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FINAL REPORT

Australian Consumers at the Heart of the EV Transition

September 2026



Final report

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Acknowledgement of Country

The authors of this report would like to respectfully acknowledge the Traditional Owners of the ancestral lands throughout Australia and their connection to land, sea and community. We recognise their continuing connection to the land, waters, and culture and pay our respects to them, their cultures and to their Elders past, present, and emerging.

What is RACE for 2030?

RACE for 2030 is a 10-year cooperative research centre (CRC) with $350 million of resources to fund and support research towards a reliable, affordable, and clean energy future.

Disclaimer

The authors have used all due care and skill to ensure the material is accurate as at the date of this report. The authors do not accept any responsibility for any loss that may arise by anyone relying upon its contents.



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1 Executive summary

Why this project matters

Australia's transition to electric vehicles (EVs) is accelerating but remains at an early stage, supported by policy reforms, vehicle emissions standards, public charging investment and growing market activity. However, the transition will not be successful, equitable or inclusive if it is treated only as a technical challenge of vehicle supply, purchase price, driving range, or charging infrastructure. These factors matter, but this project demonstrates that EV uptake is also shaped significantly by behavioural, social, cultural, economic, technological and structural conditions.

EV adoption should be understood as a multi-level behaviour and social change challenge, not simply as a technology diffusion or infrastructure delivery problem.

Consumers do not make EV decisions in isolation. Their intentions and behaviours are shaped by everyday mobility and energy practices, household income, housing tenure, access to charging, and geography. Also important are trust, social norms, direct EV experience, misinformation, financial confidence, car culture, perceived value, household energy technologies, and the extent to which EVs are perceived to fit with household routines and aspirations. This means EV adoption should be understood as a multi-level behaviour and social change challenge, not simply as a technology diffusion or infrastructure delivery problem.

What the project did

The project engaged with Australian consumers to understand their everyday mobility and energy behaviours and practices, attitudes towards EV purchase and uptake, and how these are shaped by individual, social, cultural, economic, technological and structural influences. This project translates these insights into practical recommendations for policy, infrastructure, market development and behaviour change. The project used a mixed-methods design combining qualitative consumer ethnography, participant-generated videos, a nationally representative survey and participatory co-design workshops.

122
consumer household participants

188
interviews

413
participant videos

2,481
usable survey responses

2
2 co-design workshops with householders, industry and government stakeholders

Key insights

- **EV readiness is a multi-level systems challenge.** Our findings illustrate that EV uptake is shaped by interacting macro, meso and micro-level factors. Policy support and charging infrastructure are important, but EVs also need to be seen as feasible, desirable and relevant to everyday life. This requires a strategic approach to address issues relating to trust, economic conditions, housing tenure, financial capability, geography, social norms, collective efficacy, car culture, misinformation, knowledge, attitudes and perceived value.
- **Consumers differ in their readiness to adopt.** Our segmentation analysis of survey data identified four EV readiness profiles: **Informed Enthusiasts**, **Cautiously Interested**, **Undecided Mainstream** and **Excluded or Resistant**.

INFORMED ENTHUSIASTS	CAUTIOUSLY INTERESTED
14% of sample	**13% of sample**
Most EV-ready, with stronger knowledge, perceived value, policy support and direct EV experience.	Interested but held back by misinformation, anxiety, knowledge gaps and practical constraints.
UNDECIDED MAINSTREAM	**EXCLUDED OR RESISTANT**
54% of sample	**19% of sample**
Open but unconvinced, awaiting clearer value, affordability, trust and practical feasibility.	Lowest readiness, reflecting weaker value and support alongside structural barriers, misinformation and technology discomfort.

These groups differ in their knowledge, confidence, misinformation endorsement, direct EV experience, perceived value and readiness to adopt. The four EV readiness profiles are distinguished by interacting macro, meso and micro-level factors. Future longitudinal tracking is needed to understand how consumers shift between profiles as policies, infrastructure, prices, technologies, information environments and social norms change. This segmentation model demonstrates that EV transition programs need to be segmented, targeted and evidence based.

- **Perceived value is a major and multi-dimensional driver of EV uptake.** The survey analysis found that consumer perceived value was the strongest domain associated with EV purchase intent and purchase timeline. Perceived value is multidimensional and consists of functional, economic, emotional, social and ecological value. Although ecological value received the highest average rating by survey participants, functional, economic and emotional value were more closely associated with purchase intent and expected purchase timeline. Our qualitative research identified that consumers are more likely to consider EVs when they see them as environmentally credible, practical, compatible with everyday life and financially worthwhile as well as enjoyable, safe and socially meaningful. This means EV value propositions need to go beyond economic and ecological benefits to also address functional, emotional and social value.

- **Equity is central to the transition.** Qualitative and quantitative data analysis suggested that EV uptake is easier for households with higher incomes, home ownership, off-street parking, home charging, solar PV, batteries, financial confidence and digital capability. Lower-income households, renters, apartment dwellers, regional and rural communities, people relying on the second-hand vehicle market, and consumers with limited charging access or trusted information face greater barriers. Household energy technologies such as solar PV, batteries, HEMS, smart charging and V2G can increase the value of EV ownership but may also concentrate benefits among households already able to participate. Without targeted support, the transition risks concentrating benefits among already advantaged households, while excluding groups who may face higher costs and fewer practical pathways to participate.
- **Charging access is about more than charger numbers.** The data findings suggest that consumers assess charging in relation to where they live, where they park, whether they can charge at home, whether public charging is visible and reliable, and whether charging systems are easy to use. Charging access is therefore linked to housing, tenure, strata arrangements, public infrastructure, signage, payment systems, interoperability and confidence that charging can fit into everyday routines.
- **Misinformation endorsement undermines EV readiness.** Our qualitative findings highlighted that participants encountered misleading or uncertain claims about EV cost, range, charging, fire risk, battery life, environmental impacts, manufacturer reliability and suitability for Australian conditions. Survey analysis suggested that higher misinformation endorsement was associated with lower purchase intentions and longer expected purchase timelines, while greater objective EV knowledge was associated with lower misinformation endorsement. However, misinformation is also linked to trust, identity, values, social networks, car culture and resistance to change, meaning that countering it requires more than simply providing accurate information.



Key recommendations

The project findings point to the need for coordinated action across policy, infrastructure, markets, communities and behaviour change. EV uptake will not be accelerated equitably through siloed interventions. The findings suggest the need for an integrated intervention mix that reduces structural barriers, builds trust, counters misinformation, increases direct experience, makes value tangible, supports new business models and ensures that under-served groups and places are not excluded from the EV transition. Drawing on the combined qualitative, survey and co-design findings, the report presents six linked recommendations: an overarching systems-oriented and segmented approach, supported by five action areas relating to perceived value, equity, business models and markets, community-led interventions and countering misinformation and promoting trusted information.

1		**Develop systems-oriented, segmented EV transition interventions that integrate policy, technology, infrastructure and behaviour change for consumer segments:** The findings support coordinated interventions that align policy, funding, infrastructure, trusted information, direct experience, market supports and evaluation, tailored to different EV readiness profiles and household circumstances rather than a generic consumer pathway.
2		**Promote the multi-dimensional perceived value of EVs:** The findings support segmented, evidence-based and experiential consumer perceived value propositions that communicate the functional, economic, emotional, social and ecological value of EVs while remaining transparent about barriers and diverse consumer circumstances.
3		**Embed equity and inclusion in the EV transition:** EV transition policy, program design and infrastructure planning can be strengthened by inclusion of measures that address equity and inclusion across different sectors of the community. This includes targeted support for lower-income households, renters, apartment dwellers, social housing residents, regional and rural communities, people without off-street parking and those reliant on the second-hand vehicle market. Our research findings identified compounded affordability, housing, charging and access barriers affecting these groups. We therefore recommend assessing equity through measurable differences in access, affordability, participation and realised transition benefits across households, communities and places.
4		**Develop business models and market supports that reduce friction in the EV journey:** Automotive, charging, energy and mobility market actors could help reduce friction across the consumer journey by improving model choice, affordability, second-hand EV confidence, public charging access, payment systems, signage, interoperability, shared EV models, HEMS, smart charging and network-aware charging offers.
5		**Develop community-led EV transition interventions:** Local governments, regional authorities and community organisations could be supported to co-design place-based interventions, including community EVs, community charging hubs, shared mobility schemes, community energy assets, peer learning, local demonstrations, and trusted local engagement.
6		**Counter EV misinformation and build trusted information pathways:** Counter-misinformation work could combine research, trusted messengers, independent and reliable information, community-based communication, peer learning, driver education, practical demonstrations and evaluation. This approach would distinguish misinformation and uncertainty from legitimate barriers rather than dismissing consumer concerns.

Together, these recommendations support coordinated action across policy, infrastructure, markets, technology, communities and behaviour change programs to reduce barriers and create enabling conditions for equitable EV uptake.



What happens next?

Policy, infrastructure, market and community investments can be informed by evidence about how people make decisions, experience barriers, respond to misinformation, understand value, and how these shape behavioural change over time. Longitudinal behavioural tracking, segmentation analysis, policy analysis, intervention design, pilot testing, and independent evaluation can help understand what works, for whom, under what conditions, and with what equity effects. A key implication of this project is that behavioural and social science evidence is useful to inform EV transition planning, implementation and evaluation. This evidence base can help governments, industry, energy networks, automotive stakeholders and relevant community organisations move from fragmented activity to coordinated, accountable and inclusive programmes that genuinely put Australian consumers at the heart of the EV transition.

2 Background

Despite recent growth in sales, policy support and charging infrastructure investment, Australia remains at an early stage in the transition to electric vehicles (EVs). Australia has historically lagged behind many comparable countries in the transition to cleaner transport and EV uptake (Electric Vehicle Council, 2023). Recent policy reforms and market developments have begun to shift this position, but EVs still represent a minority of new vehicle sales and a relatively small share of the total registered vehicle fleet. In 2025, more than 157,000 EVs were sold in Australia, including 103,300 battery electric vehicles and 53,484 plug-in hybrid electric vehicles, with EVs accounting for 13.1% of new car sales, up from 9.6% in 2024. Australia's total EV fleet was estimated at more than 454,000 vehicles by the end of 2025 (Electric Vehicle Council, 2026).

The EV transition is a systems-oriented behaviour change challenge

Australia's EV transition is still in the early stages. Increasing uptake will require more than expanding vehicle supply, strengthening emissions standards, reducing prices or building charging infrastructure. It will require coordinated action across policy, markets, infrastructure, households and communities to address the individual psychological, socio-cultural and structural barriers, and strengthen the enabling conditions that make EV adoption practical, trusted, equitable and valuable in everyday life.

These figures indicate growing momentum in the new vehicle market. However, fleet penetration remains low: Bureau of Infrastructure and Transport Economics (BITRE) data indicate that battery and fuel-cell electric vehicles accounted for approximately 1.2% of all registered motor vehicles and approximately 1.6% of registered passenger vehicles on 31 January 2025 (BITRE, 2025). EV uptake in Australia therefore remains early-stage, uneven and subject to significant affordability, infrastructure, housing, information and trust barriers.

Insights about how to achieve an equitable and inclusive EV transition are therefore critical (Finkel et al., 2017). EV uptake is likely to be easier for households with higher incomes, home ownership, off-street parking, access to home charging, rooftop solar, batteries, financial flexibility and higher levels of digital and energy literacy, given that upfront costs, income, charging access, home charging and parking infrastructure have all been identified as important barriers or enablers of EV uptake in Australia (Consumer Policy Research Centre, 2022; Loengbudnark et al., 2022; Pink et al., 2022).

Other groups, including lower-income households, renters, apartment dwellers, regional and rural communities, people reliant on the second-hand vehicle market, and consumers with limited access to trusted information or charging infrastructure, may face greater barriers, because EV access and use are shaped by socio-economic, housing, cultural and geographic conditions as well as vehicle affordability and infrastructure availability (Beer, 2012; Crawford et al., 2010; Fuller, 2007; Nutley, 2003; Philip et al., 2023).

Without strategic and targeted policy, market, infrastructure and behaviour change support, the EV transition risks reinforcing existing inequalities and limiting participation among households and communities that are already less able to access the benefits of new transport and energy technologies (Finkel, 2017; Consumer Policy Research Centre, 2022; Pink et al., 2022).

This project responds to that need by placing Australian consumers at the heart of the EV transition. It examines how everyday mobility and energy behaviours are shaped by an interrelated system of individual, social, cultural, economic, technological and structural influences, and identifies the barriers and enablers that need to be addressed systemically to support effective, equitable and



inclusive EV uptake. The project combines qualitative consumer research, participant-generated video data, a national survey and co-design workshops to understand EV ownership and non-ownership experiences, consumer readiness, perceived value, misinformation, equity barriers and the implications of EV adoption for households, communities, markets and energy systems.

The report provides evidence-based recommendations for policy, infrastructure, market development, technology and behaviour change. These recommendations are designed to be useful for government policymakers and planners, energy market stakeholders, electricity networks, vehicle manufacturers and retailers, infrastructure delivery partners, technology and service providers, local governments and community organisations. They are informed by a consumer segmentation model developed for Australian consumers, which considers demographic, psychographic, geographic and behavioural factors. The aim is to support more targeted, practical and equitable approaches to EV transition planning, implementation and evaluation.

3 Aims and research Questions

Project aim

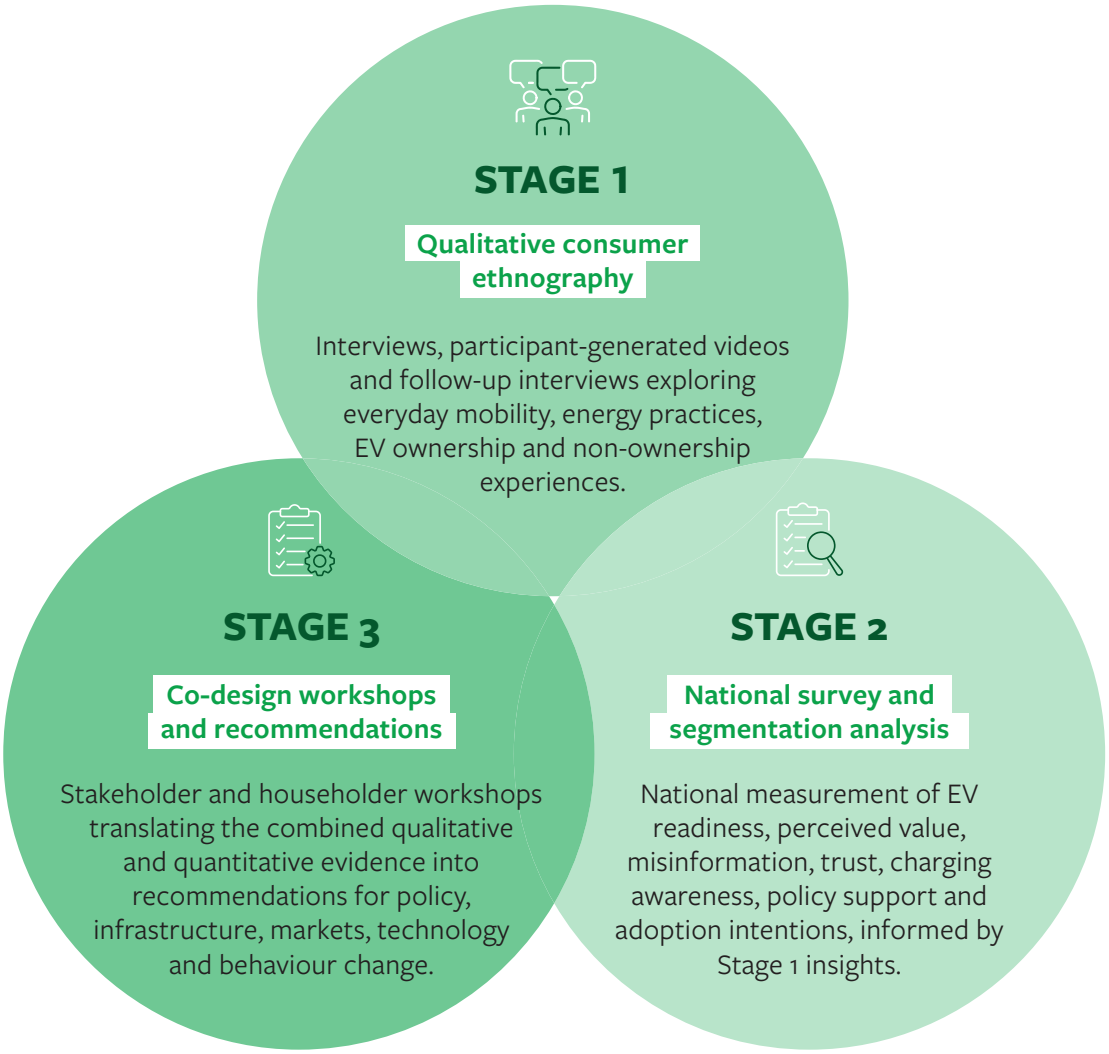
To put Australian consumers at the heart of the EV transition by understanding everyday mobility and related energy behaviours, the influences that shape them, and the barriers and enablers of behavioural change needed to support an effective, equitable and inclusive transition.

This project sought to answer five research questions:

RQ1		What are the behavioural intentions of non-users regarding EVs, and the behavioural patterns among current EV users?
RQ2		What are the individual, socio-economic, cultural, and structural factors that mediate consumer perceptions, attitudes, and behaviours towards EVs in Australia?
RQ3		How do consumers perceive the functional, economic, emotional, social and ecological value associated with EV uptake and use?
RQ4		What are the key barriers and enablers and how might these be overcome or utilised to increase the inclusive adoption of EVs among Australian consumers?
RQ5		How can these consumer research insights inform policy, practice, and infrastructure delivery to best meet the needs of Australian consumers in terms of equity and inclusivity during the transition towards EVs?

4 Methods

The project used a three-stage mixed-methods research design. This design combined in-depth qualitative exploration of consumer experiences, with a national quantitative measurement of EV readiness and adoption influences, and participatory co-design of recommendations for policy, infrastructure, market development and behaviour change. This staged approach ensured that the national survey and final recommendations were grounded in the lived experiences of Australian consumers' mobility, household energy practices, EV ownership and non-ownership, and the barriers and enablers shaping EV uptake.



