



20 March 2024

Standing Committee on Climate Change, Energy, Environment and Water
House of Representatives Committees
Lodged via online portal.

Submission to the Inquiry into the transition to electric vehicles

Energy Consumers Australia (ECA) appreciates the opportunity to provide input to the *Inquiry into the transition to electric vehicles*.

ECA is the national voice for residential and small business energy consumers, and advocates for a future Australian energy system that works for, and benefits, the households and small businesses who use it. Electric vehicles (EVs) can benefit households and small businesses as the energy system (and more broadly Australia) transitions to net zero emissions, and as we see increasing uptake of consumer energy resources (CER) such as EVs. As such, we support government policy that enables all Australians to access these benefits and delivers good outcomes for consumers.

[Consumers that switch to EVs will reduce electricity bills not only for themselves, but for all electricity consumers](#)

Our *Stepping Up* report finds that EVs will provide significant benefits to both households and small businesses that make the switch and all electricity consumers.¹ The modelling found that by 2030, EVs would provide significant annual savings for individual consumers (\$1,410) and moderate savings for all electricity consumers (\$330).

Annual Savings from Electric Vehicles (20-year average)



This analysis assumes that the overall EV adoption targets identified by the 2022 ISP Step Change are achieved.

Source: Stepping Up Report

¹ ECA, *Stepping Up: A smoother pathway to decarbonising homes* (August, 2023).

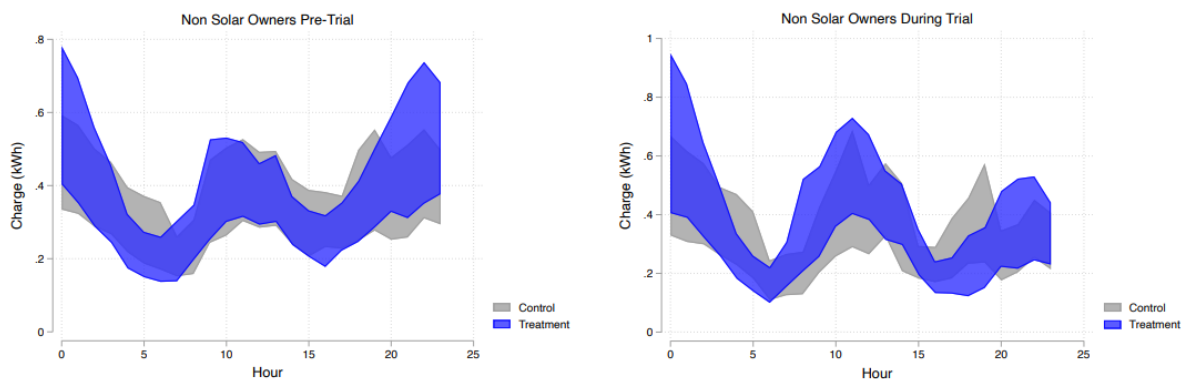


The reason that EVs benefit all electricity consumers is due to better network utilisation. The latest research in Australia suggests that currently, consumers tend to charge their EVs at times when the grid is not stressed and aligned with solar production.² Where this occurs, additional EVs increase electricity demand without significantly increasing the size or cost to provide local grid infrastructure – which reduces the unit cost of the network. Overall, while some additional expenditure will be required to increase network capacity to meet higher peak demands, these costs are more than offset by improved network utilisation. This is consistent with evidence in California, where millions of EVs have demonstrably put downward pressure on electricity prices (and consequently provided benefits for other grid users).³

The impact of EVs on electricity consumption and demand

There are also opportunities to further reduce the impact of EVs on peak demand by incentivising users to charge at times when the grid isn't stressed. We know that consumers can be flexible in when they charge if provided with an encouragement. For example, research by the University of Queensland found that providing a financial incentive prompted consumers to shift their charging off peak periods by as much as 26% and increase their charging when energy is abundant by up to 25%.⁴

Impact of financial incentives on the pattern of average electricity use by non-solar owners



Source: The UQ CHARGE-EV Project Final Report

This aligns with research from Monash University, which found that 36% of households would prefer to charge when it is the least expensive for them.⁵

Further, AEMO's *2024 Draft Integrated System Plan* acknowledges that EV ownership is expected to significantly increase from the late 2020s when determining its roadmap for the transition of the National Electricity Market power system (expecting that by 2050 between 63-97% of all vehicles are battery EVs).⁶ It consequently forecasts that the coordination of EV storage will have an increasing role in the needs of the energy system (which can be seen in the below figure, noting that coordinated CER storage including EVs).

