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Legislative Council Economy and Infrastructure Committee
Parliament House
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Submitted via Parliamentary hub.

31 October 2025

Dear Ms Purcell,

AGL Energy (**AGL**) welcomes the opportunity to respond to the Legislative Council Economy and Infrastructure Committee Inquiry (**the Inquiry**) into *Electricity Supply for Electric Vehicles (EVs)*.

Proudly Australian since 1837, AGL delivers around 4.5 million gas, electricity, and telecommunications services to our residential, small, and large business, and wholesale customers across Australia. AGL operates the largest private electricity generation portfolio in Australia, with a total operated generation capacity of almost 8000 MW across Australia. AGL is Australia's largest privately owned hydro power station operator and operates the largest portfolio of renewables and storage assets of any ASX listed company. Since 2006, AGL has invested billions of dollars in the construction and delivery of over 2 GW of renewable and firming capacity in the National Electricity Market (NEM).

AGL's views in response to this Inquiry relate to four broad topics under consideration:

1. **EV charging during periods of peak demand and supply on the grid-** EVs can support grid reliability and consumer affordability if charging is guided by flexible pricing and infrastructure that preserves future technology and user choice.
2. **Uptake of bidirectional charging-** facilitating EV uptake requires enabling consumer-led access to affordable, reliable bidirectional charging within a flexible, integrated energy system.
3. **The role for electricity distribution businesses in the roll-out of EV charging infrastructure-** distribution businesses should enable open access and flexible infrastructure while preserving competition and consumer choice in EV charging.
4. **Regulatory opportunities for the rollout of EV infrastructure-** regulatory reform should enable coordinated infrastructure planning, streamlined approvals, and equitable access to low-cost charging, while supporting consumer-led EV adoption.

1. Strategies to reduce EV charging during periods of peak demand on the grid

EVs represent more than a mode of transport. They have the potential to play a vital role in delivering reliable, secure, affordable, and safer energy as Australia transitions to Net Zero. With EV batteries capable of storing around 67KWh of electricity,¹ EVs can power homes and support the energy system. AGL's view of how EVs can benefit both consumer and the energy sector is informed by our experience in delivering EV products and services to customers, including:

¹ <https://evworld.au/ev-battery-range/#:~:text=EV%20Range%20Variables-,Energy%20storage%20capacity,Or%20more>



- AGL partnership with PLUS ES to expand New South Wales EV Charging network by installing 153 public chargers – Kerbside Charger - Pole Charging in Australia.
- AGL's electric vehicle (EV) plans, which have attracted over 35,000 customers (both OVO and AGL customers) in FY25– this includes the Night Saver EV Plan, a time-of-use (TOU) plan where customers are encouraged to charge their vehicle overnight for as low as \$5.
- AGL partnership with major Distribution Network System Providers across the NEM, auto manufacturers and EV charger developers to establish a collaborative ecosystem and launch its V2G trial - the trial aims to test the ability of EVs to discharge energy to power customers' homes and export to support the grid when needed.
- Our offering of EV home and commercial charging products and EV subscriptions.

Choice and availability of EV charging infrastructure is critical to help drive EV uptake. It will address issues such as 60% of customer concern around range anxiety and charging in Australia. ²The EV market is in its infancy in Australia, and the rollout of public charging and other supporting infrastructure is even more nascent. On this basis, the Inquiry should consider actions taken to facilitate growth in public EV chargers must maintain optionality, as consumer preferences and technology options evolve. Consumer choices should not be unfairly limited. Public funding to accelerate deployment and test technology options should be complemented by measures to safeguard and promote other forms of charging.