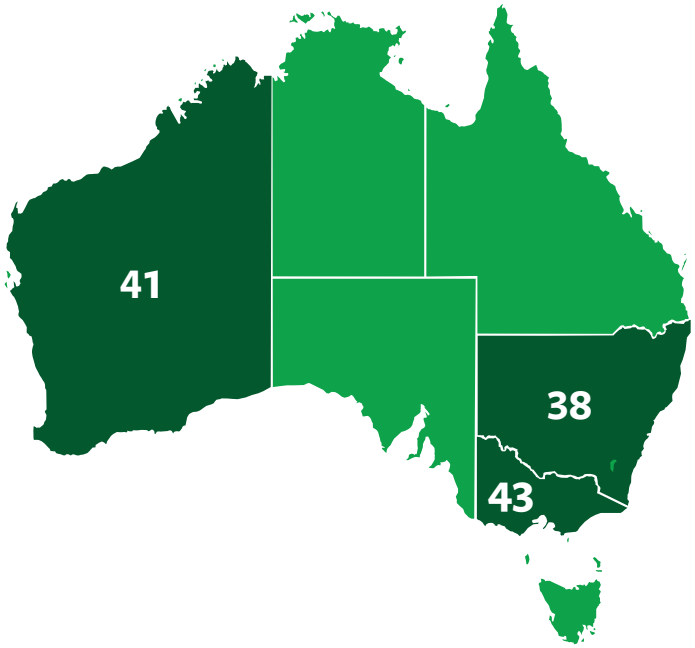
The three stages of the project were designed to be iterative and integrated

Stage 1 qualitative insights informed the development and refinement of the Stage 2 survey, including constructs relating to EV knowledge, perceived value, misinformation, charging, household energy technologies and adoption readiness. Stage 2 then provided national quantitative evidence on the factors associated with EV readiness and supported the development of the consumer segmentation model. Stage 3 used the combined qualitative and quantitative evidence to co-design practical recommendations for policy, infrastructure, market development, technology, community engagement and behaviour change.

4.1 Stage 1: consumer ethnography: interviews and participant videos

Stage 1 of the research project involved qualitative consumer ethnography, including in-depth interviews, participant-generated videos and follow-up interviews with consumers across Victoria, Western Australia and New South Wales. This stage was designed to generate rich insight into how consumers understand, experience and negotiate EVs in everyday life, including issues related to household mobility, charging, affordability, trust, perceived value, misinformation, energy technologies and readiness for change.

Consumer ethnography was used to generate rich, contextual insight into how Australian consumers understand, experience and negotiate EVs in everyday life. This approach enabled the project to examine EV uptake not only as a purchase decision, but as part of wider household mobility routines, energy practices, charging arrangements, technology use, social meanings, barriers and aspirations.



122
consumer household participants

188
interviews

413
participant-generated videos

The qualitative dataset was collected over a nine-month period from 122 participants in the Australian states of Western Australia (WA) (n=41), Victoria (VIC) (n=43), and New South Wales (NSW) (n=38). The selection of 3 states was designed to provide comparative data across different policy, energy market and charging infrastructure contexts, while recognising that other states and territories not included are also significant for examining consumer behaviours and EV uptake.

Participants were recruited using a commercial research recruitment company. The participant sample was purposive and designed to encompass householders across different geographical categories (inner city (n=25), suburban and outer suburban (n=83), and regional/remote (n=14); income groups according to Australian Bureau of Statistics Socio-Economic Indexes for Areas (low (n=22), middle (n=42), high (n=58); housing tenure (owner occupier (n=90), renter (n=32); and ethnic or cultural backgrounds (including speaking a language other than English). This sampling strategy is not intended to be reflective of the Australian population but provides a spread of demographic characteristics important to understanding multiple experiences of the EV transition. Householder participants received a shopping voucher in recognition of their time for each research activity in which they participated, including interviews, participant-generated videos, follow-up interviews and co-design workshops.

The sample was arranged over four quadrants: EV ownership; EV and Solar Photovoltaic (SPV) ownership; ICEV ownership considering purchasing an EV; and ICEV ownership not considering purchasing an EV (Table 1). EV owners were deliberately recruited at a higher proportion than their representation in the Australian adult population to ensure sufficient depth and diversity of EV ownership experience for meaningful qualitative comparison with non-EV owners. A full description of participants is included in Appendix 1.

Table 1. Participant sample

	Western Australia		Victoria		New South Wales		
	Male	Female	Male	Female	Male	Female	Total
EV only	1	4	5	1	2	2	**15**
EV + SPV	5	2	3	4	4	6	**24**
EV +ICEV	3	0	3	0	2	1	**9**
EV + ICEV + SPV	3	0	7	0	0	2	**12**
ICEV Considering EV	4	6	6	3	4	4	**27**
ICEV + SPV Considering EV	1	1	2	2	1	0	**7**
ICEV Not considering EV	1	6	1	4	6	4	**22**
ICEV + SPV Not considering EV	4	1	1	0	0	0	**6**
Total	**22**	**20**	**28**	**14**	**19**	**19**	**122**

Data were collected in the form of 601 items. First interviews were conducted across the three states for 122 participants (43 VIC; 41 WA; 38 NSW). Seventy participants generated 413 videos of 2 to 3 minutes long on average, and 66 follow up interviews (23 VIC; 22 WA; 21 NSW) were completed.[1]

The interview and video-making guides were informed by the research methodology literature, and the project team's expertise and prior project experience using these methods with input from the project funding partners and industry reference group (IRG) members. Qualitative semi-structured in-depth interviews were conducted face-to-face and occasionally online by the research team with EV owners and non-EV owners (including potential future EV owners).

Interviews lasted between 30 and 90 minutes. The questions were designed to gather participant stories, reflections, perceptions, and lived experiences of driving private, shared, hire car, or company vehicles where relevant. Thus, questions gave attention to not only what people knew about EVs (price and availability of EV models; location of public charging infrastructure; price and speed of charging facilities; EV batteries as part of household energy management systems technologies) but also explored daily mobility routines (e.g., EV, ICEV and public transport) and perceptions and beliefs about how EVs could or did fit with expectations in relation to housing types, parking availability, cost and convenience.

Questions focused on participants' social, cultural and environmental views and experiences, how they understood the EV transition, and what measures could support behaviour change to make this change equitable for different groups (e.g., elderly, people with disabilities, lower socio-economic status, geographically remote).

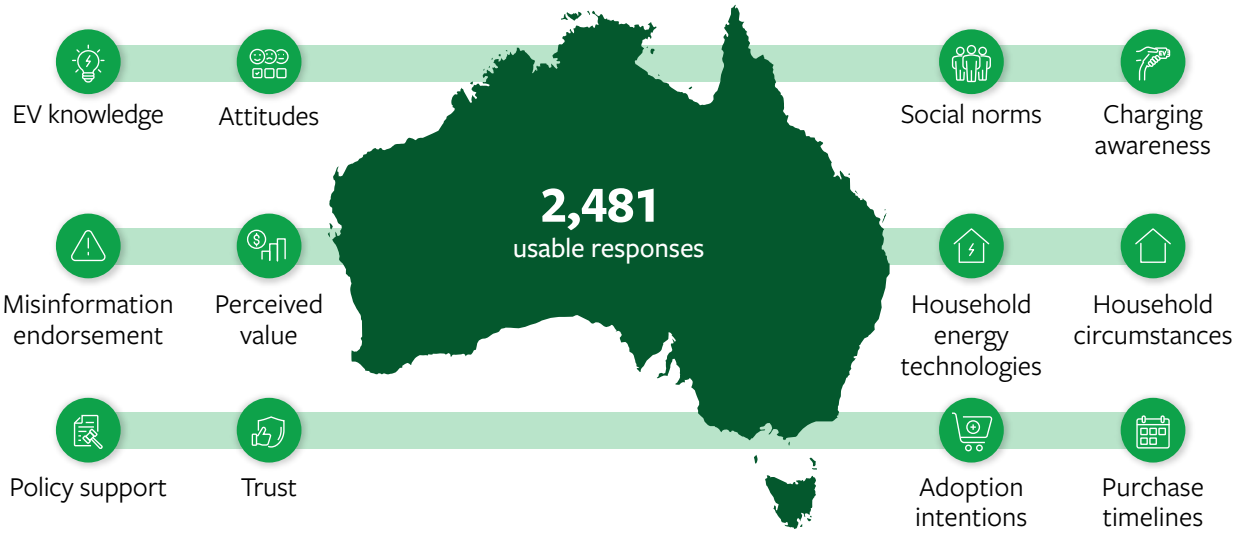
1 Four participants submitted videos but did not take part in a follow-up interview.

These interviews were supplemented by participant-led video recordings. Participants were invited to make video recordings to document their daily journey patterns over a two-week period including use of ICEVs, public transport and EVs.

Participants were supplied with a video guide that encouraged reflection on key questions such as the perceived or real barriers and enablers to EV uptake; how easy or hard it was to move around in everyday life; the source of energy used to power private vehicles; and their views on the energy transition, environmental policy, and actions for a sustainable future.

4.2 Stage 2: National survey

Stage 2 involved a nationally representative survey of Australian adults. The survey was informed by Stage 1 findings and measured EV knowledge, attitudes, misinformation endorsement, perceived value, social norms, policy support, trust, charging awareness, household energy technologies, household circumstances, adoption intentions and purchase timelines. This stage provided statistical evidence on the factors associated with EV readiness and allowed the project to develop a consumer segmentation model.



The national survey drew on tested and validated scale items to measure relevant concepts and constructs. The survey instrument was then refined based on input from project funding partners, industry reference group (IRG) members and the results from Stage 1 data analysis.

The primary objectives of the survey were to:

- Measure Australians' knowledge and understanding of EVs, including charging, costs, and environmental impacts.
- Identify psychological, social, economic, and infrastructural barriers and enablers to EV adoption.
- Capture detailed information on current EV ownership, charging behaviours, and travel patterns.
- Understand EV purchase intentions and timelines.
- Assess public attitudes toward EV-related policies, energy management, and emerging technologies such as smart charging, HEMS, and virtual power plants (VPPs).
- Generate a high-quality dataset suitable for policy-relevant analysis and future academic research.



The full technical report is included in Appendix 2.

Survey participants were recruited through a commercial online research panel and received the standard panel reward for completing the survey. The final achieved sample was 2,545 responses, with 2,481 retained as usable responses after data cleaning. Analytic sample sizes vary across analyses depending on item completion and eligibility. Survey participants constituted a representative sample of the Australian adult population across age, sex, and geographical location.

Specifically, survey participants were mostly from NSW (31.4%), Victoria (26.5%) and Queensland (19.3%), followed by WA (10.1%). Participants were mostly from major cities (59%), with fewer residing in rural (6.3%) and remote areas (0.2%). The average age of participants was 49 years old, with the youngest participant being 18 and the oldest 94. The survey attracted responses from slightly more women (53.1%) than men (46.6%).

Most survey participants identified Australian ancestry (66.2%). The next most frequently selected ancestry categories were English (12.7%), Irish (4.9%) and Scottish (4.6%), which together accounted for 22.2% of selections. Aboriginal and Torres Strait Islander ancestry was selected by 1.6% of participants. Other reported ancestries included Chinese, Italian, New Zealander, Indian, German and others by fewer participants. As participants could select multiple ancestries, percentages do not sum to 100%.

A minority of participants were BEV owners (4.4%). The majority owned an ICEV (71.3% petrol and 15.6% diesel), and another small proportion owned a hybrid (10.8%) or plug-in-hybrid vehicle (3.7%). The sample also included 7.5% of participants who did not own a car at the time of completing the survey. This broadly reflects the current trend in Australia where the majority of registered vehicles are ICE (71.3%), with a small but growing market for hybrid (16%), plug in hybrid (4.3%) or EVs (8.3%) (Australian Bureau of Statistics, 2022; Car Expert, 2026).

Car owners predominantly had access to off-street parking (e.g., driveway, garage, shared common area) (94.8%). Most participants lived in a house (71.7%) while 26.1% lived in accommodation subject to strata rules (e.g., apartment, townhouse). Accommodation was owned outright or with a mortgage for 70.7% of participants, while 24.8% were renting. This broadly reflects the housing trends in Australia where ownership is at 66% and rental at 31% (Australian Bureau of Statistics, 2025). Close to half of the participants (44.7%) had SPVs, 14.9% had battery storage, with only 12.4% having both SPV and battery storage. This is representative of current levels of SPV ownership at 43% in 2025 (Solar Statistics, 2025) and strong growth in household batteries (Clean Energy Regulator, 2026).

The national survey enabled detailed analysis of the factors associated with EV readiness and differences between consumer groups.

First, zero-order correlations and multiple regression were used to examine associations between consumer characteristics, circumstances and behavioural and social influences and two EV readiness outcomes: purchase intent and expected purchase timeline. Zero-order correlations showed how strongly each predictor was associated with an outcome on its own, while multiple regression assessed whether each predictor remained associated after accounting for the other variables.

Second, dominance analysis assessed the relative contribution of 13 broader predictor domains to the variance explained in purchase intent and purchase timeline. This accounted for overlap between domains and allowed their relative predictive importance to be compared.

Third, Latent Profile Analysis identified groups of consumers with different configurations of EV readiness. The analysis used nine measures:

1. Technology optimism: confidence in and enthusiasm for new technologies;
2. Technology discomfort: feeling overwhelmed or intimidated by new technologies;
3. Social norms: whether EV uptake is visible, socially supported or encouraged by people whose views matter;
4. Self-rated knowledge: how much participants believed they knew about EVs;
5. Objective knowledge: factual knowledge assessed through survey questions;
6. Misinformation endorsement: agreement with common myths or inaccurate claims about EVs;
7. EV policy support: awareness and endorsement of government policies supporting EV uptake;
8. EV perceived value: the functional, economic, emotional, social and ecological value attributed to EVs; and
9. EV anxiety: anxiety or concern associated with EV use and ownership.

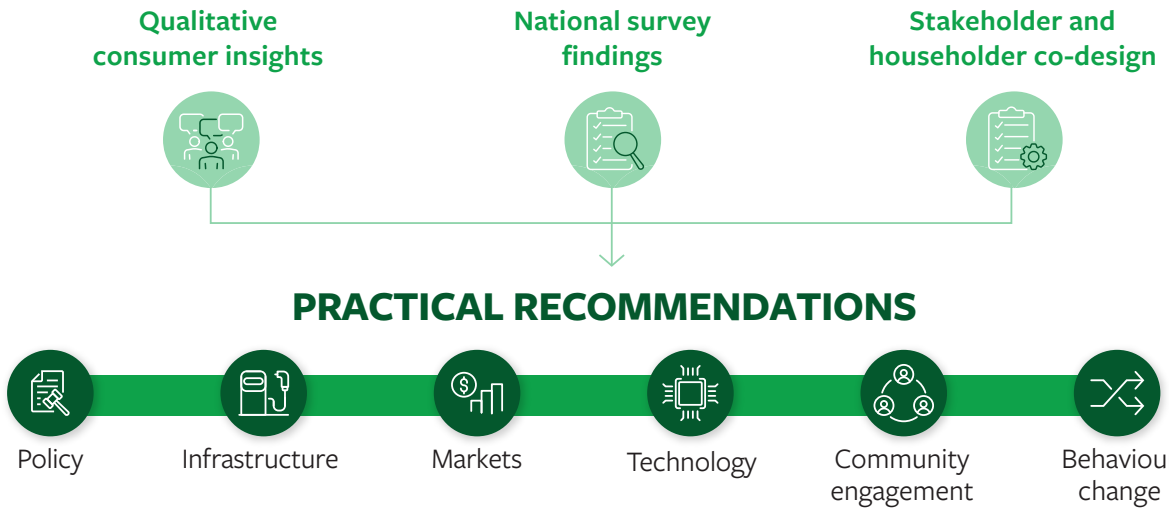
The analysis identified four EV readiness profiles. Odds ratios were then used to examine factors associated with membership of each profile relative to the Undecided Mainstream group.

The analyses served different purposes: regression examined associations with EV readiness outcomes; dominance analysis compared the relative contribution of broader predictor domains; and Latent Profile Analysis identified different configurations of consumer readiness.

4.3 Stage 3: Co-design workshops

Stage 3 involved participatory co-design workshops with householders, industry representatives and government stakeholders. This stage translated the qualitative and quantitative findings into practical recommendations for policy, infrastructure, market development, technology, community engagement and behaviour change.

The co-design workshops brought together householders, industry representatives and government stakeholders to consider how the evidence could be applied in practice, identify priorities for action, and refine recommendations so they were relevant to different actors involved in the EV transition.



Two co-design workshops were held with 21 project participants and 10 industry and government representatives to create a shared understanding of consumer perspectives and to generate ideas and recommendations to support the transition to EVs. Participants were recruited from the sample of interview/video participants, and industry and government representatives, members of the project's reference group or other key stakeholders. The first workshop was held in person on 27 November 2025 at UTS with 12 participants and 3 stakeholder representatives. The second workshop was held online on 2 December 2025 with 9 participants and 7 stakeholder representatives and followed the same format as the in-person workshop. Attendance was voluntary.

Including project participants in the co-design process adds to the strength of recommendations because this reflects lived experience and provides insights into how to best meet the needs of Australian consumers in terms of effectiveness, equity, and inclusivity within the constraints of the energy market, grid, and existing EV infrastructure. This user-led approach promotes stronger buy-in and greater representation of diverse experiences and opinions and can lead to better decision making (Dietrich et al., 2016; Steen et al., 2011).

The aim of the workshops was to provide a platform for authentic exchange of ideas between government representatives, industry representatives, householders and state-based organisations. The in-person workshop was held in a teaching room at UTS Ultimo campus equipped with an audiovisual system, and on arrival, participants provided written consent for use of their data from the 150-minute session. The research team explained the context of the project, provided a summary of the findings from the previous stages, and explained the aims of the workshop. Participants and stakeholders worked together in groups using a range of resources (paper, markers, Post-it notes, whiteboards) to address key topics about the EV transition. Groups worked collaboratively and shared their ideas for developing solutions to enable a more equitable transition to EVs. Further analysis of the collected artefacts and workshop recordings was conducted by the research team

through reviewing transcripts with attention to less dominant voices and interpreting drawings and diagrams as knowledge construction based on personal meaning (Pauwels and Mannay, 2020). Findings from the research team were synthesized with participant produced recommendations.

