran MacDonald, Executive Officer, franm@brimbank.vic.gov.au

- Brimbank City Council
- Maribyrnong City Council
- Hobsons Bay City Council
- Melton City Council
- Moonee Valley City Council
- Moorabool Shire Council
- Wyndham City Council

This submission has been approved through the Greenhouse Alliances' governance structures but may not have been formally considered by individual members. The submission does not necessarily represent the views of all members.

[i] https://www.smh.com.au/politics/federal/australians-biggest-fears-about-buying-evs-and-the-one-new-tax-they-actually-want-20251014-p5n2fm.html