² CSIRO, *Electric vehicle projections 2023: update to the 2022 projections report* (December 2023); CSIRO, *Electric vehicle projections 2022* (November 2022).

³ Synapse Energy Economics, *Electric Vehicles Are Driving Electric Rates Down* (December 2022).

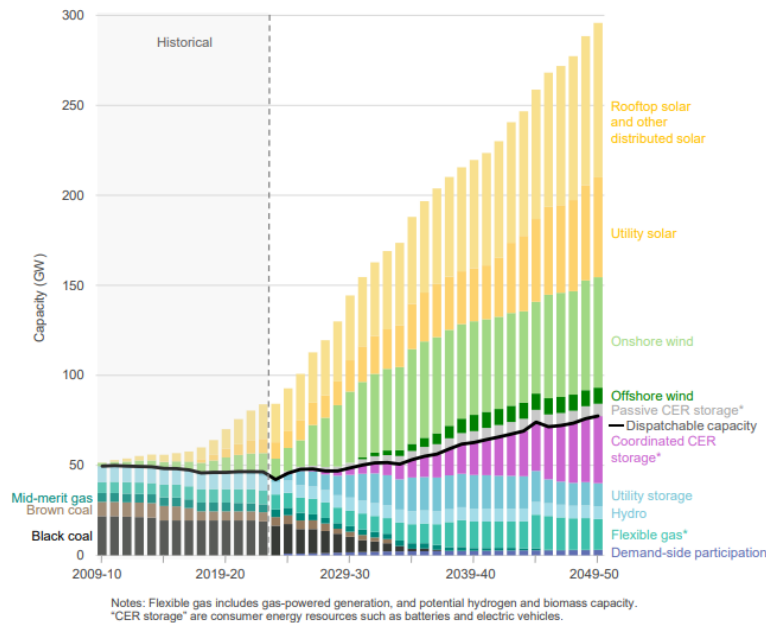
⁴ The University of Queensland, *The UQ CHARGE-EV Project: Final Report* (February 2024).

⁵ Monash University, *Future Home Demand: Anticipating Energy and Everyday Life Trends Across Three Victorian Networks* (October 2023).

⁶ AEMO, *Draft 2024 Integrated System Plan* (January 2024).



Capacity, NEM (GW, 2009-10 to 2049-50, Step Change)



Source: Draft 2024 Integrated System Plan

A crucial expectation of this coordinated storage is that it will have the ‘smarts’ to help manage the import and export of electricity to the grid. Further, as the report itself notes, ensuring this capacity will depend on robust financial incentives, technology and communications standards, customer preferences, and market or policy arrangements. If consumers do not see the value of participating in these services or making the intended behavioural changes (and which may require giving some level of control over their vehicle to another party), they will simply choose not to take part. For example, automated charging of EVs is still an unfamiliar concept for both current and prospective EV owners, and many households envision being unwilling to hand over the management of their charging to a third party or automated system.

While there are significant barriers for consumers to participate in vehicle-to-grid today, some consumers are already benefitting from providing such services.⁷ For example, during a heatwave in NSW, one EV owner earned \$100 for providing energy back to the grid for two hours.

[Comprehensive policies, including the establishment of resources, systems and infrastructure are required to support the transition to EVs and positive consumer outcomes](#)