4.4 An integrative approach

The three stages of the project were designed to be iterative and integrated rather than separate. Stage 1 qualitative insights informed the development and refinement of the Stage 2 survey, including constructs relating to EV knowledge, perceived value, misinformation, charging, household energy technologies and adoption readiness. Stage 2 then provided national quantitative evidence on the factors associated with EV readiness and supported the development of the consumer segmentation model. Stage 3 used the combined qualitative and quantitative evidence to co-design practical recommendations for policy, infrastructure, market development, technology, community engagement and behaviour change.

The qualitative interview and video data were analysed using open and axial coding to identify key concepts, relationships and explanatory categories, supported by thematic and visual analysis of participant accounts, video materials and fieldwork records (Strauss and Corbin, 1998; Braun and Clarke, 2006; Rose, 2016). Survey data were analysed using a combination of descriptive statistics, group comparisons, predictor modelling, dominance analysis and segmentation analysis. Regression-based analysis was used to identify behavioural influences with statistically significant associations with EV readiness, while dominance analysis was used to assess the relative contribution of predictor domains to explained variance in EV purchase intent and purchase timeline, including domains such as perceived value, policy and governance trust, EV familiarity and social norms.

The segmentation analysis used Latent Profile Analysis (see Morin et al., 2020) to identify four EV readiness profiles, with odds ratios (Masyn, 2013) used to examine factors associated with membership of each segment relative to the Undecided Mainstream group. Co-design workshop data were also analysed thematically, drawing on text-based and visual materials generated during the workshops to identify stakeholder priorities, practical implementation considerations and areas of convergence or divergence across participants (Braun and Clarke, 2006; Sanders and Stappers, 2008). The findings were then interpreted across methods, with qualitative and visual data used to explain and contextualise survey patterns, and quantitative findings used to assess the prevalence, relative strength and segmentation of themes identified through the qualitative research.

5 A systems-oriented overview of EV readiness

Key insight

EV uptake depends on coordinated change across the system. Price, vehicle supply and charging infrastructure matter, but consumers' readiness to adopt EVs is also shaped by trust, familiarity, social norms, household circumstances, misinformation, financial capability, equity issues, and the perceived value of EVs in everyday life.

This section addresses RQ2 by examining the individual, socio-cultural and structural factors that shape Australian consumers' perceptions, attitudes and behaviours towards EVs, including their intention to purchase and expected purchase timelines. The findings show that EV readiness is not driven by one factor alone. Rather, EV uptake is shaped by interacting influences across macro, meso and micro levels of the transition system, which aligns with our understanding of behaviour and social change from the scientific literature (Michie et al., 2014; French and Gordon, 2020).

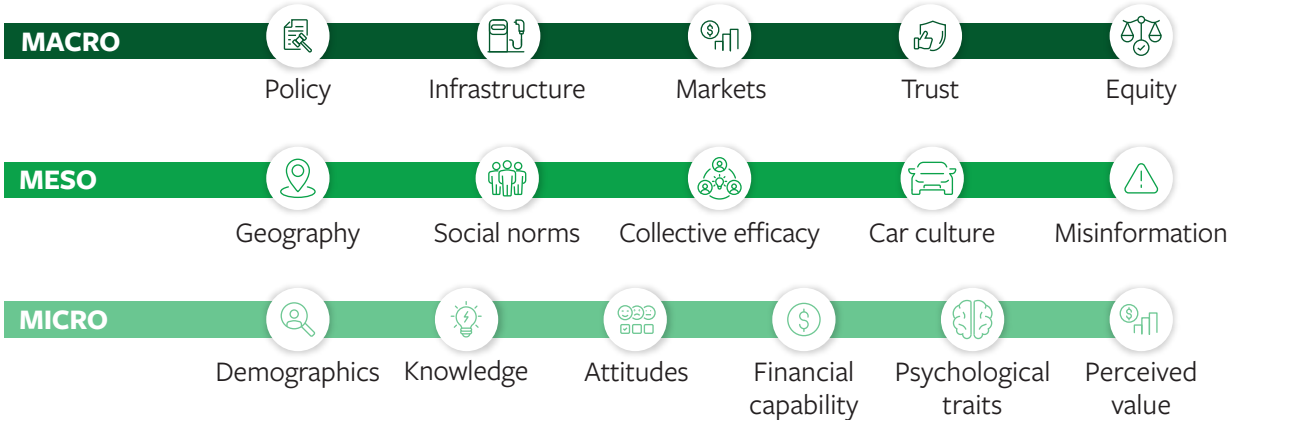
At the macro level, structural factors shape whether EV adoption is practically feasible. These include EV policies, technology and charging infrastructure, consumer confidence and economic conditions, trust in government, and equity or inequity in access to vehicles, charging and enabling household energy technologies.

At the meso level, socio-cultural factors shape whether EVs are seen as socially credible, normal and desirable. These include geographic location, social norms, collective efficacy, car culture and misinformation.

At the micro level, individual and household factors shape whether consumers see EVs as relevant, affordable, manageable and valuable in everyday life. These include demographic characteristics such as age, sex, income, education, employment status and household composition, as well as environmental concern, EV knowledge, attitudes, psychological traits, financial capability and perceived value.

The qualitative and survey findings were synthesised to examine how these factors interact. Across both evidence streams, perceived value, policy and governance trust, EV familiarity, social norms, objective knowledge, collective efficacy and charging awareness emerged as important influences on EV readiness. The findings also show that consumers are not only influenced by price or economic incentives. EVs are evaluated through functional, economic, emotional, social and ecological meanings, and these meanings shape whether consumers see EV ownership as worthwhile, practical and compatible with everyday life.

EV READINESS IS A MULTI-LEVEL SYSTEMS CHALLENGE



Key findings from the survey indicate perceived value of EVs (emotional, functional, economic, social), EV knowledge, injunctive norms, and trust in government are strong indicators of willingness to purchase as are ecological value, and collective efficacy. This means that people are influenced not only by price or economic incentives but derive meaning from the emotional and social aspects of EV ownership. While both survey and qualitative data support findings that economic value is a major consideration in terms of EV purchase, emotional, social and ecological value are also a driver of EV ownership. This is demonstrated through the qualitative data where participants, even ICEV owners, related the emotional value that was associated with driving an EV:

> *"I love the idea of driving home, plugging your car in, we're good to go. To me, that's the ultimate convenience."*
>
> **Yolanda, Female, WA, ICEV owner**

People can be swayed by injunctive norms of EV ownership – when more people approve of this behaviour and it becomes socially acceptable - and this can lead to greater belief in collective efficacy – that is, if more people own EVs then a greater impact can be achieved in terms of reducing carbon emissions. EV ownership can nurture a belief in collective efficacy as part of the wider transition to net zero for a sustainable future. The qualitative data reinforces the quantitative findings, providing examples of how EV ownership influences injunctive norms and collective efficacy:

> *"I talk about the benefits in our family, but also our community and wider society as well. And I think maybe the collective positivity around the change that is happening and hearing positive feedback on how it's affected other people. It's almost, say it is just another motivator to see like, oh, we can actually enact change positively."*
>
> **Priya, Female, NSW, EV owner**

5.1 Predictors of EV purchase and timeline

The national survey examined which factors were most strongly associated with EV purchase intent and expected purchase timelines. The analysis shows that EV readiness is shaped by a combination of value, trust, familiarity, social norms, knowledge, charging awareness and household circumstances, rather than by price or infrastructure factors alone. Detailed survey results are presented in Table 2, which shows the association between macro, meso and micro-level factors and EV-related behavioural outcomes.

Reiterating the qualitative findings, the survey findings indicate that perceived value of EVs is the main predictor of EV purchase intent, followed by collective efficacy and trust in government and other key sector actors.

This means that in order to encourage EV uptake, people need to understand the potential value including financial, emotional, social, and ecological benefits that come with EV uptake. Financial savings may underpin key decision-making moments, but how people feel about purchasing and driving an EV influences social norms about 'doing the right thing for the environment' and improving the health and wellbeing of family and community members through reduced emissions. Furthermore, although trust in government was associated with EV readiness, this does not mean government should necessarily always act as the sole or primary messenger. Consumer-facing interventions could involve trusted actors appropriate to different audiences and contexts, including consumer and community organisations, motoring organisations, peers and other credible intermediaries.

Table 2. Predictors of EV Purchase Intent and Timeline (Non-EV Owners)

		Purchase Intent (1–4)		Purchase Timeline (years)		
Predictor	**Scale**	**r (SE)**	**β (SE)**	**r (SE)**	**β (SE)**	**Practical Impact**
Perceived emotional value of EVs	1-5 (7 items)	+0.63*** (0.02)	+0.218*** (0.037)	-0.56*** (0.02)	-0.641** (0.212)	2.9 yrs sooner
Perceived functional value of EVs	1-5 (6 items)	+0.58*** (0.02)	—	-0.55*** (0.02)	-0.690*** (0.168)	2.9 yrs sooner
Perceived economic value of EVs	1-5 (3 items)	+0.58*** (0.02)	—	-0.54*** (0.02)	-0.557*** (0.158)	2.8 yrs sooner
Perceived social value of EVs	1-5 (3 items)	+0.55*** (0.02)	—	-0.49*** (0.02)	—	2.6 yrs sooner
Injunctive norms ('others approve')	1-5 (3 items)	+0.53*** (0.02)	+0.069** (0.023)	-0.46*** (0.02)	—	2.4 yrs sooner
Perceived ecological value of EVs	1-5 (3 items)	+0.51*** (0.02)	—	-0.46*** (0.02)	—	2.4 yrs sooner
EV policy support (items endorsed)	0-9 count	+0.48*** (0.02)	+0.186*** (0.019)	-0.42*** (0.02)	-0.871*** (0.107)	2.2 yrs sooner
Collective efficacy	1-5 (4 items)	+0.47*** (0.02)	—	-0.40*** (0.02)	+0.382** (0.136)	2.1 yrs sooner
EV knowledge (adjusted quiz score)	-11 to +11	+0.42*** (0.02)	+0.049* (0.020)	-0.39*** (0.02)	—	2.0 yrs sooner
Trust in government	1-5 (3 items)	+0.39*** (0.02)	—	-0.36*** (0.02)	—	1.9 yrs sooner
EV attitudes (range, charging, trust concerns)	1-5 (8 items)	-0.38*** (0.02)	-0.098*** (0.019)	+0.34*** (0.02)	+0.366*** (0.108)	1.8 yrs later
Environmental concern (GREEN scale)	1-5 (6 items)	+0.36*** (0.02)	+0.063*** (0.019)	-0.29*** (0.02)	—	1.5 yrs sooner
Descriptive norms ('others are doing it')	1-5 (3 items)	+0.34*** (0.02)	+0.038* (0.018)	-0.28*** (0.02)	—	1.5 yrs sooner
EV experience (weighted exposure)	0-10	+0.34*** (0.02)	+0.095*** (0.016)	-0.30*** (0.02)	-0.405*** (0.093)	1.6 yrs sooner
Public charging location awareness	1-3 (5 items)	+0.32*** (0.02)	+0.081*** (0.016)	-0.30*** (0.02)	-0.511*** (0.094)	1.6 yrs sooner
EV misinformation belief	1-5 (10 items)	-0.28*** (0.02)	—	+0.26*** (0.02)	—	1.4 yrs later
Education level	1-7 ordinal	+0.27*** (0.02)	+0.113*** (0.016)	-0.22*** (0.02)	-0.404*** (0.093)	1.2 yrs sooner
Risk tolerance	1-10	+0.24*** (0.02)	—	-0.22*** (0.02)	-0.232* (0.101)	1.2 yrs sooner
Consumer confidence index	0-200	+0.23*** (0.02)	—	-0.19*** (0.02)	—	1.0 yrs sooner
Financial literacy (Lusardi-Mitchell)	0-3 correct	+0.19*** (0.02)	+0.041** (0.016)	-0.16*** (0.02)	—	0.9 yrs sooner
Currently employed	0/1	+0.19*** (0.02)	—	-0.18*** (0.02)	-0.418** (0.129)	0.9 yrs sooner
Age (years)	Continuous	-0.18*** (0.02)	—	+0.13*** (0.02)	—	0.7 yrs later
Perceived social support (MSPSS total)	1-7 (12 items)	+0.15*** (0.02)	—	-0.14*** (0.02)	—	0.7 yrs sooner
Openness to experience (Big Five)	1-5 (2 items)	+0.14*** (0.02)	—	-0.11*** (0.02)	—	0.6 yrs sooner
Financial skills self-assessment	1-5 (10 items)	+0.14*** (0.02)	+0.036* (0.017)	-0.12*** (0.02)	—	0.6 yrs sooner
Married or living with partner	0/1	+0.13*** (0.02)	+0.049** (0.016)	-0.13*** (0.02)	-0.275** (0.093)	0.7 yrs sooner
Lives in major city (500k+)	0/1	+0.11*** (0.02)	—	-0.12*** (0.02)	—	0.7 yrs sooner
Has solar panels or battery	0/1	+0.12*** (0.02)	+0.050** (0.016)	-0.11*** (0.02)	-0.188* (0.091)	0.6 yrs sooner
Retired	0/1	-0.12*** (0.02)	—	+0.10*** (0.02)	—	0.5 yrs later
Household income band	1-5 ordinal	+0.12*** (0.02)	—	-0.11*** (0.02)	—	0.6 yrs sooner
Female gender	0/1	-0.10*** (0.02)	—	+0.11*** (0.02)	—	0.6 yrs later
Extraversion (Big Five)	1-5 (2 items)	+0.09*** (0.02)	—	-0.09*** (0.02)	—	0.5 yrs sooner
Emotional stability (Big Five)	1-5 (2 items)	+0.05* (0.02)	—	-0.07** (0.02)	—	0.3 yrs sooner
Renter (vs owner)	0/1	-0.06** (0.02)	—	+0.05* (0.02)	—	0.3 yrs later

* p < .05, ** p < .01, *** p < .001. r = zero-order Pearson correlation; [] = standardised regression beta. SE in brackets. Green = favourable for EV uptake; Red = unfavourable. Bivariate N: intent = 2287, timeline = 2287. Regression N: intent = 2287 (R^2 = 0.538), timeline = 2287 (R^2 = 0.439).

Analytical Method: Each predictor (factor which influences intention to purchase) is assessed two ways:

(i) Zero-order correlation (r): The total bivariate relationship between one predictor and the outcome, ignoring all other variables. In plain terms, r answers: "How strongly does this factor relate to EV adoption on its own?" A larger absolute r means the factor is more strongly associated with the outcome, regardless of why. Values around .10 are small, .30 are moderate, and .50+ are large.

(ii) Standardised beta (β) From a multiple regression including all predictors simultaneously. β answers: "Does this factor still predict EV adoption once we account for everything else?" A large β means the predictor has a unique effect not shared with other variables. When predictors are correlated (e.g., environmental concern and perceived ecological value), the regression partitions shared variance between them, so both betas may appear smaller than either predictor's true importance.

Reading the table: The r column is the primary indicator of a predictor's overall importance. The β column shows what remains after accounting for overlap. When r is large but β is small, the predictor matters but shares its effect with related variables. Practical Impact converts the bivariate r for timeline into an approximate years-sooner/later interpretation by multiplying the r value for timeline by its standard deviation (5.2 years). This is an approximation; it captures the total (unadjusted) association, not the unique effect after controlling for other predictors. It is shown only for the timeline outcome because years are a more concrete unit than the 1–4 intent scale. All predictors were standardised (z-scored). Only predictors with p < .05 for the zero-order correlation in at least one outcome are shown, sorted by effect size.



5.2 Relative influence of key predictor domains

Key insight

Perceived value is the strongest predictor domain associated with EV purchase intent and purchase timeline. Policy and governance trust, EV familiarity and social norms are also important, showing that EV uptake depends not only on affordability and infrastructure, but on whether EVs are trusted, familiar, socially supported and seen as valuable in everyday life.

While Table 2 demonstrates individual predictor effects, it is acknowledged that many predictors are correlated. The five perceived value dimensions, for instance, share variance with each other and with environmental concern. Therefore, dominance analysis is presented in Table 3 to isolate each predictor. The overlap of influence by individual predictors is resolved by calculating each domain's average contribution to explained variance across all possible combinations of domains. The result is a percentage of R^2 attributable to each domain that sums to 100%, providing a fair allocation of predictive importance even when domains overlap.

The dominance analysis shows that perceived value was the strongest domain associated with both EV purchase intent and purchase timeline, accounting for 24.0% of explained variance in purchase intent and 26.8% of explained variance in purchase timeline. Policy and governance trust, EV familiarity and social norms were also important contributors. EV misinformation also had a significant association with EV readiness, although it contributed a smaller share of explained variance overall, but it remains important because it is an emerging concern and it interacts with trust, identity, uncertainty and social networks in ways that can slow readiness for some consumers.

While this section identifies the relative influence of the main predictor domains associated with EV purchase intent and purchase timeline, the detailed interpretation of these domains is developed in the sections that follow. Macro-level structural factors such as equity, affordability, infrastructure, housing and policy are discussed in Section 6; meso-level socio-cultural factors such as misinformation, geography, social norms, collective efficacy and car culture are discussed in Section 7; and micro-level individual factors such as perceived value, knowledge, financial literacy, attitudes and demographic characteristics are discussed in Section 8. These sections unpack the survey findings alongside qualitative evidence and relevant literature, rather than treating the predictors as isolated statistical variables.

Table 3. Dominance analysis: domain contributions to explained variance

Domain	R^2 Contribution (Intent)	% of R^2 (Intent)	R^2 Contribution (Timeline)	% of R^2 (Timeline)
Perceived Value	0.1292	24.0%	0.1174	26.8%
Policy and Governance Trust	0.0780	14.5%	0.0643	14.7%
EV Familiarity	0.0771	14.3%	0.0681	15.5%
Social Norms	0.0655	12.2%	0.0469	10.7%
Environmental Values	0.0480	8.9%	0.0320	7.3%
Socioeconomic	0.0398	7.4%	0.0292	6.7%
EV Attitudes	0.0340	6.3%	0.0254	5.8%
Financial Capability	0.0202	3.8%	0.0165	3.8%
EV Misinformation	0.0145	2.7%	0.0124	2.8%
Housing and Location	0.0128	2.4%	0.0119	2.7%
Economic Sentiment	0.0081	1.5%	0.0056	1.3%
Personality	0.0072	1.3%	0.0060	1.4%
Social Support	0.0034	0.6%	0.0030	0.7%

General dominance analysis (Budescu, 1993). Total R^2: Intent = 0.538 (N = 2287), Timeline = 0.439 (N = 2287). % of R^2 = domain's general dominance statistic / total × 100.