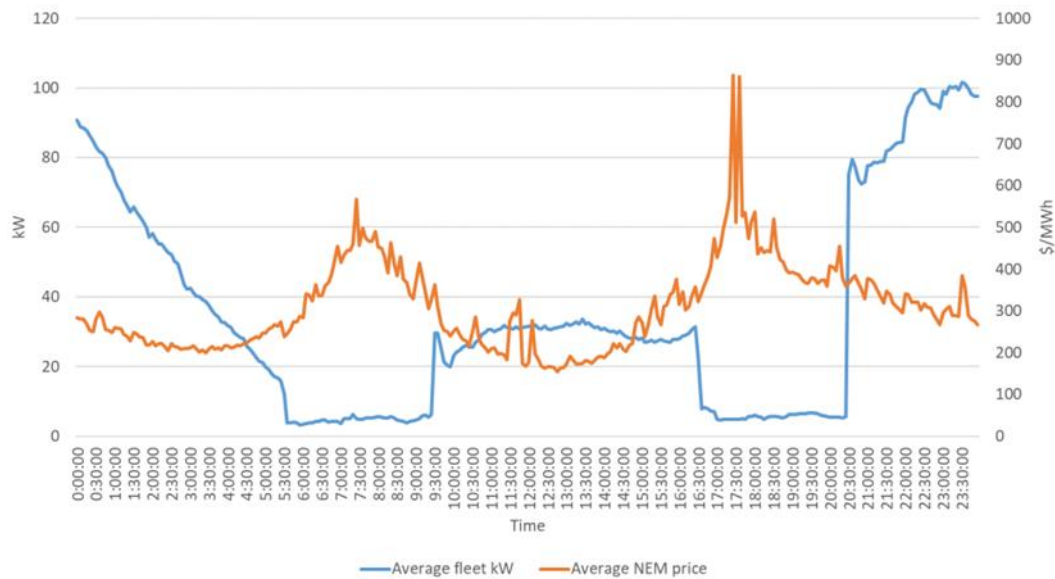
AGL acknowledges that the electrification of transport presents both opportunities and challenges for the energy system. Based on current data and projections, the impact of EV charging on peak energy demand is expected to be modest in the near term. Further the increased electricity consumption from EV charging outside the peak can increase network utilisation and reduce unit prices for all customers, particularly for the distribution network tariff component.

Analysis by the Electric Vehicle Council³ suggests that by 2030, EVs will contribute approximately 1% of total peak grid demand. Findings from AGL's own Australian Renewable Energy Agency (**ARENA**)-funded EV Orchestration Trial⁴, which included trialling 300 EV owners, reinforce this, showing very low coincident peak demand, around 450W per vehicle, even without coordinated pricing mechanisms. This is equivalent to the load of just a few traditional incandescent light bulbs.

² <https://www.aaa.asn.au/2025/08/new-real-world-tests-will-help-overcome-ev-range-anxiety/>

³ https://electricvehiclecouncil.com.au/wp-content/uploads/2024/12/Home-EV-Charging-and-the-Grid-2030_-edition-2.1_all-edits-complete-MS.pdf

⁴ <https://arena.gov.au/assets/2023/08/20230703-AGL-Electric-Vehicle-Orchestration-Trial-Final-Report.pdf>



Average daily load for the smart charger fleet and average NEM spot price, 1 July to 17 August 2022.

Our experience demonstrates that EV owners are highly amenable to changing behaviour in response to simple price signals, such as AGL's Night Saver EV plan. This reaction underpins AGL's view that simple, actionable and fair Time of Use (TOU) tariffs will greatly assist with managing demand. We observed customers shifting their charging to off-peak periods, predominantly overnight, in response to these signals (see graph above). In effect, TOU pricing proved to be as effective as controlled charging schedules,⁵ offering greater flexibility compared to controlled charging.

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

According to the Climate Change Authority's 2035 Targets Advice report,⁶ Australia requires 5 million EVs on the road by 2035 to reduce emissions by 62-70% by 2035. With only 167,850 EVs currently on the road, achieving these targets will require a collaborative approach between industry and Government to deliver a landscape where EV charging is affordable, accessible and reliable. This includes securing energy supply, fostering the uptake of smart technologies and ensuring seamless integration of EV chargers into the broader energy network.

Vehicle-to-grid / Vehicle-to-home technology

AGL views bidirectional charging as a critical enabler for lowering household energy costs and strengthening energy security in Australia. Commonly referred to as vehicle-to-grid (**V2G**) or Vehicle-to-home (V2H), this technology allows electricity to flow both ways – charging an EV from the grid or home solar and discharging energy from the EV battery back to the grid or to power their home.