Consumers need to be empowered to access the benefits of EVs

1. Consumers need support to make EV-related decisions

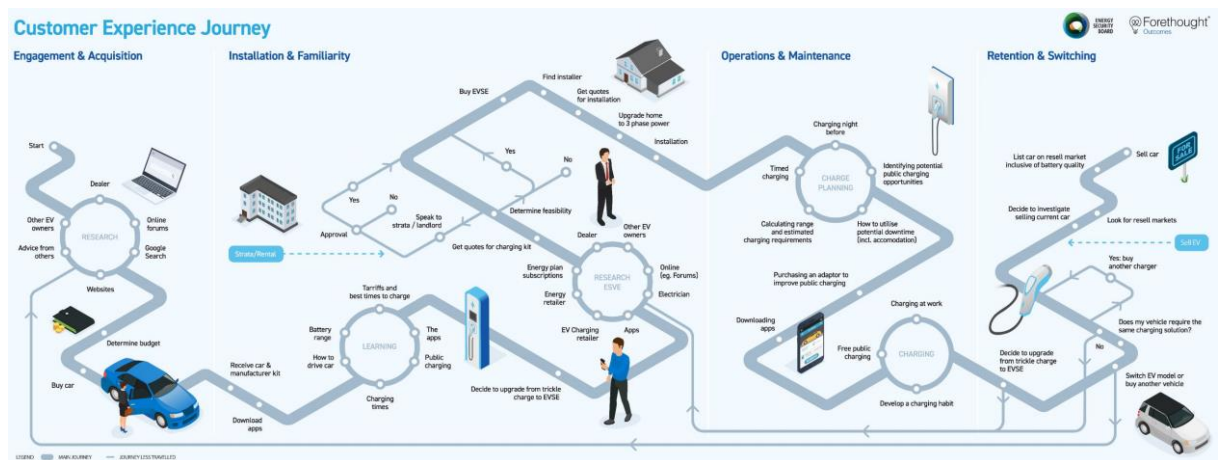
Other policy levers will not be effective without targeted, tailored advice for consumers to support their decisions on EV-related issues. For energy decisions more broadly, research finds that already consumers struggle to locate the information they are looking for, and too often what they do find is

⁷ The Driven, [V2G: My Nissan Leaf earned \\$100 in just two hours supporting grid in heatwave](#) (accessed March 2024).



neither relevant nor easy to understand.⁸ This is similar for EV-related decisions, where even heavily engaged early adopters are having difficulty navigating the market and managing their EV charging.⁹ The below journey map shows the number of potential EV-related actions which a consumer may consider.

Current state journey map – potential actions taken by consumers



Source: Customer Insights Collaboration Release 3 Knowledge Sharing Report

Ultimately, as the number of choices in how consumers use and manage their energy technologies and services grow, there is a real risk that consumers’ agency to make decisions in their best interests will be vastly diminished. To address this, our research identifies the need for the provision of the right information, at the right time, from trusted sources.¹⁰ We see that the nature of consumer support in the energy sector must be fundamentally refocused towards more practical enablement and delivery, in the form of establishing a one-stop-shop. To address EV charging needs specifically, this could include access to a comparator to assist consumers in identifying the most suitable EV equipment and tariff option for them, aligned with their specific needs and preferences.¹¹ We would be happy to discuss this in more detail with the Standing Committee on Climate Change, Energy, Environment and Water, including our Pre-Budget submission to the Commonwealth Treasury (a request for funding for ECA to develop a business case for a one-stop-shop).

2. Consumers need to know they are protected

We support a fulsome review of consumer agency, protections and dispute resolution frameworks for energy products and services, to ensure they are comprehensive and robust in their application of evolving innovative CER and services.¹² Existing arrangements are not fit-for-purpose and will increasingly become out of date as the energy system transitions, which will impact consumer confidence and trust in emerging markets and providers.

For example, the current jurisdictional energy and water ombudsman schemes play an important role in helping customers resolve complaints, but their current jurisdiction does not capture all EV-related

⁸ ECA, *Household Energy Consumer Information Research* (November 2023); ECA, *SME Energy Consumer Information Research* (November 2023).

⁹ ESB, *Customer Insights Collaboration: Release 3 Knowledge Sharing Report* (June 2023).

¹⁰ ECA, *Household Energy Consumer Information Research* (November 2023).

¹¹ ESB, *Customer Insights Collaboration: Release 3 Knowledge Sharing Report* (June 2023).

¹² ECA, *Submission: Review of consumer protections for future energy services* (December 2022).



products and services, such as EV charging equipment. This results in consumers having to seek alternative, complex, and often costly forms of redress, without adequate resolution.¹³ This lack of single point of accountability or assistance is frustrating for consumers, leading to disengagement in the market and reducing their trust in the energy industry and energy transition. Consequently, we recommend working with state and territory governments to expand the jurisdiction of the ombudsman schemes to include all energy services.