Analytical method: Predictors were grouped into 13 conceptual domains/groups (as described below/in appendix). Dominance analysis (Budescu, 1993; Azen and Budescu, 2003) was conducted using the domir package (v1.3.0; Luchman, 2026) in R (v4.6.0; R Core Team, 2026), fitting all 2^{13}– 1 = 8,191 subset models for each outcome. Each domain's general dominance statistic represents its average marginal contribution to R^2 - the portion of explained variance it uniquely and jointly accounts for. Domains are ranked by their % of total R^2 explained.

Predictor Domains:

- Perceived Value (PERVAL): Functional value, economic value, emotional value, social value, ecological value
- Environmental Values: GREEN environmental concern, collective efficacy
- Social Norms: Descriptive norms, injunctive norms
- EV Misinformation: Misinformation belief sum
- EV Attitudes: EV attitudinal composite (range, charging, trust, planning)
- Financial Capability: Financial skills self-assessment, financial literacy
- Economic Sentiment: Consumer confidence index (ANZ-Roy Morgan)
- Policy and Governance Trust: Government trust, policy support count
- Personality (Big Five): Extraversion, agreeableness, conscientiousness, emotional stability, openness to experience (TIPI)
- Social Support: Perceived social support (MSPSS total)
- EV Familiarity: EV knowledge (adjusted), EV experience (weighted), public charging awareness
- Socioeconomic: Age, household income, education level, employed, retired, married/partnered
- Housing and Location: Female gender, solar/battery ownership, renter, apartment dweller, metropolitan location

To illustrate how these multi-level systems factors influence EV behaviours and uptake, we provide a segmentation analysis from 2,241 participants who responded to the national survey. This provides insights into how people are currently placed in relation to EV readiness, and what factors could influence migration across groups.

5.3 Segmentation analysis

Key insight

The segmentation analysis identified four EV readiness profiles: Informed Enthusiasts (14%), Cautiously Interested (13%), Undecided Mainstream (54%) and Excluded or Resistant (19%). These profiles show that Australian consumers are not all at the same point in the EV transition. Each group reflects a different combination of policy support, technology confidence, perceived value, social norms, misinformation endorsement, EV knowledge and attitudes. This means EV transition strategies need to be segmented and targeted, using different combinations of information, infrastructure, incentives, direct experience, trust-building and value creation. The profiles should be used as a strategic tool for policy design, programme targeting, resource allocation and evaluation, while recognising that consumers may move between profiles as the transition evolves.

To better understand how different groups of consumers are positioned in relation to EV uptake, the project used Latent Profile Analysis (LPA) to identify distinct EV readiness profiles within the national survey sample. Rather than treating Australian consumers as a single, uniform audience, segmentation helps identify combinations of barriers, enablers and readiness conditions that differ across groups. This provides a practical basis for considering policy priorities, programme targeting, resource allocation and intervention design.

The LPA was a distinct segmentation analysis using nine behavioural influence variables spanning the macro, meso and micro levels of the EV transition system that were identified through the project's preceding regression analysis and described earlier in Section 4.2. These variables were used as profile indicators to identify four groups with different configurations of EV readiness influences.

Segmentation is used here as a strategic tool for understanding heterogeneous consumer needs and readiness, guiding the prioritisation of resources, and informing differentiated policy, programme and intervention design (Dibb and Simkin, 2008). The four profiles are not fixed consumer identities, but provide a way to identify current barriers, enablers and leverage points for policy, infrastructure planning, programme targeting, resource allocation and behaviour change intervention design. Segmentation research in environmental and energy management shows that segments can remain relatively stable over time while still allowing movement between segments as consumer circumstances, policy settings, technologies, market conditions and perceived value change (Gordon et al., 2025). For this reason, the profiles should be interpreted as a strategic tool, and practical framework for understanding current readiness and possible pathways for change, rather than as permanent consumer identities. Tracking how consumers move between profiles over time would also help assess the impact of interventions such as new policies, charging infrastructure, market offers, trusted information campaigns and behaviour change programmes.

This provides an insight into general groupings of respondents who expressed similar viewpoints at the time of the survey. The segmentation analysis identifies four major groups with different patterns of EV readiness. This provides a starting point for considering how readiness might change over time and what forms of support could be tested for different groups. Figure 1 shows how each segment compares to the overall average on the nine behavioural influence measures that are associated with EV readiness related outcomes. Bars extending to the right (blue) indicate above-average scores; bars to the left (red) indicate below average. We next present a summary profile of each segment.



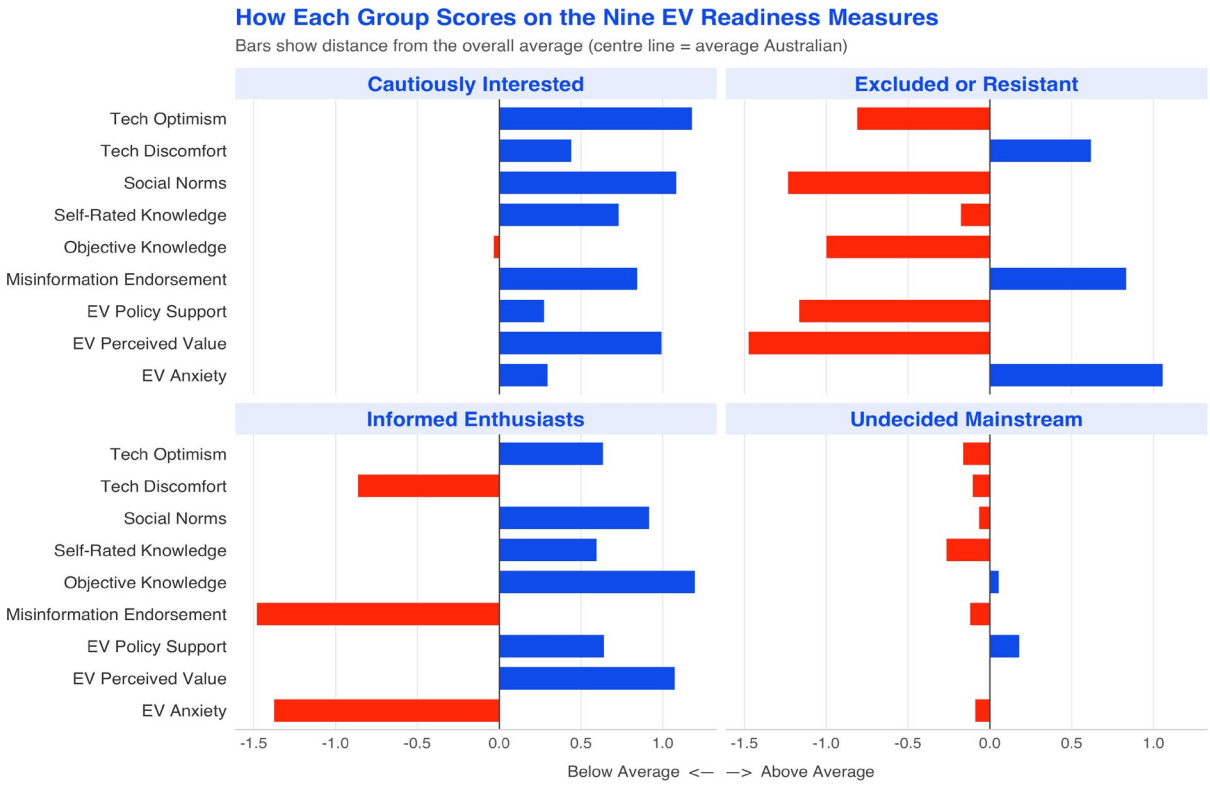


Figure 1. Group scores on 9 EV readiness measures

5.4 Profiling the four segments

The four EV readiness profiles show how different combinations of structural, socio-cultural and individual-level influences shape consumers' current readiness to adopt EVs.

INFORMED ENTHUSIASTS

14% of sample

Most EV-ready. Higher knowledge, lower misinformation endorsement, stronger policy support, higher perceived value and greater direct EV experience. This group generally has the confidence and capability to act.

Intervention focus:

Remove friction. Support accessible charging, maintain policy certainty, streamline purchase pathways and make EV ownership easier to complete.

CAUTIOUSLY INTERESTED

13% of sample

Interested in EVs and positive about their value, but confidence is undermined by misinformation, anxiety, lower factual knowledge and practical constraints such as income, rental housing or early life-stage barriers.

Intervention focus:

Convert enthusiasm into informed readiness. Provide trusted information, myth-checking, total-cost-of-ownership tools, test drives, peer learning and visible charging information.

UNDECIDED MAINSTREAM

54% of sample

The largest group. Not strongly opposed to EVs but not yet convinced. This group sits close to average on most readiness measures and is waiting for EVs to feel practical, affordable, trusted and normal.

Intervention focus:

Create mainstream momentum. Make EV value tangible, improve visibility of charging, normalise EV use, reduce perceived risk and provide clear, practical decision support.

EXCLUDED OR RESISTANT

19% of sample

Least EV-ready. Lower perceived value, lower knowledge, weaker social support, lower policy support, higher misinformation endorsement and greater anxiety or technology discomfort.

Intervention focus:

Do not rely on persuasion alone. Prioritise trust-building, practical reassurance, community-based information, direct experience and policies that reduce risk, cost and uncertainty.

EV readiness profiles help identify current barriers, enablers and leverage points for action. They can guide policy, programme targeting and evaluation, while recognising that consumers may move between profiles as the transition evolves.

1. Informed enthusiasts

308 people (14% of the sample)

Informed Enthusiasts are typically on higher household incomes, more often male, and with an established household (more likely to own their home). Their educational profile and income suggest they have both the means and the motivation to act on their EV interest. Their cultural background and political leanings reflect a group that is engaged with broader social and environmental issues. Informed Enthusiasts are the most EV-ready segment. At the structural level, they support the widest range of government EV policies. At the socio-cultural level, they see the most value in EVs, have the strongest social circles supporting adoption, and are the most comfortable with technology. At the individual level, their confidence is well-founded - they score highest on both self-rated and factual EV knowledge, are the least likely to believe common EV myths, and report the lowest anxiety about ownership. A range of factors were related to people being members of the Informed Enthusiasts segment. The strongest drivers are meso-level factors: higher environmental identity (GREEN score) and greater EV experience. At the macro level, charging awareness is a key enabler - people who know where to charge are more confident. At the micro level, higher financial knowledge and greater openness as a personality trait both contribute to a positive attitude towards EV purchase. The picture is of someone who cares about the environment, has direct EV experience, is financially literate, and has knowledge of the existing EV infrastructure. In terms of EV uptake, Informed Enthusiasts are ready now. The vast majority have definite plans to buy an EV, with timelines in the 'Now' to '1-2 years' range.

2. Cautiously interested

295 people (13%)

Cautiously Interested were generally the youngest respondents. While enthusiastic about EVs, they may face practical individual-level barriers - lower incomes, rental housing, and earlier career stage can make an EV purchase harder to justify in the near term. Cautiously Interested present a paradox. At the socio-cultural level, they look similar to Informed Enthusiasts - they see high value in EVs and rate their own knowledge highly. But at the individual level, they also endorse significantly more misinformation, report more anxiety, and are less comfortable with technology. While they think they know a lot about EVs, their factual knowledge does not match their confidence. This gap between enthusiasm and understanding delays their adoption. In terms of factors that were associated with membership of this segment we found that environmental identity and EV experience were relevant, but that macro and micro factors that could convert enthusiasm into informed action are weaker. They lack the level of charging awareness, financial literacy, and factual knowledge that characterises Informed Enthusiasts. Cautiously Interested say they want to buy an EV, but their timelines are longer - the gap between stated interest and commitment reflects their unresolved concerns.

3. Undecided mainstream

1,215 people (54%)

Undecided Mainstream closely mirrors the full sample on most individual demographics. This makes sense - they are the largest group and represent the broad middle of Australian society. There is no single demographic lever that would shift this group; instead, changes need to come from the structural and socio-cultural levels. Undecided Mainstream is the largest segment - over half the sample. They sit close to the average on every measure across all three levels, meaning their endorsement of misinformation is relatively high, and they were not able to correctly answer many facts about EVs. They are not opposed to EVs, but not enthusiastic either. This is the segment where effort could possibly have the greatest impact, simply because of their number. Members of the Undecided Mainstream segment spread across 'considering' and 'some interest', mostly expecting purchase within 3-5 years. They are waiting for a compelling reason to purchase an EV.

4. Excluded or resistant

423 people (19%)

Excluded or Resistant are skewed toward those who are older, female, with lower average incomes. They are more likely to be retired. These individual-level characteristics compound the attitudinal barriers identified in their readiness profile - less income, less exposure to EVs in daily life, and less engagement with technology. Excluded or Resistant are the furthest from adoption. At the structural level, they support fewer EV policies. At the socio-cultural level, they see the least value in EVs and have the weakest social support for adoption. At the individual level, they score lowest on both types of EV knowledge, are most likely to believe in misinformation, and report the highest anxiety and technology discomfort. Lower environmental identity was the single strongest predictor of membership of this segment, followed by lower charging awareness, less EV experience, weaker collective action beliefs, and older age. These factors span all three levels - this segment faces structural barriers (low infrastructure awareness), socio-cultural barriers (weak environmental and collective values), and individual barriers (age, lower openness) simultaneously. Members of the Excluded or Resistant segment overwhelmingly report no interest, with timelines for EV purchase dominated by 'Never'.

To understand what makes someone more likely to belong to one segment rather than another, we calculated odds ratios (Masyn, 2013). As illustrated in Figure 2, this analysis provides insights into factors which can change the odds of belonging to a given segment compared to the Undecided Mainstream which was set as the reference segment as it reflects the average, and largest segment in the survey participant sample.

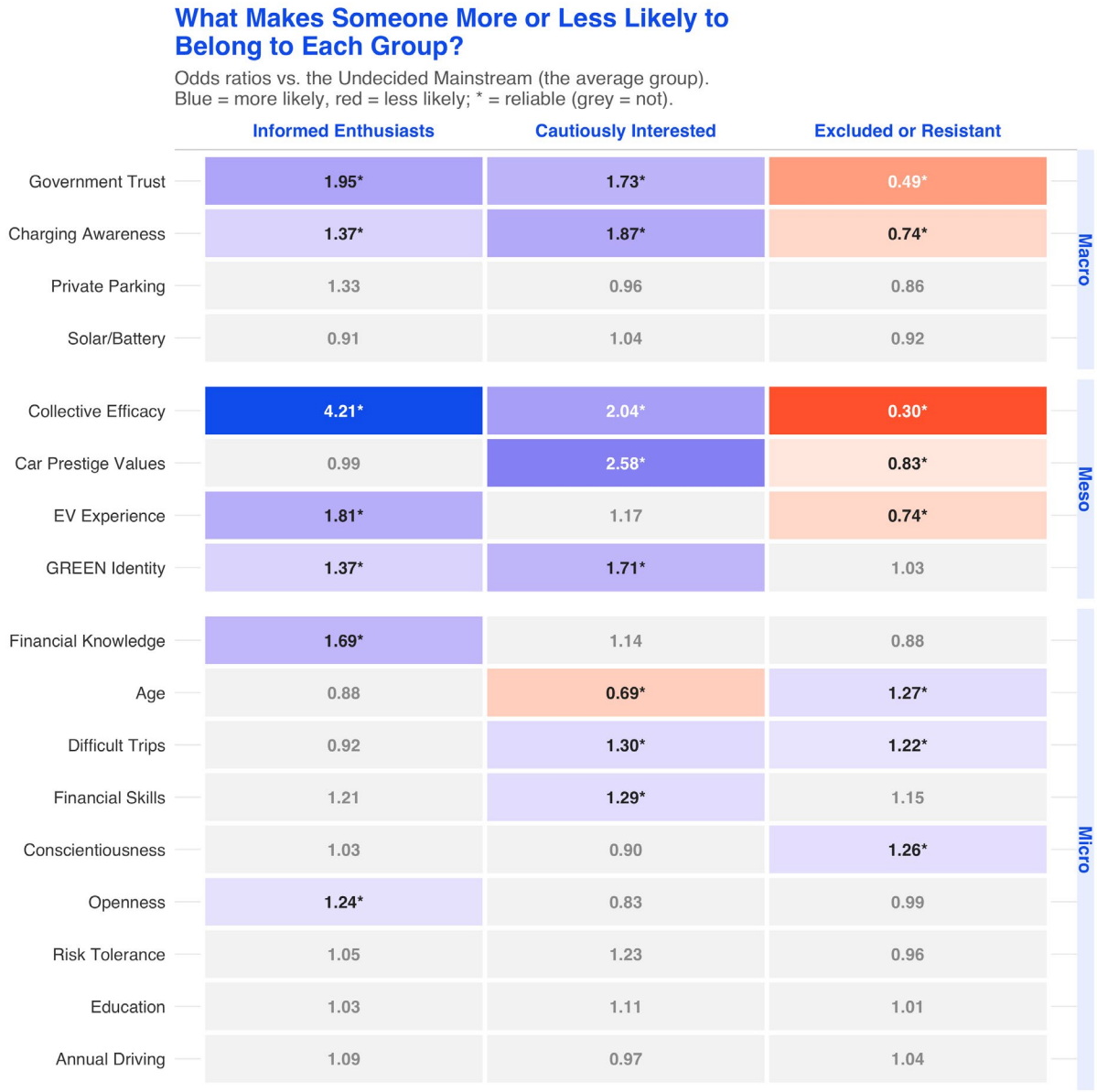


Figure 2. Factors that explain the likelihood of people being a member of each segment

These associations identify potential leverage points for testing in future interventions. For example, charging infrastructure awareness, the economic and financial benefits of EVs, or opportunities for EV experiences could be promoted through advertising, marketing, signage or events and may have a positive influence on EV readiness for the Undecided Mainstream segment.