By acting as mobile energy storage, EVs can help households reduce their electricity bills and even generate revenue through energy arbitrage and participation in other market and network services. V2H can even provide backup power to the home and/appliance during outages. This positions EVs not just as modes of transport, but as valuable and dynamic energy assets.

⁵<https://arena.gov.au/assets/2025/02/Bidirectional-Bidi-ROADMAP-2025-01-15-1.pdf>

⁶<https://www.climatechangeauthority.gov.au/sites/default/files/documents/2025-09/2035%20Targets%20Advice%20Report.pdf>



When electricity prices are low and renewable generation is high, EVs can charge cheaply and reduce prices for all customers by increasing utilisation of the distribution network. Later, they can discharge to power homes and/or be paid to export surplus energy back to the grid— a win-win that increases value for the EV customer and reduces costs for all other customer by helping to meet peak demand.

This two-way flexibility supports both increased reliability and savings for EV customers and reduced system costs for all customers while also increasing system resilience.

To unlock this potential, AGL and other energy retailers, DNSPs, carmakers and other technology innovators are launching V2G trials. These initiatives are designed to explore how customers can transition from passive energy consumers to active energy managers. By integrating EVs into the energy ecosystem, these trials pave the way for smarter, more sustainable energy use—especially as Australia ramps up its renewable capacity.

AGL's new *V2G trial* brings together all major Distribution Network Service Providers (DNSPs), leading EV manufacturers (including Hyundai, BYD, Kia, and Zeekr), and EV supply equipment providers to build a collaborative ecosystem for delivering V2G capability to customers. A warranty is provided to customers for their vehicle's battery while participating in the program. Throughout the trial we aim to gain critical insights to scale the program out in the future and potentially standardise the connection process with DNSPs.

AGL has also invested in a smart charging trial in South Australia to explore the optimal approach to delivering customer benefits and grid stability. Preliminary results from this trial have demonstrated smart charging could reduce commercial fleet owners and off-street carpark energy bills by 7%, whereby smart charging orchestration can lower infrastructure upgrade costs for property owners' onsite EV infrastructure upgrade costs and can reduce grid network congestion and overinvestment in the grid, leading to more efficient network utilisation.

AGL agrees that V2G offers significant potential to the energy market, as modelled in ARENA's study, including reducing \$0.7 to \$2.7 billion in wholesale generation costs on the grid (this includes CAPEX, OPEX and emission reduction) and distribution network peak demand costs by \$0.3 to \$2.4 billion.⁷ However, it is important that V2G uptake is consumer-led for it to be successful. Consumer interest, preferences, and protections will be critical to realising the opportunities of V2G initiatives and consequently inform associated technologies and supporting products. Success cannot be mandated. Success must be earned through innovation and product design that creates value for customers and makes it easy so that customers choose to buy EVs and chose to engage with V2G.

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

The EV market in Australia is still in its infancy, and the rollout of public charging and other supporting infrastructure is growing rapidly from a small base. The market is testing, learning and evolving rapidly and it is too early to be confident of what consumer preferences will be when it comes to publicly available infrastructure. It is important that consumer choices are not unfairly limited too early by locking in uniform electric vehicle charging infrastructure (EVCI) solutions at the expense of others.

AGL supports initiatives that explore innovative and new concepts, including a limited ringfencing waiver for kerbside charging trial in Victoria, however it is important that these trials are not anti-competitive. Trials should support customer centric innovation and enable ongoing competition to provide cost-effective solutions for customers. Consumers and charging providers need to be protected from unfair monopolistic practices. DNSPs control every aspect of connection, service and pricing for access to the distribution network for EV charging. There are risks that without appropriate protections DNSP led pole-mounted charging may not only crowd out other forms of kerbside charging but also undermine to the rollout and growth of adjacent AC and DC EV charging

⁷ <https://arena.gov.au/assets/2025/02/National-Bidi-Roadmap-MARKET-MODELLING-REPORT-2025-02-12.pdf>



markets (for example, destination charging and charging at shopping centres, retail precincts, apartment blocks and workplaces).