3. Consumers need adequate infrastructure

The development and enforcement of rules and standards for EVs and related equipment (that deliver value and optionality for consumers), is necessary to support consumers' confidence and ensure safe and effective products.¹⁴ This should include interoperability standards, which can enable the flexibility of EV load, and which is critical for an energy system that relies on the storage capabilities of EVs. Currently, consumers installing EV charging equipment may encounter interoperability issues which can be time consuming and costly to resolve.¹⁵

Further, we recommend the establishment of robust reliability standards for public charging infrastructure across jurisdictions, to address concerns about station availability and functionality and ensure positive and consistent public charging station experiences. This should include simplifying the public charger interface, to eliminate confusion surrounding payment methods within the existing charging infrastructure and provide flexibility for consumers to choose a payment method that suits their needs.¹⁶

Policy must also ensure that the transition to EVs is equitable

Our regular *Energy Consumer Behaviour Survey* identifies a growing divide in the ownership of CER (including EVs) between those who own a house, and those who live in apartments, rent, or identify as being under financial pressure.¹⁷ Our *Household Energy Consumer Information Research* also identifies that these cohorts feel less engaged with the market, less hopeful about the future, and less sure of their ability to take actions that will enable them to take part in the energy transition.¹⁸ It is important that government policy prioritise an equitable transition that ensures all consumers can access the benefits of EVs.

The significant upfront cost is a barrier for many consumers, let alone other related expenses (for example charging equipment, or the cost of upgrading electrical wiring in the home if needed). Policy should target improving access to low-cost EVs, and we note the work underway to establish a globally competitive New Vehicle Efficiency Standard.¹⁹ Further nationally consistent incentives are needed to reduce the upfront cost and further stimulate demand, which could include zero interest loans or leasing schemes.²⁰ For example, in the ACT Government's Sustainable Household Scheme, eligible households can access interest-free loans of up to \$15,000 to purchase efficient CER, which

¹³ University of Sydney, *What will energy consumers expect of an energy and water ombudsman scheme in 2020, 2025, and 2030?* (October 2019).

¹⁴ ECA, *Electric Vehicle Smart Charging Issues Paper submission* (September 2022).

¹⁵ ESB, *Customer Insights Collaboration: Release 3 Knowledge Sharing Report* (June 2023).

¹⁶ ESB, *Customer Insights Collaboration: Release 3 Knowledge Sharing Report* (June 2023).

¹⁷ ECA, *Understanding the energy divide* (December 2023).

¹⁸ ECA, *Household Energy Consumer Information Research* (November 2023).

¹⁹ Department of Infrastructure, Transport, Regional Development, Communications and the Arts, *The Australian Government is introducing a New Vehicle Efficiency Standard for cleaner and cheaper-to-run cars* (accessed March 2024).

²⁰ EVC, *Australian Electric Vehicle Industry Recap 2023* (March 2024).



includes EVs and EV charging infrastructure.²¹ We emphasise that such schemes should target low and middle income households, who are least able to make the switch but are most affected by increasing fuel and other costs.

As mentioned above, housing ownership and type is also a barrier for many consumers, with only 52% of Australian households being stand-alone and owner-occupied.²² Policy should support accessible and widespread charging infrastructure for consumers who face additional barriers in charging their EV at home, particularly renters, those without off-street parking or living in multi-unit dwellings. Our June 2022 Energy Consumer Sentiment Survey found that for households and small businesses, two key reasons they haven't purchased an EV (apart from cost) are that there aren't enough charging stations and that they don't have anywhere to charge an EV at home.²³

Thank you again for the opportunity to provide input into this inquiry, which we see as an important opportunity to support consumers to access the benefits of EVs and reduce their energy bills. If you have any questions or comments about our submission, or require further detail, please contact Isabella Darin at isabella.darin@energyconsumersaustralia.com.au.

Yours sincerely,

Dr Brendan French
Chief Executive Officer

²¹ ACT Government, *Sustainable Household Scheme* (accessed March 2024).

²² ECA, *Stepping Up: A smoother pathway to decarbonising homes* (August, 2023)

²³ ECA, *Energy Consumer Sentiment Survey* (June 2022).