5.5 Distinguishing between the EV readiness profiles

Key insight

The four EV readiness profiles are distinguished by interacting macro, meso and micro-level factors, including policy support, charging awareness, perceived value, EV experience, social norms, financial knowledge, environmental identity, misinformation endorsement and car culture. These differences point to practical leverage points for action, but they should not be interpreted as evidence of actual movement between profiles. Future longitudinal tracking is needed to understand how consumers shift between profiles as policies, infrastructure, prices, technologies, information environments and social norms change.

The previous section identified four EV readiness profiles. This section examines the macro, meso and micro-level factors that distinguish those profiles and point to potential leverage points for policy, infrastructure, markets, communication and behaviour change. Because the survey is cross-sectional, the analysis does not track actual movement between profiles over time. However, it does identify the factors associated with higher and lower levels of EV readiness, which can inform programme targeting, intervention design and future longitudinal tracking.

This use of segmentation aligns with environmental management and social marketing research that treats segments as strategic tools for understanding heterogeneous consumer needs, prioritising resources, tailoring interventions and tracking movement over time as policies, technologies, markets and perceived value change (Gordon et al., 2025).

Further insight into potential movement between profiles can be gained by examining the factors that distinguish higher and lower EV readiness. Figure 3 shows how each segment compares to the overall average on the nine behavioural influence measures that are associated with EV readiness related outcomes. Bars extending to the right (blue) indicate above-average scores; bars to the left (red) indicate below average.



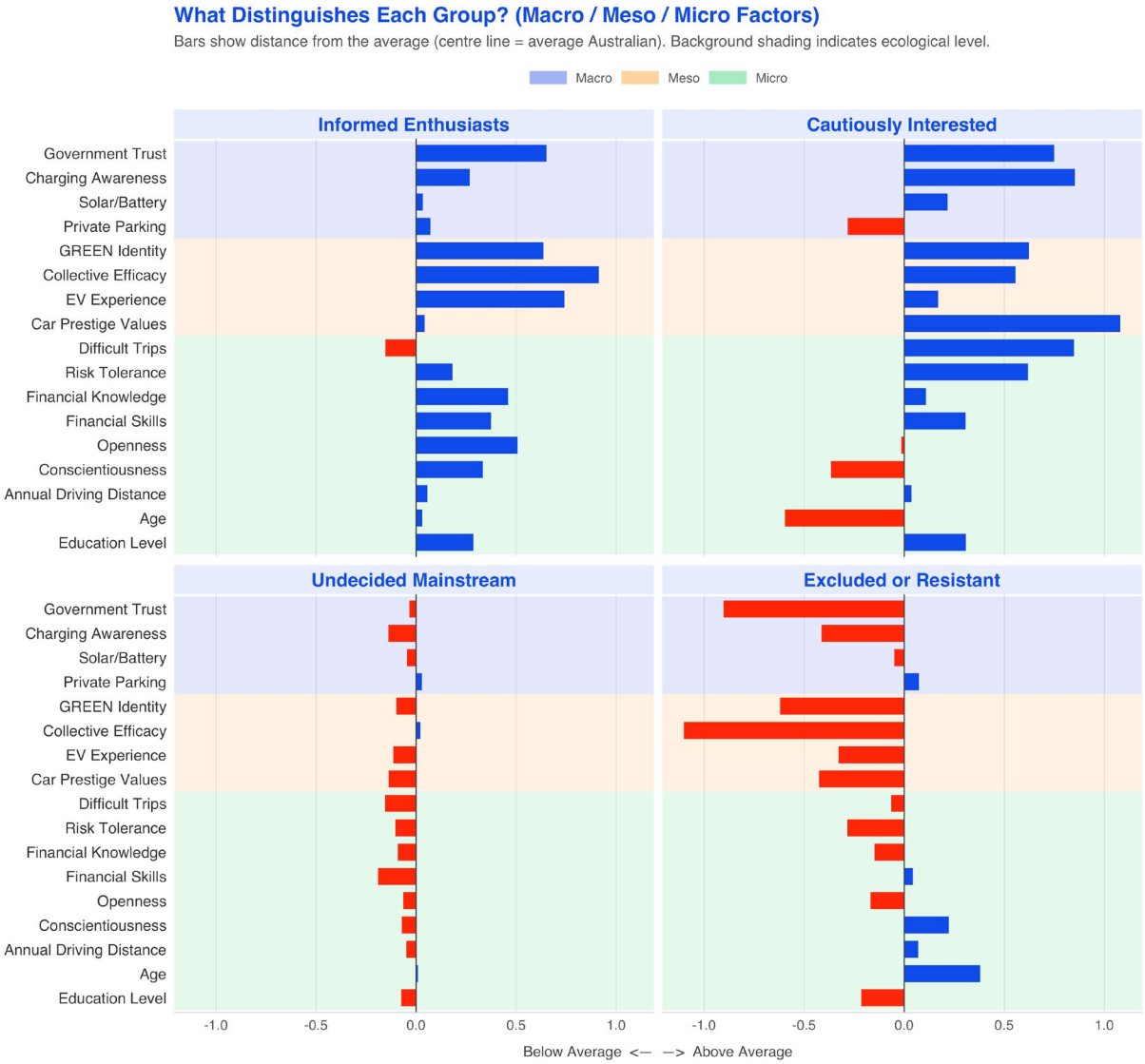


Figure 3. Distinguishing macro, meso and micro level factors between the four groups

Our segmentation analysis found that in terms of socio-cultural level influences on behaviour the four segments are sharply differentiated by four factors: environmental identity, collective action beliefs, EV experience, and car culture. Figure 3 shows how each segment differs from the average across these factors.

In terms of environmental identity (GREEN score) this was one of the strongest overall predictors. Informed Enthusiasts and Cautiously Interested both score above average, while Excluded or Resistant score well below. This suggests that environmental concern is a gateway to EV interest - but on its own, it is not enough to produce informed readiness. The qualitative data consistently illustrated that the environmental benefits of EV ownership were often high but not the main driver for purchase.

> *"My partner was probably more interested in that environmental impact, as silly as it sounds and I was quite ignorant. I was more about saving money and having something that was easier to use daily. I didn't really think about that as much, but I knew obviously that it was doing a better thing for the environment. So, it's sort of a tick box with that, but that wasn't really a factor for why I picked the (brand of EV)."*
>
> **Genevieve, Female, NSW, EV owner.**

Collective efficacy - the belief that people working together can make a difference - separates the engaged from the disengaged. Informed Enthusiasts score highest; Excluded or Resistant score lowest. People who feel that collective action matters are more open to EVs as part of a broader societal shift. The qualitative data also indicated that EV ownership was a catalyst for rethinking energy and mobility choices, often prompting introspection and greater reflection on personal responsibility and part of society wide change.

> *"We're getting to reconsider our relationship with the world and the way that we traverse around the world. And I think anything that prompts that kind of society wide reflection and introspection is a net positive. And so, I've had to sort of sit with myself and think, how is it that I get around? What is it powering that? And what am I doing in this sort of transition to be a bit more considered about how I'm getting about?"*
>
> **Irwin, Male, NSW, EV owner.**

In relation to EV experience, whether someone had seen, ridden in, or driven an EV, was consistently higher among Informed Enthusiasts and Cautiously Interested. The qualitative data illustrated that when EVs become familiar in a neighbourhood, there is greater interest which often leads to enthusiastic conversations and sharing of knowledge between family, friends and community members. Consistently, people related that hands-on experience such as being driven in an EV led to test drives, and that test drives were a strong influence on purchase behaviour.

> *"My neighbour has an EV as well...The more people that they're getting to test drive, the most people that test drive want to buy them after that."*
>
> **Emery, Male, NSW ICEV owner.**

Thus, for both the survey and the qualitative data, hands-on experience was a strong enabler of adoption readiness, operating through social networks and community exposure.

Finally, in relation to car prestige values - the importance placed on a car's power, status, sporty appearance, and popularity, represent socio-cultural factors that captures car culture. Segments that place higher importance on car prestige may face a cultural barrier if EVs are not yet seen as meeting these status needs, or conversely, may be drawn to high-performance EV models. The qualitative data supported this with some participants perceiving EVs as weak in relation to ICEVs.

> *"Show me the one (EV) that replaces my Ute. I want that super-sized Ute. There isn't one out there at the moment."*
>
> **Brock, Male, VIC, EV and ICEV owner.**

This points to how there are opportunities for expanding the range of EV models that are available and offering greater choice for consumers.

6 Macro level structural factors

Key insight

Macro-level conditions shape whether EV adoption feels possible. Consumers' readiness to adopt EVs depends not only on attitudes, values or knowledge, but on whether the wider system provides affordable vehicles, accessible charging, trusted policies, stable market conditions, reliable infrastructure and practical pathways for different households and places to participate.

Macro-level structural factors are the wider system conditions that make EV adoption more or less feasible for Australian consumers. In this report, these include equity and inclusion, affordability and financial cost, charging access and infrastructure, housing tenure, access to enabling household energy technologies, consumer confidence and economic conditions, EV policy settings, and trust in government and market actors. These factors shape whether EV adoption is practical, affordable, trusted and accessible. Equity is treated as a key macro-level factor, but also as a cross-cutting issue because affordability, housing, charging, technology access and policy benefits are not experienced evenly across households or places.

6.1 Equity and inclusion in the EV transition

Key insight

Equity in the EV transition depends on both access to enabling conditions and the social and structural circumstances that shape whether people can access them. Enabling conditions include affordable vehicles, finance, reliable charging, suitable housing, off-street parking, second-hand EV supply, trusted information and access to household energy technologies. These conditions are not evenly distributed. Lower-income households, renters, apartment dwellers, regional and rural communities, older people, people with disability, young people on low incomes, culturally diverse households and people reliant on older second-hand ICEVs may face overlapping barriers that make EV adoption substantially less feasible.

Equity is one of the key macro-level factors shaping the EV transition because the structural conditions that enable EV uptake are unevenly distributed across households and places. Contemporary EV equity research shows that high-income homeowners have comprised a disproportionate share of the EV market to date, while housing- and income-related factors significantly shape EV perceptions, charging preferences and adoption opportunities (Lee et al., 2024). Research on EV charging equity also highlights that access to charging infrastructure is a central distributional issue, particularly for households without reliable home charging, renters and residents of multi-unit housing (Johnson and Lamm, 2024; Russo et al., 2024). Consistent with this literature, the qualitative and survey findings from this project show that EV adoption is currently easier for higher-income, owner-occupier and energy-engaged households, particularly those with access to off-street parking, home charging, solar PV, batteries, financial literacy and the capacity to absorb high upfront purchase costs. In contrast, lower-income households, renters, apartment dwellers, regional and rural communities, consumers with limited access to trusted information or reliable charging, and those reliant on the second-hand vehicle market face greater barriers to participation. These barriers can also intersect with disability, age, household composition, geography, car dependence, lack of trust in government and exposure to misinformation, creating compounded forms of exclusion from the benefits of the EV transition.

Building on this equity framing, the project findings show that EV uptake depends on access to enabling conditions that reduce practical, financial and psychological risk. The findings show that EV adoption is currently easier for households with higher incomes, secure housing, off-street parking, home charging, solar PV, batteries, financial flexibility, financial literacy and confidence navigating new technologies. These conditions reduce the practical, financial and psychological risks of EV adoption. They also make it easier for households to realise the economic and functional benefits of EV ownership, including lower running costs, convenient charging and integration with household energy systems.

For other households, these enabling conditions are weaker or absent. Lower-income households, renters, apartment dwellers, regional and rural consumers, people without off-street parking, people reliant on the second-hand vehicle market and consumers with limited access to trusted information or reliable charging face greater barriers to participation. These barriers do not operate separately. A household may be interested in an EV but unable to afford a suitable vehicle, unable to install home charging, dependent on public charging, uncertain about battery replacement costs, or excluded from solar and battery benefits because of rental housing or apartment living. This means that equity in the EV transition is not only about whether EVs eventually become cheaper; it is about whether different households and places can access the practical conditions that make EV adoption feasible.

Participants frequently interpreted incentives and infrastructure through this equity lens, particularly where subsidies or benefits were seen to favour households already able to afford an EV:

> *"The subsidies they've given out have been a useful incentive. But again, they are unequally valuable because those who can afford it benefit by the subsidy. Those that can't afford it don't benefit and still can't progress into it."*
>
> **Mckinley, Male, WA, EV owner.**

For some consumers, the transition also raised concerns about being left behind, particularly where independent mobility was already constrained by income, disability, limited public transport or reliance on an existing ICEV:

> *"Actually, I'm a bit scared. I'm scared because I was quite happy with my head in the sand. An EV is out of my realm. I don't have to think about it. But knowing that it probably will happen in my lifetime, absolutely terrifies me because without my vehicle I'd be lost. I can't do public transport. I certainly can't afford taxis and I can't walk."*
>
> **Ivanka, Female, WA, ICEV owner.**

These findings establish the equity lens for the macro-level factors that follow. Affordability, charging access, housing tenure, public infrastructure, second-hand EV availability and access to household energy technologies are discussed in separate subsections because they are structural factors in their own right. However, each also has equity implications because the barriers and benefits associated with them are unevenly distributed and shaped by intersecting social and structural characteristics.

Intersectional vulnerability refers to the way multiple forms of structural disadvantage can overlap and compound, shaping people's capacity to participate in behaviour and social change initiatives and increasing the risk that policies or programmes designed for a general population will miss those facing the greatest barriers (Crenshaw, 1991; Gordon et al., 2022). In this project, intersectional vulnerabilities were evident where low income, rental housing, apartment living, disability, older age, regional or rural location, reliance on older second-hand ICEVs, limited public transport alternatives and limited access to charging combined to make EV adoption substantially less feasible, affordable or relevant for some households.

Some consumer groups were seen as particularly affected by unequal access to EV options and feeling abandoned in the transition to net zero mobility. People living on low-income and in rented accommodation were perceived as the most affected by unequal transition. This included older people on low-income, living in rural or remote areas and/or rented accommodation. People living with disability on low-income or in remote areas were also significantly affected by the unequal transition. Another disadvantaged group in this transition was young people on low-income:

> *"The nature of what young people buy is old rubbish cars. And so those cars will be around, I think for a really long time. And I guess what are the social implications for those people? If we do pour all the money into middle-aged and older people, what happens to the people that's about their cars? Because even if you gave them $5,000 assistance to buy an EV, they're still not going to be able to buy one. And so, there's a generational, I believe in the notion of generational theft and intergenerational inequity."*
>
> **Angelique, Female, VIC, ICEV owner.**

The survey findings reinforce this equity concern. Purchase price remained the dominant barrier across all income groups, but lower-income participants were more likely to cite "nowhere to charge at home", consistent with the wider pattern of rental housing, lower access to off-street parking and reduced access to household energy technologies. Lack of public charging was also a common concern across income groups. These findings show how affordability and infrastructure barriers can compound rather than operate separately (Figure 4).

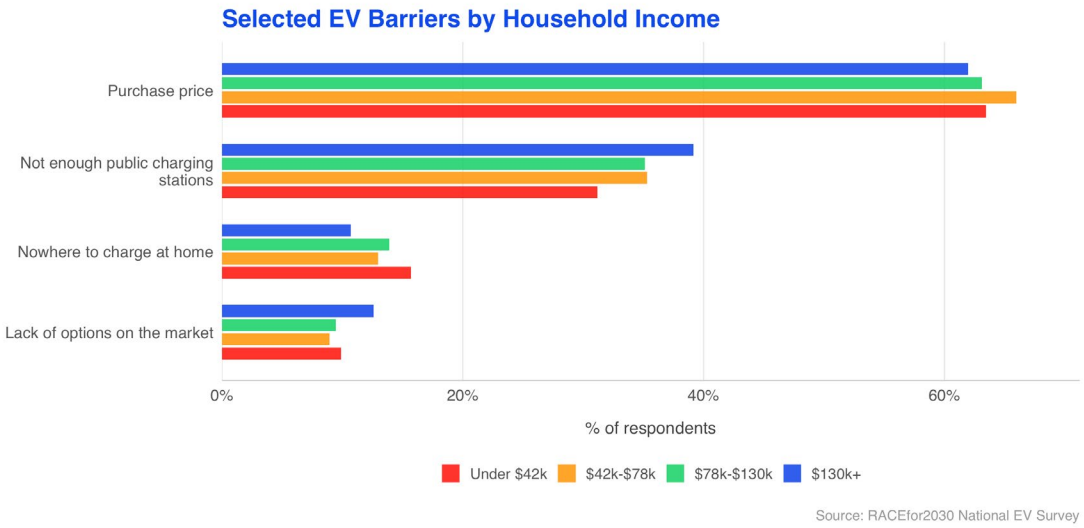


Figure 4. Key barriers to purchasing an EV by level of household income

The following subsections examine a range of macro-level structural conditions that shape EV readiness and uptake, many of which also have equity implications. These include affordability and vehicle budgets, charging access and housing tenure, public infrastructure, second-hand EV access, and household energy technologies such as solar PV, batteries and HEMS.

6.2 Affordability, financial cost and economic confidence

Key insight

Affordability is not only about the purchase price of a new EV. It also includes household vehicle budgets, access to finance, second-hand EV availability, uncertainty about battery replacement costs, charging costs, and whether consumers feel economically confident enough to make a major vehicle transition.

Affordability is one of the clearest macro-level constraints on EV readiness. The findings show that upfront purchase price, household vehicle budgets, second-hand market access, battery replacement concerns and confidence in long-term economic value all shape whether consumers see EV adoption as financially achievable.

Purchase price is the dominant barrier for both EV and non-EV owners but was cited more often by non-EV owners (63.1% vs 45.9%). In answering the question 'What would hold you back from choosing a BEV for your next vehicle?', the groups diverge on rank order: EV owners rank insufficient driving range #2 (40.7%), while non-EV owners rank battery life concerns #2 (42.1%) and charging stations #3 (36%). Insufficient driving range is one of few items where EV owners match or exceed non-owners (40.7% vs 33.6%), suggesting this is a barrier confirmed — not dispelled — by ownership experience (Figure 5).