DNSPs have a critical role to play in enabling the roll out and connection of EV charging infrastructure as part of their core business. EV charging providers are customers of the network as are the end use customers who use the charging infrastructure. The core DNSP role includes providing access to connect to the network, access to use customer funded assets like power poles, and developing efficient tariffs that enable the ramp up of EV charging services and incentivise EV load-shifting.

Improvements in publicly available standardised network capacity information and charging connection processes would enable competitive providers of EV charging infrastructure to have open access to electricity networks and to develop innovative solutions that meet customer needs.

AGL does not support monopoly provision of EV charging such as pole-mounted EV charging, owned and maintained by DNSPs making preferential use of existing infrastructure paid for by customers. Focusing solely or predominantly on a monopoly DNSP-led EV charging infrastructure roll-out would have detrimental effects on the ability and incentive for competitive providers to deploy EV charging infrastructure designed for customers, where and when customers need them.

As a general economic principle, monopoly service providers are incentivised to over price and under service customers. Economic regulation is essential to define the required service and allowed returns for such providers. Should DNSP-led public EV charging be captured by the regulatory network determination framework, customers will pay for these assets through Regulated Asset Base for years, with a guaranteed return for the DNSP and cost recovery occurring regardless of utilisation levels or need for the assets and services.

Ringfencing is important to maintain alternative providers' confidence that they will have fair access to connect to the distribution network and that the network owner does not exploit their position to effectively impose an unregulated monopoly in adjacent markets, like public EV charging connected to the distribution network. Waivers to ring fencing requirements, where justified, should be exceptional, limited and narrowly defined to achieve the specific purpose. AGL appreciates that trialling new technologies or service delivery methods across Consumer Energy Resources will require ongoing flexibility in administering the regulatory framework. However, flexibility should not come at the expense of competition, which ultimately comes at the expense of consumers.

4. Regulatory opportunities

Accelerating the uptake of EVs will be an integral technology pathway for decarbonising Australia's economy, as transport currently accounts for 21% of Australia's emissions. The widespread uptake of EVs, when coupled with the decarbonisation of the electricity grid presents a substantial opportunity to deliver emissions reductions consistent with Australia's long-term commitments under the Paris Agreement.

AGL supports the National Electric Vehicle Strategy and its focus on establishing a national framework for the uptake of EVs as part of Australia's decarbonisation ambitions. AGL also supports the introduction of the New Vehicle Efficiency Standard that will incentivise car companies to supply new cars that use less fuel per kilometre. However, we consider there is more that could be done to accelerate the uptake of EV chargers across Australia to meet growing demand and to relay range anxiety.

Fundamentally, a more holistic approach will be required for the roll-out of public EV charging infrastructure in Australia to benefit all consumers. To achieve this, AGL considers there is a need for a national direction to set a clear path for the distribution of EV infrastructure across both urban and rural areas. A nationally coordinated approach could also assist in creating and planning consistent strategies across states, including the identification of where infrastructure is most required to prevent crowding and underutilisation. Distribution Network Service Providers could also share visibility and provide data to facilitate this process.



Ongoing strong support by State and Local Government will also be essential to enable the timely and cost-effective roll out of EV Charging infrastructure to meet the needs of customers in all locations. AGL recognises and welcomes the strong track record of the Victorian State and Local Governments to support the roll out of EV charging infrastructure.

Streamlining Planning Approvals

Public charging options remain an important choice for some factions of our community. AGL acknowledges that the Victorian Government has played its part in developing its *Zero Emissions Vehicle Roadmap*⁸ to assist in the rollout of EV public charging infrastructure. While this has made strides, AGL considers there are still regulatory challenges that prevent the accelerated implementation of charging infrastructure.

While state governments play a critical leadership role in expanding public EV charging networks, local governments also have an important role to play in enabling deployment by reducing regulatory barriers and collaborating with industry. Local governments are uniquely positioned to respond to the needs of their communities and implement practical measures that enhance the accessibility and convenience of public EV charging.