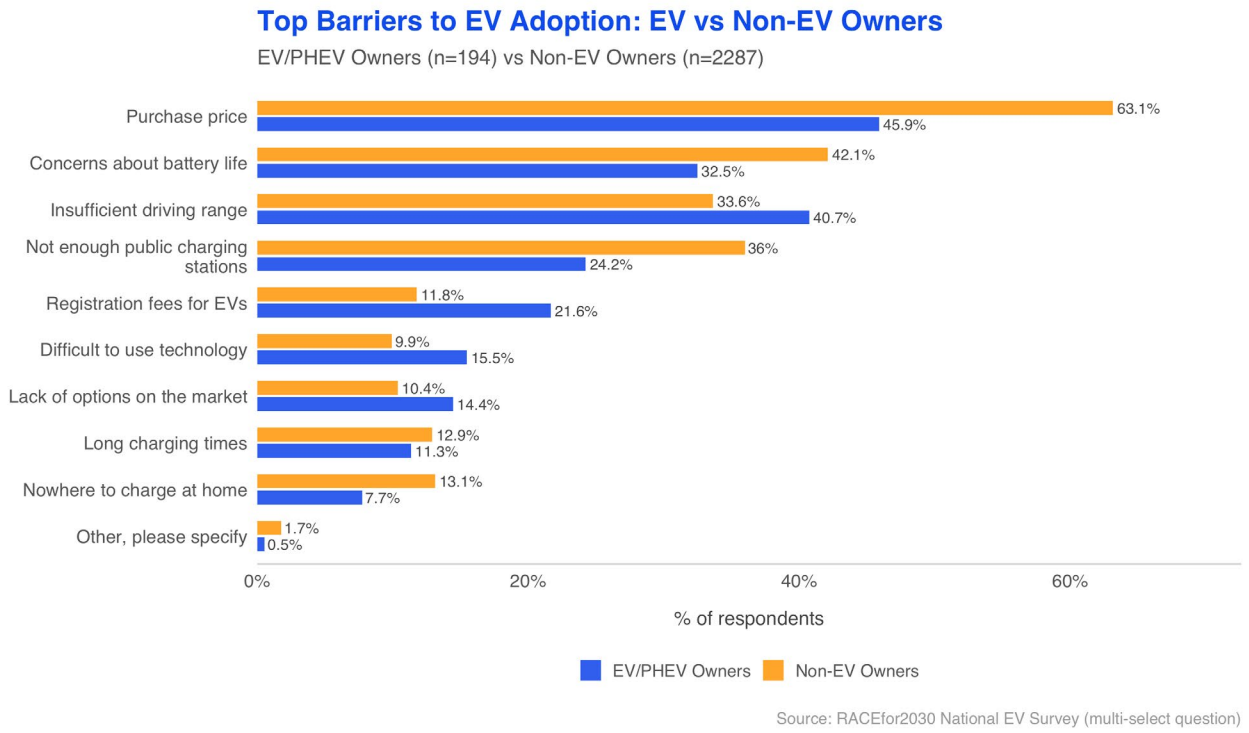


Figure 5. Comparison of key barriers to EV adoption between EV and non-EV owners

The upfront purchase price was a major barrier especially for consumers who usually purchase and use second-hand vehicles, and this was especially flagged by younger adults. New EVs were perceived as more expensive than ICEVs.

> *"I think probably the biggest issues currently are the challenges in using an EV in the initial outlay. I just literally cannot afford to buy a new car or a new EV."*
>
> **Yolanda, Female, WA, ICEV owner.**

This aligns with Australian EV adoption research showing that purchase price, and also public fast-charger availability, financial incentives, driving range and fast charging time are significant factors affecting EV purchase decisions (Philip et al., 2023). It also reinforces consumer research identifying upfront cost, as well as charging access, charging time and performance or reliability concerns as major barriers to EV uptake (Consumer Policy Research Centre, 2022).

However, providing incentives to help with upfront costs was not seen by participants as a likely option for low-income groups because there were perceptions that current policy rewards those who can already afford to buy EVs and this reinforces perceptions that the EV transition is not equitable. Similarly, subsidised solar PV and home batteries which make it more cost effective for EV owners, work to reinforce the perception that policy concentrates the rewards for participation in the sustainable energy transition to groups who can already afford these technologies. This is especially evident for those who do not have access to solar PV or home charging through renting or apartment living. In addition to the direct cost of purchasing and maintaining an EV, the qualitative data analysis highlights that the unequal distribution of incentives shifts the burden and cost of achieving net zero mobility transition onto people on low income:

> *"That they're [government incentives to increase EV uptake] very enthusiastically embraced is all very nice. But it's more of the same of making the rich richer."*
>
> **Jemina, Female, VIC, EV owner.**

Together, these anxieties undermine trust in government policies to address affordability issues and help support the transition to EVs.

Another key concern was the potential cost of battery replacement, especially among participants worried about EV battery life.

> *"I think the running cost, you might save on it in a short term, but if the battery has any issues, then that might be a costly replacement."*
>
> **Zihao, Male, VIC, ICEV owner.**

These perceptions created anxieties about further hardships for those already on low incomes because of potential scenarios where EVs could make it unaffordable to buy, sell or run an ICEV:

> *"People that don't have a lot of money at the moment, you'd get a second-hand car, which costs not sure what they cost these days, but you can get cheaper ones for say $5,000. But all those are going to be redundant and there's going to be no cheaper car because EVs are so new. So, I guess those people that either currently have a car that now they can no longer sell because no one's buying their petrol, they're going to be left without a vehicle, and I think that could cause some significant problems."*
>
> **Agatha, Female, NSW, ICEV owner.**

The survey also suggests that economic confidence is associated with EV purchase readiness. Mean economic confidence was highest among participants who planned to purchase a BEV next (9.39), followed by those who would consider a BEV (8.60), those with future interest (8.13), and those with no interest (7.70). This suggests that affordability is not only about stated purchase price barriers, but also about whether consumers feel economically confident enough to consider a major vehicle transition. However, most survey participants (66%) expected that EVs would meet their needs and budget in less than six years.

While private vehicle use is a dominant feature of Australian household mobility, household vehicle budgets vary widely, with significant implications for EV purchase intent. When asked 'What do you consider a reasonable budget when buying your next vehicle?', participants with higher vehicle budgets were more likely to express interest in purchasing an EV and to report shorter expected purchase timelines. Vehicle budget closely tracks EV interest. Those with budgets under $20k are the most disinterested, while $60–80k budget holders show the strongest positive intent. The survey analysis suggested that affordability is a binding constraint — people with the financial capacity for a higher vehicle budget are substantially more open to EVs (Figure 6).

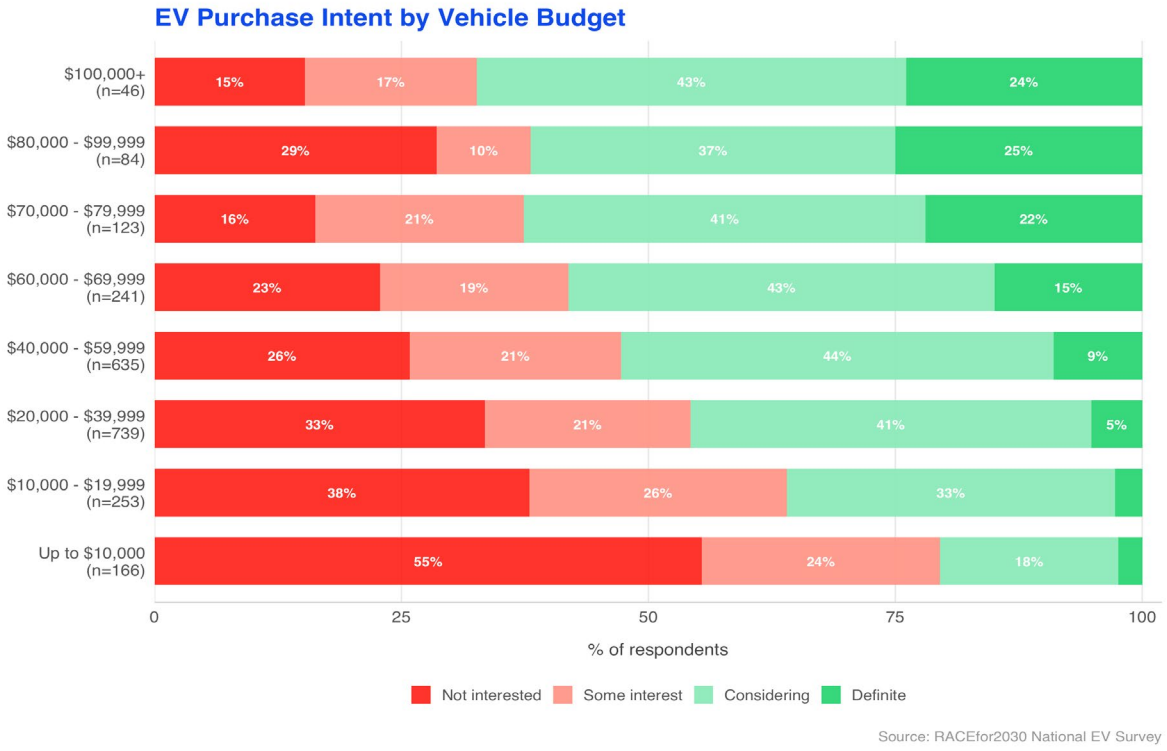


Figure 6. Intention to purchase an EV by vehicle budget size

The same affordability gradient was found in relation to timelines for intended purchase of an EV. Those with budgets under $20k had the highest 'Never' rate. Higher-budget participants cluster in shorter 1–5-year horizons, suggesting they are not just more interested but more actively planning a purchase. This result was corroborated by the survey results about intention to purchase a new or used EV. Used-car buyers are substantially more disinterested in EVs (~40%) compared to new-car buyers (~24%). This is a critical equity concern because lower-income households disproportionately rely on the used-car market, where affordable EV supply remains very limited. Meanwhile, survey findings found that used-car buyers reported longer purchase timelines, with a higher share saying 'Never' (~22% vs ~12% for new buyers). New-car buyers concentrate in the 3–5-year horizon. The limited availability of affordable used EVs likely delays the transition for budget-constrained consumers.

These findings show that affordability is not only a question of current purchase price. It also concerns household vehicle budgets, access to finance, confidence in long-term economic value, battery replacement uncertainty, and whether consumers can access a viable second-hand EV market. Without more affordable purchase pathways, the benefits of EV uptake risk remaining concentrated among households with the financial capacity to buy new or near-new vehicles.



6.3 Charging access, housing and infrastructure

Key insight

Charging access is not only an infrastructure issue. It is shaped by housing tenure, off-street parking, apartment and strata arrangements, public charging visibility, charger reliability, digital and payment systems, and confidence that charging can fit into everyday routines.

Charging access is a macro-level feasibility condition shaped by housing, parking and infrastructure provision. The findings show that home charging, public charging availability, charger reliability, apartment and rental arrangements, off-street parking, and confidence identifying suitable chargers all influence EV readiness. For consumers with secure off-street parking and the ability to install home charging, EV ownership can be easier to integrate into everyday routines. For renters, apartment dwellers and households reliant on public charging, the transition can feel more uncertain, less convenient and harder to control.

This aligns with contemporary EV equity and charging research showing that access to home and public charging is unevenly distributed, with renters and residents of multi-unit housing facing distinctive legal, financial, technical and infrastructure barriers (Johnson and Lamm, 2024; Russo et al., 2024). It also aligns with Australian EV adoption research showing that public fast-charger availability, charging time and charging access are significant factors shaping EV purchase preferences and barriers (Consumer Policy Research Centre, 2022; Philip et al., 2023).

Survey results indicated that access to charging at home, at work, in the local area and while travelling had an influence on intention to purchase an EV. Overall, non-EV owners (see Figure 7) demonstrated lower levels of awareness than EV owners of where to find chargers around their workplace, shopping centres, public roads, petrol stations and car parks. While around half of non-EV owners were not aware of workplace or public charging locations, more than half were aware of shopping centre and car park charging. This suggests that signage and visibility of chargers at shopping centres and on streets plays an important role in increasing people's awareness of charging locations as well as helping normalise EVs. This is especially important for non-EV owners, as visibility of chargers in everyday locations can help improve awareness of existing infrastructure and make EV charging seem more familiar and normal.

> *"There is infrastructure, it's just not, you just don't know where it is unless you know where it is."*
> **Mark, Male, VIC, EV and ICEV owner.**

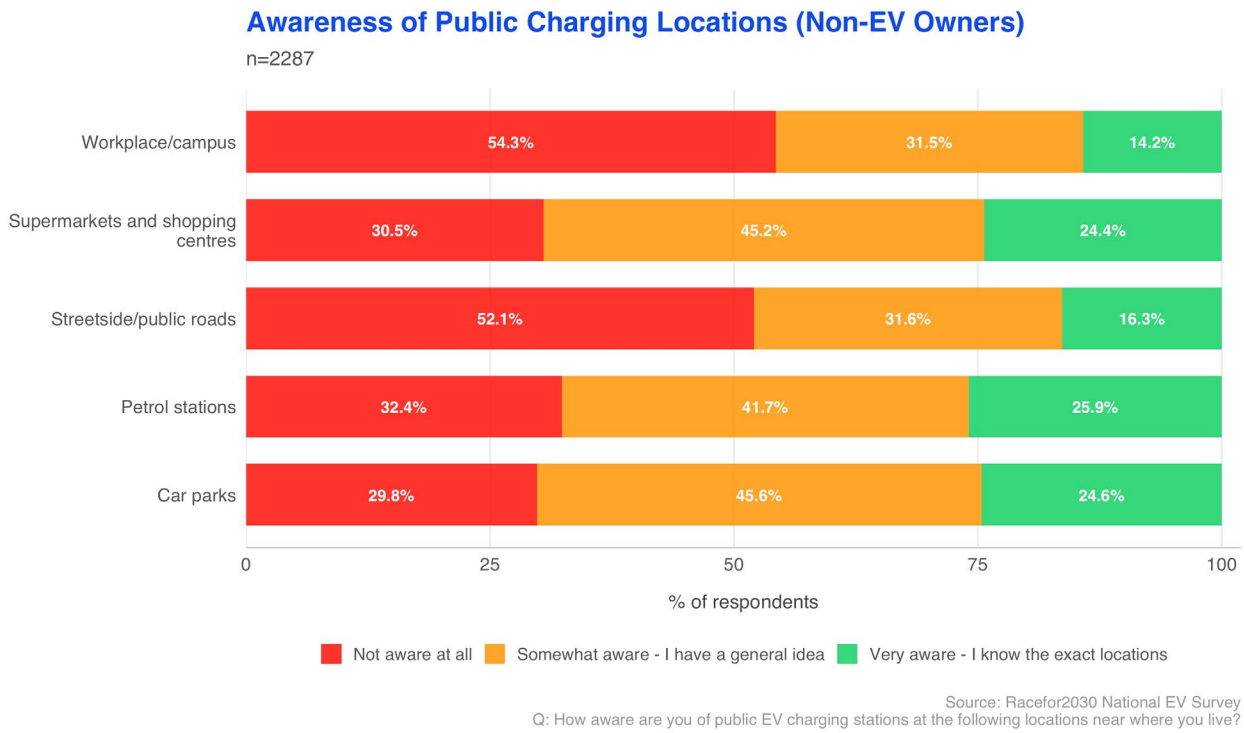


Figure 7. Non-EV owners' awareness of public EV charging locations

Survey analysis found that most EV owners living in free-standing housing had slightly greater awareness of chargers in various locations than people living in apartments. We also found that people living in apartments had slightly greater awareness of streetside charging perhaps reflecting the lack of access to charging in apartments. This was reinforced by the qualitative data which found that many EV owners living in rentals and apartments relied on publicly available charging. For these participants, charging could be manageable when supportive conditions were in place, such as home charging or reliable public infrastructure.

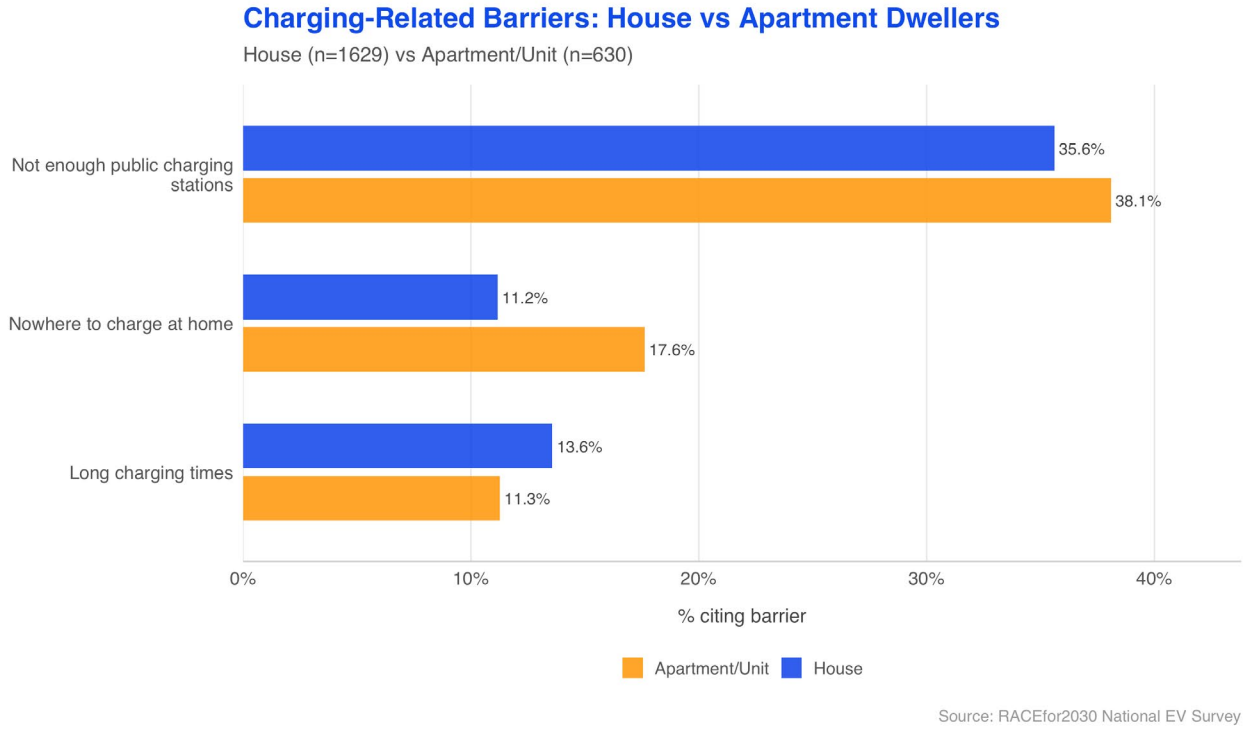
> *"There's one (charger) over at RMIT, I think it is, in North Melbourne, which I've used once, but the one down here at Toyota and there's another one over at the carpark in Footscray, are the two that I use the most. They're reliable, they're always available and there's a shop nearby if you want to go and grab a coffee. I normally just sit and read my book for an hour. ... Even using public charging, the EV is still way cheaper."*
>
> **Arturo, Male, VIC, EV owner.**

The survey revealed that EV owners score 'charging is easy' (reversed) lower than non-owners (2.75 vs 3.63), suggesting real-world experience related to unreliable or unavailable charging infrastructure. A notable contrast was that in the qualitative data many EV owners often described charging as manageable and routine, while ICEV owners may perceive apartment or rental living as a significant barrier to EV adoption. This suggests a gap between lived experience and perceived feasibility with non-EV owners underestimating the potential challenges of charging using public infrastructure.

However, several structural barriers exist to owning an EV when living in apartment and for rental residents. These include rentals and strata restrictions, perceived fire risks, installation costs, insurance concerns, and shared-cost complications. These barriers were seen as needing to be tackled at a government level through appropriate supportive legislation.

> *"If there was a law for example, that says you can't deny someone in apartment building to install an electric car charger, that would be great. And then maybe some money on top of that to encourage it."*
>
> **Eric, Male, VIC, EV owner.**

Apartment dwellers were more likely than house dwellers to cite 'Nowhere to charge at home' as a barrier (17.6% vs 11.2%), confirming the expected home-charging disadvantage. However, insufficient public charging is the top concern for house and apartment dwellers at similar rates (~36–38%). House dwellers are slightly more concerned about long charging times, possibly reflecting longer-distance commuting patterns (Figure 8).

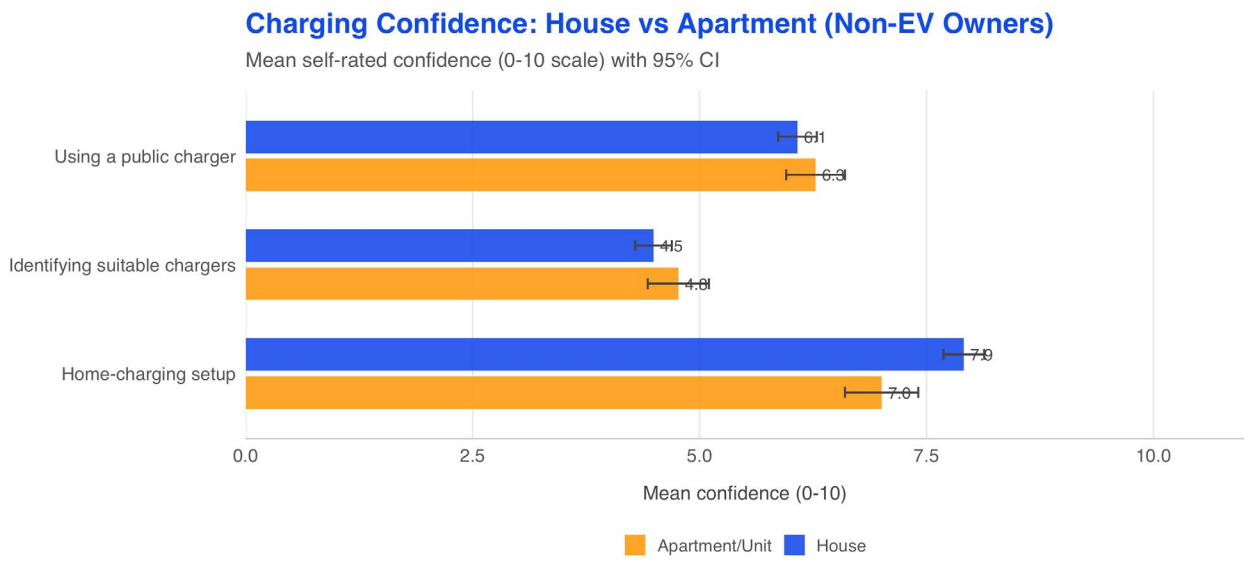


Source: RACEfor2030 National EV Survey

Figure 8. Charging-related barriers for house and apartment dwellers

The charging confidence gap between house and apartment dwellers is concentrated in home-charging setup (House: 7.9, Apartment: 7.0 on a 0–10 scale), while public charging confidence and charger identification are roughly equivalent across housing types (both ~6.1–6.3 and ~4.5–4.8 respectively). This suggests the apartment charging barrier is specifically about home infrastructure access, not a broader knowledge or comfort deficit.

This also has important equity implications because the ability to install or access home charging is shaped by housing tenure, building type, strata arrangements, parking access and household resources. For people in rental accommodation EV uptake is often more dependent on public infrastructure provision which creates inequality for those living in disadvantaged areas, on low income, or living with illness. Identifying suitable chargers is the lowest-confidence domain for both groups (~4.5), pointing to a universal information gap that policy could address through better charger mapping and signage (Figure 9).

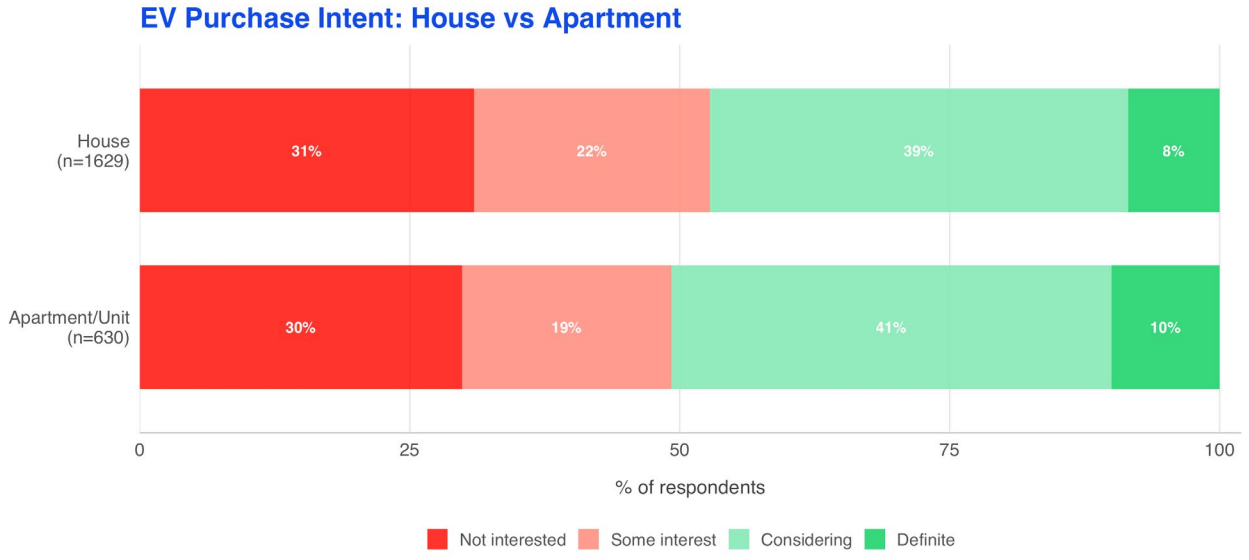


Source: Racefor2030 National EV Survey

Figure 9. Non-EV owners' charging confidence for house and apartment dwellers

Rental, apartment and strata settings create additional barriers because many consumers have limited control over parking, electrical upgrades, charger installation and shared infrastructure decisions.

House and apartment dwellers show virtually identical EV intent — 31% vs 30% 'Not interested' and 8% vs 10% 'Definite'. From the survey, we can assume that aspirational intent may be real but decoupled from feasibility, or that barriers may not yet be felt by non-owners who haven't reached a purchase decision. However, qualitative data consistently demonstrated that many apartment dwellers who owned EVs readily found charging routines using public infrastructure easy to manage. Despite the well-documented charging challenges for apartment dwellers, dwelling type alone does not appear to differentiate purchase interest (Figure 10).



Source: RACEfor2030 National EV Survey

Figure 10. Intention to purchase an EV for house and apartment dwellers

Mirroring the intention to purchase an EV results, house and apartment dwellers report near-identical purchase timelines. Both show 16–17% saying 'Never' and approximately 31% in the 3–5-year window. The practical charging constraints facing apartment dwellers are not translating into measurably different stated timelines (Figure 11).

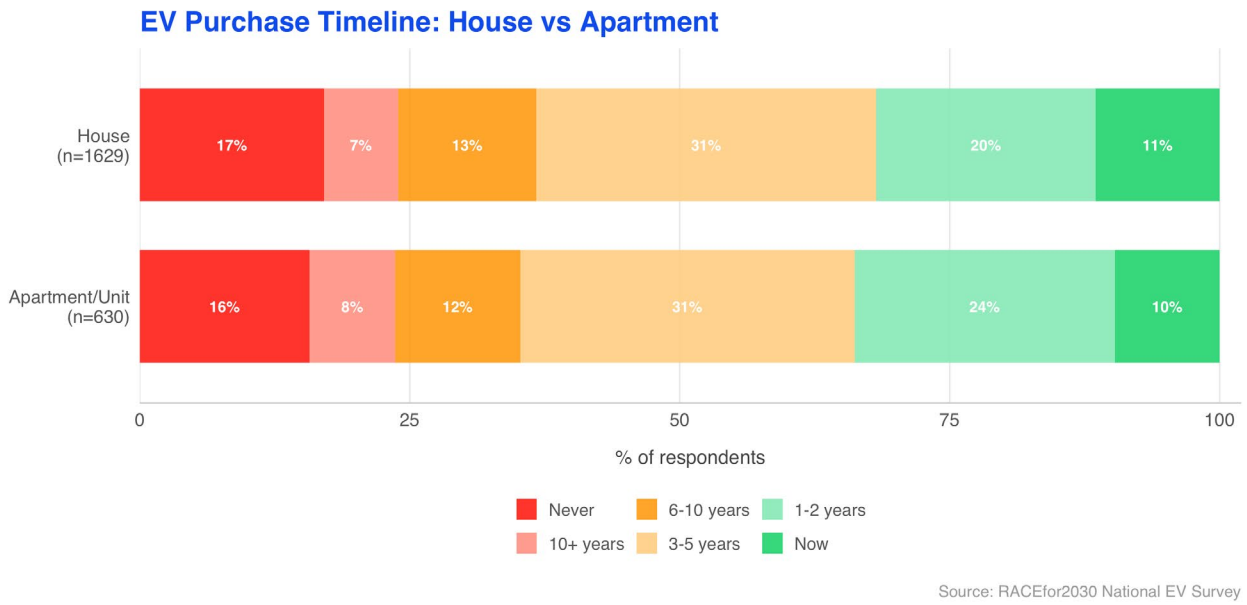


Figure 11. Timeline of intention to purchase an EV for house and apartment dwellers

While there is little difference between the type of housing arrangement i.e., free standing house vs apartment in the intention to purchase an EV, renters face compounded inequalities due to being unable to access Solar PV and home batteries which would make an EV more financially attractive. Renters felt constrained by landlords often unwilling to outlay the cost of installing EV chargers and HEMS in their properties. Renters were also concerned about asking for access to these facilities in case it resulted in increased rent, especially in the context of high cost of living issues.

> *"I don't think many landlords are just going to do that [install solar panels] on their own back. [...] landlord is similar to a corporation. I guess in one sense they're only going to do what's going to benefit them."*
>
> **Shawn, Male, WA ICEV owner.**

Overall, these findings show that charging access is shaped by more than the number of public chargers. Consumers assess EV feasibility in relation to where they live, where they park, whether they can charge at home, whether public charging is visible and reliable, and whether charging can fit into everyday routines. Addressing charging barriers therefore requires coordinated action across housing, planning, infrastructure delivery, strata and rental arrangements, public charging networks, clearer signage and consumer information.

6.4 Household energy technologies

Key insight

EVs are becoming part of a wider household energy ecosystem. Solar PV, batteries, HEMS, smart charging and V2G can increase the value of EV ownership, but these benefits may concentrate among households with home ownership, capital, suitable housing infrastructure and energy literacy unless access is broadened.

EV adoption is increasingly connected to wider household energy systems. Solar PV, batteries, home energy management systems (HEMS), smart charging and vehicle-to-grid (V2G) can strengthen the functional and economic value of EV ownership by enabling households to manage charging, reduce energy costs, optimise solar use and potentially support grid flexibility. However, these benefits are not evenly distributed. Households with home ownership, capital, suitable roofs, off-street parking

and energy literacy are better positioned to access integrated EV-solar-battery benefits, while renters, apartment dwellers and lower-income households may be excluded from some of the most valuable parts of the transition. This makes household energy technologies a macro-level readiness issue, with both infrastructure and equity implications.

Recent EV-grid integration and charging research shows that EV adoption is increasingly connected to home charging, smart charging, solar PV integration, V2G and wider household energy management. Home charging remains the dominant charging location for many EV owners, but access is uneven and shaped by dwelling type, parking and income, while smart charging, PV integration and V2G create opportunities for grid flexibility and household energy optimisation if consumer concerns about cost, battery degradation, privacy, control and value are addressed (IEA, 2024; Comi and Idone, 2024; IEA PVPS, 2025; Liu et al., 2025).

Solar PV and battery ownership were strong markers of energy-engaged households and were associated with greater EV readiness. The survey data show that home energy infrastructure intersects with vehicle ownership, purchase intent and charging confidence. Only 15% of EV owners had neither solar nor battery, compared with 56% of ICEV owners. PHEV owners showed the highest solar-plus-battery rate (51%), followed by EV owners (42%) and hybrid owners (22%). This clustering suggests an "energy-engaged household" profile in which households adopt multiple low-carbon technologies together rather than as isolated decisions (Figure 12).

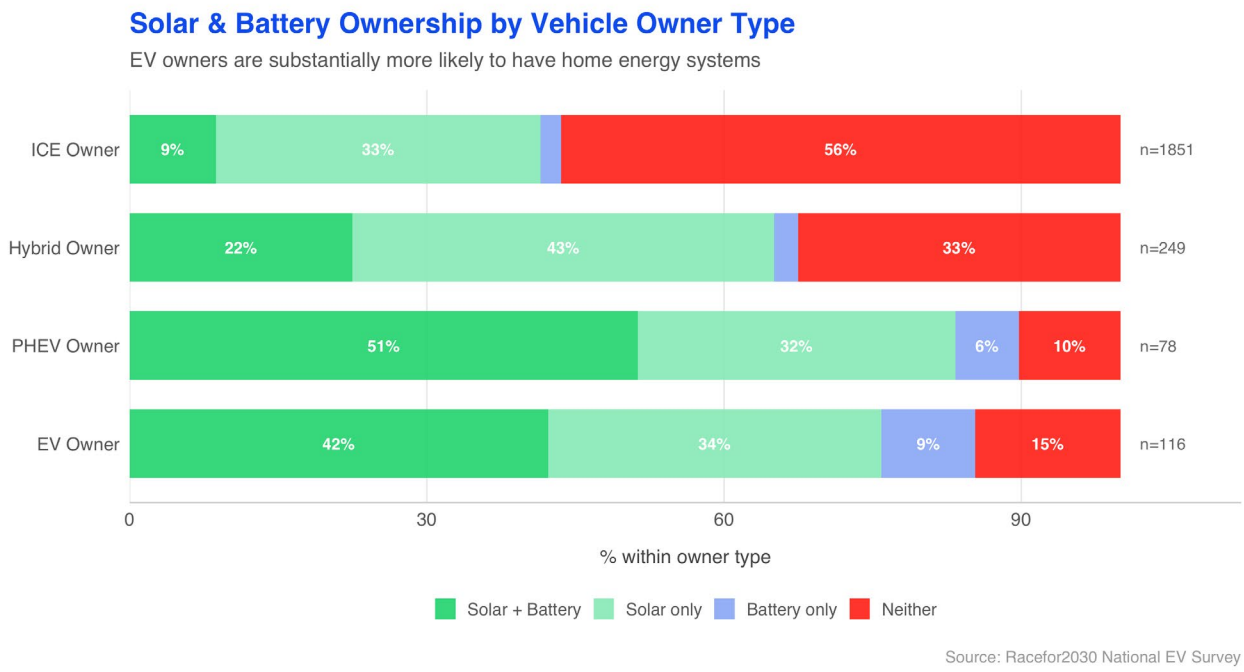


Figure 12. SPV and battery ownership by vehicle owner type

Survey findings indicated that existing home energy technology investment is a strong predictor of EV purchase intent. Among battery-only households, 75% are considering or definite about an EV purchase (33% definite), compared to just 42% of those with neither solar nor battery (5% definite). Solar + Battery households also show elevated intent (64% considering/definite, 19% definite). These findings suggest that households already invested in distributed energy are primed for vehicle electrification, and that solar/battery adoption programs could serve as a pipeline for EV uptake.

Purchase timelines followed a similar pattern. Battery-only households showed the most immediate plans, with 53% intending to purchase within two years. Solar-plus-battery households were also more accelerated, with 49% intending to purchase within two years. In contrast, only 28% of those with neither solar nor battery planned to buy within two years, and 20% said they would never purchase an EV.



In the ethnographic component of the study, having solar and a home battery is an advantage to EV adoption:

> *"Having solar, it just makes sense to have an EV."*
> **Rose, Female, NSW EV owner.**

The ethnographic findings reinforced this pattern. For some consumers, solar PV and batteries made EV ownership feel more logical, economical and aligned with household energy practices. However, this pathway was moderated by geography, house design, life stage, housing tenure and income. Households unable to install solar PV, renters, apartment dwellers and households saving for a future home could find the EV-solar-battery pathway less accessible or less relevant.