Local governments should review and, where appropriate, simplify planning approval processes to ensure they do not become a barrier to public charger deployment. This includes streamlining requirements related to lighting, signage, and integration of charging infrastructure in public spaces, ensuring that such considerations do not unnecessarily delay or complicate installations.

Facilitate Zero-Cost Land Access for Charge Point Operators (CPOs)

There is opportunity for local councils to play an even more proactive role in accelerating the rollout of EV charging infrastructure. One impactful way councils can contribute is by offering low-cost leases or access arrangements for government-owned land, such as public car parks, libraries, and community centres to support the deployment of public charging stations.

While funding and delivery are typically led by state and federal governments, local governments are uniquely positioned to act as enablers by prioritizing the broader public benefits of increased EV adoption. These include reduced transport emissions, improved equity in access to clean mobility, and stimulation of local economic activity through new jobs and services.

Importantly, councils can also demonstrate visible leadership in the transition to e-Mobility. By installing chargers at council buildings, electrifying their fleets, and integrating EVs into community programs, they send a strong signal of support for the shift to cleaner transport. This not only builds public confidence but also encourages private investment and uptake in surrounding areas.

Private EV-charging in apartment dwellings

One area that AGL considers is underdeveloped and critical to enabling wider EV uptake, is the availability of low-cost charging in apartment dwellings. From past ARENA studies, AGL is aware that at-home charging is customers' preference for recharging their EVs due to lower costs, however this option is not always feasible to some customers.

AGL is aware that many apartments in Victoria lack EV charging capability, notably 30% of our customer base who reside in apartment dwellings. This is primarily due to the cost of installing EV chargers being traditionally

⁸ <https://www.energy.vic.gov.au/renewable-energy/zero-emission-vehicles>



high, which has meant it is often challenging for strata's to approve passing charging fees onto property owners, ultimately limiting tenants' access to EV options.

We understand that there are some initiatives underway to address this barrier, such as NOX's ARENA funded trial, which will deploy nearly 2,000 "Intelligent Power Sockets" (IPS) across 16 strata-titled apartment buildings in Australia, with a focus on slower charging, suitable for overnight home/residential use, rather than high-power fast chargers (Level 1 chargers). Some installations will trial load-shifting behaviour, for example, aligning EV charging with rooftop solar export in strata buildings. EV-drivers will pay the electricity, plus a service fee. The owners' corporations receive full reimbursement, and apartment owners without EVs do not subsidise charging.

AGL encourages the Inquiry to identify pathways and mechanisms for scaling this innovation nationally. One approach could include using regulatory levers, such as minimum standards for rental properties in Victoria to require body corporates to install chargers in large apartment dwellings, encouraging renters' uptake of EVs. This could also be used to benchmark progress against broader government policy, for instance the *Trajectory for Low Energy Buildings*.⁹ Alternatively, a rebate scheme that supported property owners with installing infrastructure, equivalent to New South Wales' *EV Ready Building scheme*, could be mirrored¹⁰ to help meet Australia's 2035 emissions target.

Consumer protections

We note the Department of Energy, Environment and Climate Action is developing a CER consumer protections framework.¹¹ As technology develops in the V2G, as referenced above regarding our V2G trial, it will be important to apply adequate customer protections, such as Codes of Practice and standards to prevent malpractice, to deliver best positive outcomes and promote customer confidence. We encourage the Inquiry to consider this work when developing their Report.

Should Committee members wish to discuss AGL's V2G findings in more detail, please do not hesitate to contact us to facilitate a meeting. Equally, if you have any questions in relation to this submission, please contact Emma Holloway (Manager, Regulatory Affairs) at eholloway@agl.com.au.

Yours sincerely,

Ralph Griffiths
General Manager, Policy & Regulation

⁹ <https://www.dcceew.gov.au/energy/energy-efficiency/buildings/trajectory-low-energy-buildings>

¹⁰ <https://www.energy.nsw.gov.au/business-and-industry/programs-grants-and-schemes/electric-vehicles/electric-vehicle-ready>

¹¹ <https://engage.vic.gov.au/CER-consumer-protections-review>