For lower-income households, the upfront cost of solar PV and batteries could act as a barrier to participating in the wider energy transition:

> *"Accessing things like solar panels at the moment is not an option for us. I don't really want to go into debt and take out a loan in order to get solar panels.* [...] *I think if the government offered me a loan, a low interest loan to purchase solar panels for my house, I'm not talking about rebates. I know that there are rebates, I would be all for of that. I would take that up tomorrow."*
> **Geraldine, Female, WA ICEV owner.**

The promotion of solar PV and home batteries can therefore strengthen EV readiness, but it can also reinforce unequal access if benefits mainly flow to households that already own suitable homes and have capital to invest. This points to the need for complementary policy options such as low-cost finance, targeted support for lower-income households, community solar, community batteries and solutions for renters and apartment residents.

Vehicle-to-grid (V2G) is a technology that allows energy to flow in two directions between an EV battery and the electrical power grid. Using a bidirectional charger, a parked EV can draw electricity to charge or discharge its stored energy back into the grid to balance supply and demand.

Vehicle-to-grid (V2G) and bidirectional charging were not widely understood among non-EV owners, but they were seen by several EV owners and EV enthusiasts as an important future opportunity. Participants who understood the concept described EVs as potential "batteries on wheels" (Kamila, female, VIC EV owner), that could support household energy resilience, provide backup power during outages, reduce reliance on the grid and potentially feed surplus energy back into the electricity system.

Recent V2G reviews show that consumer acceptance depends not only on technical feasibility, but also on perceived battery impacts, flexibility, risk, costs, contract arrangements, privacy and whether households perceive tangible value from participating (Comi and Idone, 2024; Liu et al., 2025). This vision of the future integration of EVs into household energy arrangements offered a range of benefits including emergency power during outages, and independence from the energy grid:

> *"I would love to be storing during the day off using all the peak stuff from the battery and then having the vehicle itself feed back into the house if required as a secondary backup. That to me, I can't wait for that future. That will be amazing. And for me to be off technically off grid for power."*
>
> **Joan, Female, WA EV and ICEV owner.**

These findings suggest that V2G may strengthen the perceived value of EV ownership for some consumers, particularly when linked to energy independence, emergency backup power, solar optimisation and future cost savings. However, V2G is unlikely to influence mainstream uptake unless consumers understand how it works, what benefits are available, what safeguards are in place and how households would be compensated for participation.

Home energy management systems (HEMS) integrate solar PV, batteries, EVs and smart appliances through hardware, software and data-enabled platforms. These systems can help households optimise energy use by prioritising solar energy, managing charging loads, monitoring energy use and responding to price or grid signals. HEMS, smart meters and smart charging may also provide pathways for energy providers and networks to manage demand on the grid while helping households optimise energy use at home.

When asked about awareness of and interest in HEMS we identified a key information barrier to the integrated energy-transport transition. This is consistent with smart charging and EV-grid integration research showing that coordinated charging and energy management can support demand flexibility, but adoption depends on consumer understanding, user experience, trust, perceived control and the visibility of household benefits (Comi and Idone, 2024; IEA, 2024; Liu et al., 2025).

There was a lack of knowledge about HEMS amongst all groups, including those with high financial and energy literacy. While managing demand on the energy grid was considered an essential part of the EV transition, the practical workings of HEMS were not easily understood:

> *"To be honest, I know virtually nothing about them. I'm assuming that would be a good idea because it's going to lead to a more efficient system, but I don't know enough about them to really comment on it."*
>
> **Arturo, Male, VIC, EV owner.**

Survey data showed that over half of non-EV, non-HEMS owners expressed only slight or no interest in installing a HEMS, indicating a major awareness and engagement gap in the integrated energy-transport transition (Figure 13). However, EV owners who did not yet have a HEMS showed

higher interest, suggesting that EV ownership may act as a gateway to broader household energy management engagement.

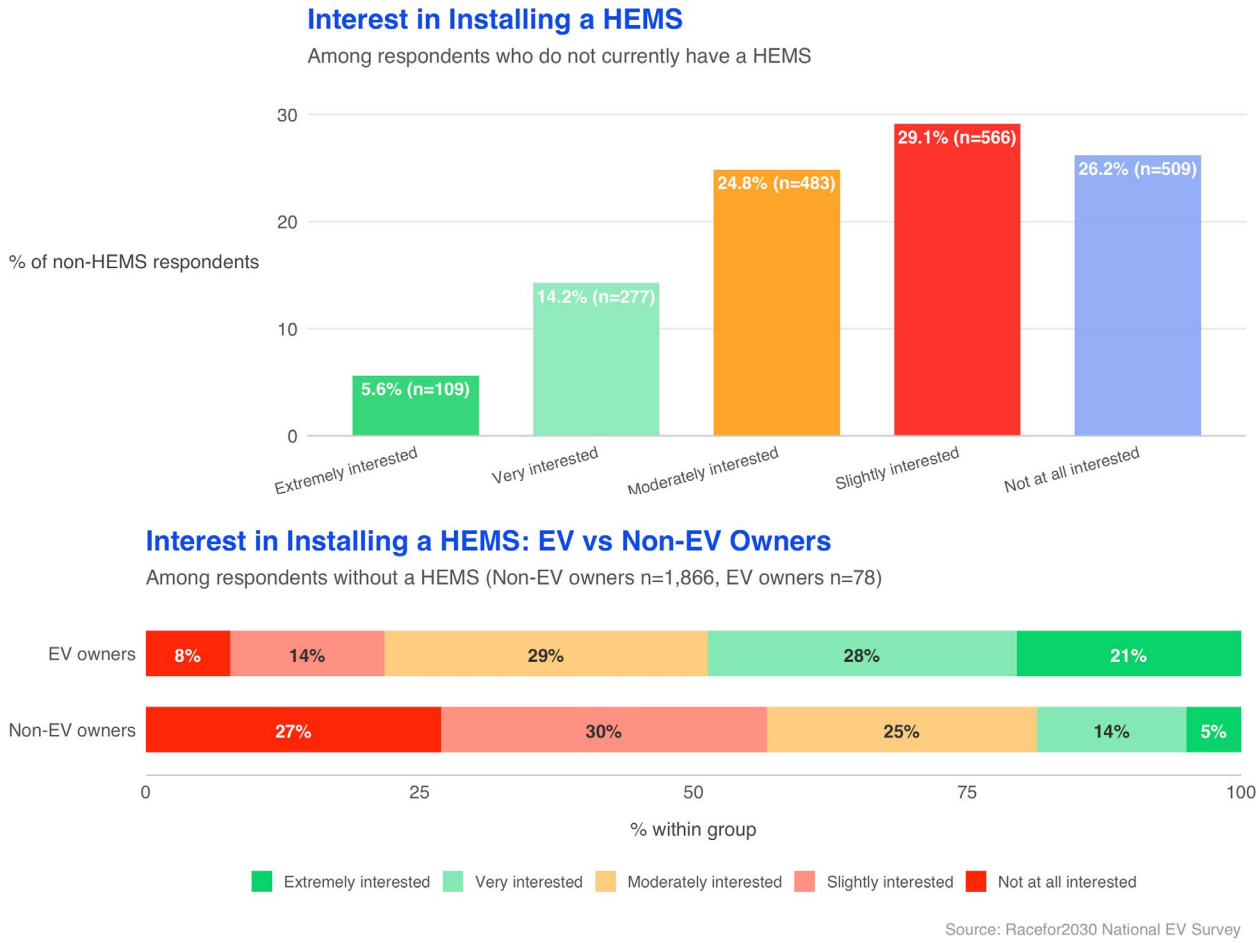


Figure 13. Non-EV owners interested in installing a HEMS

Barriers to HEMS acceptance included lack of information, data privacy concerns, perceived surveillance by energy providers, unfamiliarity with software or hardware, loss of household control, distrust of energy market actors and perceived cost. Participants recognised the value of a stable grid to support EV uptake, but many felt that grid management was primarily the responsibility of energy providers. Without clear household benefits, safeguards and trustworthy offers, HEMS and smart charging are unlikely to be adopted at scale.

> *"I wouldn't do it as an altruistic thing just to, oh, I want to support the grid. I want to help the power company. They're saving money. Give me some of that benefit too. And if the benefit isn't enough to justify the hassle of not having that control, I'll opt out of that. But if the benefit's quite good, well, maybe it really depends on what is put in front of me as the offer to do that. I'll assess it, pop it in a spreadsheet and make the decision then. But I wouldn't just in general, yes, I like the concepts, but it really depends on that fine print."*
>
> **Eric, Male, VIC, EV owner.**

EV and non-EV owners without HEMS had similar expectations of what these systems should deliver. Saving money on electricity bills was by far the most important, expected benefit, followed by monitoring energy use in real time, reducing environmental impact and participating in energy-saving programmes. For EV owners, energy monitoring, automated appliances and energy-saving programmes were particularly appealing, reflecting a more direct need for integrated energy solutions. By contrast, EV charging management ranked lower for non-EV owners, suggesting that HEMS is not yet strongly linked to EV ownership in many consumers' minds.

While the lack of knowledge of HEMS was a major barrier to HEMS acceptance, other barriers included the need to be familiar with software to automate appliances, monitor energy usage, and issues of control which stemmed from a lack of trust in energy providers. An additional barrier was the high level of distrust in market actors who were seen as motivated by profit rather than having consumers' interests at heart. Further, there is a strong perception that this technology is expensive and out of reach for many people.

Price sensitivity was also strong. The survey analysis found that most participants were not interested in paying for HEMS installation, and many non-HEMS participants were unwilling to pay, or would pay less than $5 per month. This suggests that HEMS adoption is likely to require subsidies, strong cost-saving propositions or clear evidence of household benefit.

> *"Whether it's financial, whatever it might be, as long as there's an incentive for why it's being done and if it's going to manage blackouts or brownouts on a hot day, that's an incentive as well. Happy to contribute. If it's not going to cost me money and it could possibly make me money, that's even better."*
>
> **Quintin, Male, VIC, EV owner.**

The survey analysis also found a strong association between HEMS ownership and EV purchase intent. HEMS ownership rates increased sharply with EV purchase intent, from 8% among those not interested in EVs to 44% among those with definite intent. This suggests that HEMS, smart charging and EV uptake may be mutually reinforcing, and that bundled EV-solar-battery-HEMS offers could be important for future transition programmes.

Overall, these findings show that household energy technologies can strengthen EV readiness by increasing the practical, economic and functional value of EV ownership. However, they also highlight a risk that the most integrated benefits of the EV transition may flow first to households that already have home ownership, solar PV, batteries, digital confidence and financial capacity. Future EV programmes should therefore consider how to broaden access to integrated energy benefits, including through targeted finance, community energy models, renter and apartment solutions, trusted information, and offers that clearly demonstrate household value.

Implications for energy-system stakeholders

The findings suggest that EV uptake cannot be separated from household energy systems. For DNSPs, energy providers and technology companies, the transition creates opportunities to support smart charging, HEMS, V2G readiness, EV-solar-battery integration and clearer consumer information. However, uptake will depend on whether these offers are trusted, easy to understand, financially worthwhile and accessible beyond higher-income owner-occupier households.

6.5 EV policy support

Key insight

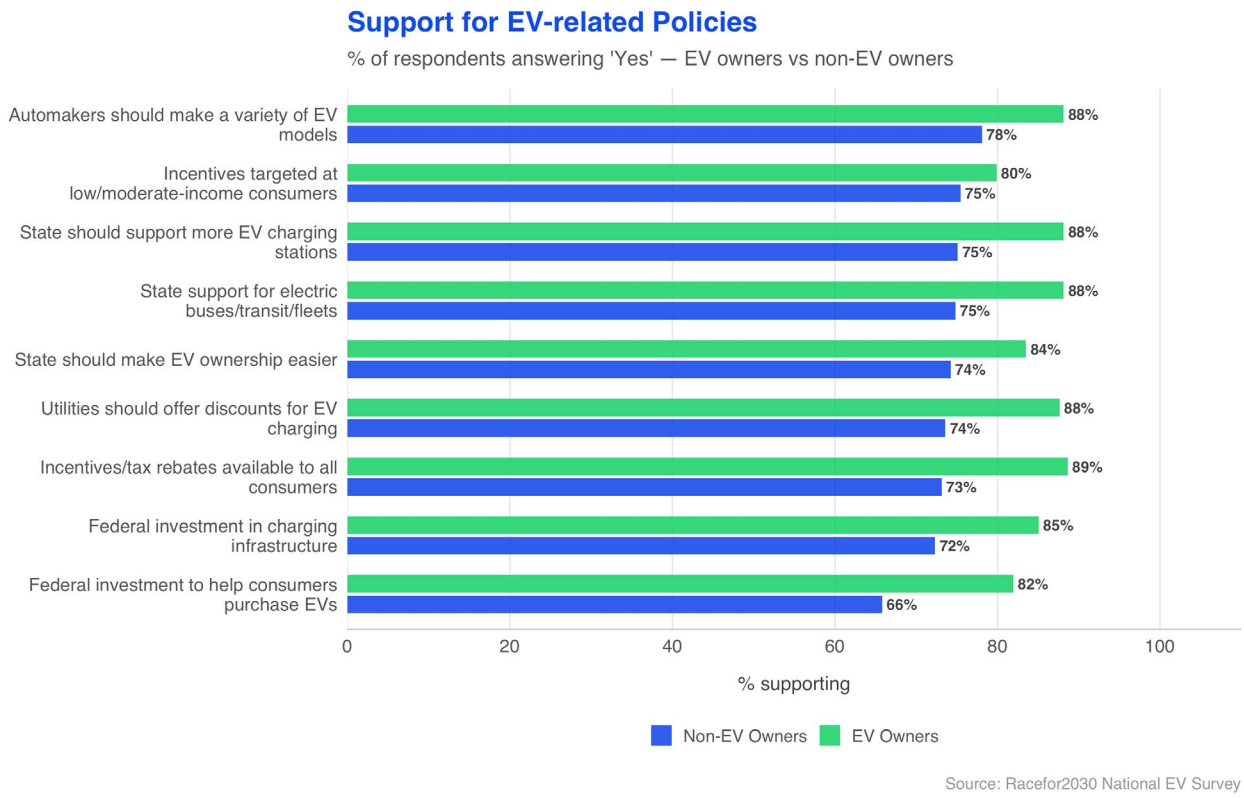
Policy support depends on more than the existence of incentives or infrastructure programmes. Greater consumer awareness of EV policies, practical benefits such as lower upfront costs, reliable charging, clearer information and an affordable second-hand supply will support confidence in the transition. Visible support for households that face barriers to participation can improve perceptions of fairness.

Policy shapes EV readiness not only through incentives and infrastructure investment, but through demonstrating stable, credible and visible implementation of strategies to deliver supportive programs. This can be achieved through improved visibility of policy objectives and building confidence in perceived fairness of outcomes. Consumers can be supported by better understanding long term policy objectives and delivery timelines, levels of available support, and how government plans to enable different households and places to participate in the EV transition. In Australia, EV policy is developing across multiple levels of government, including the National Electric Vehicle Strategy, the New Vehicle Efficiency Standard, charging infrastructure investment, fleet and finance initiatives, and state and territory incentives. These measures can improve affordability, vehicle availability and charging access, but their impact depends on whether consumers perceive them as practical, inclusive and stable.

Australian policy documents frame EV uptake as requiring coordinated action across affordability, vehicle supply, charging infrastructure, fleet transition and emissions reduction, while also noting that Australian and state or territory governments are using incentives, infrastructure programmes and the New Vehicle Efficiency Standard to support EV adoption (Department of Climate Change, Energy, the Environment and Water, 2025).

Qualitative data showed that policy awareness, trust in government and confidence in infrastructure varied across states and between EV owners and ICEV owners. While purchasing a vehicle is often experienced as an individual household decision, participants recognised that EV adoption is also shaped by large-scale policy, infrastructure and market conditions. However, many ICEV owners had limited knowledge of specific policies, legislation, rebate programmes or plans for EV integration. This was closely related to distrust in government and reinforced by perceptions that policies can "flip flop" (Adam, WA, ICEV owner). Some participants referred to previous transport policies, such as the LPG vehicle conversion scheme, as examples of past policy efforts that did not create sustained change.

Survey data indicated high levels of support for EV policies across both EV owners and ICEV owners. While support was generally higher among EV owners, a majority of participants supported federal investment in charging infrastructure (88.1% of EV owners and 75.1% of non-EV owners) and support or incentives to help consumers purchase EVs (83.5% of EV owners and 65.8% of non-EV owners). Greater support among EV owners may reflect direct experience of current charging infrastructure gaps and concerns about affordability (Figure 14).



Source: Racefor2030 National EV Survey

Figure 14. Consumer support for EV-related policies

Figure 14 also demonstrates high levels of support exist for increasing the range of available EV models, discounts for EV charging, and electrification of buses, transit and fleets. Many participants were keen for all levels of governments to support and invest in EV infrastructure, including public charging stations and electric public transport. This indicates that while EV uptake in Australia is currently low, there is general support and interest in the EV transition. EV owners have higher levels of support for incentives and tax breaks (89% vs 73%) indicating an interest in policies that can help other Australians in transitioning to EVs and demonstrating greater commitment to the EV transition.



However, policy support depended on whether government action was perceived as equitable and relevant to different places and households. The qualitative data revealed that many participants perceived that the majority of EV infrastructure was concentrated in metropolitan and urban areas. This caused dissatisfaction for those who lived in outer suburban and regional areas, where car driving and long distances is necessitated by a lack of public transport.

> *"They are also the most people to not need a car living in a dense area with public transport. So, if the government, it was to spend money on that, it's like why are we putting money on this and not other people? But that seems to be the people who want electric cars, most seem to be those inner-city types, not the people who where I live (regional), which we could actually benefit from the most."*
>
> **Eric, Male, VIC EV owner.**

Participants also noted a broader lack of visible leadership and few strong public examples of EV uptake, which could undermine confidence in government policy. Some participants pointed to the absence of electric government fleet vehicles or visible charging infrastructure at public buildings as missed opportunities for governments to model the transition. This suggests that trust in policy may be strengthened not only through incentives, but through visible public-sector leadership, including EV fleets, solar PV on public buildings and charging infrastructure in government and community spaces.

> *"I mean, I can't see why there aren't solar panels on all the roofs of government buildings and libraries, train stations, train stations, everything like that. I mean, if you gave out free power in those places that have got, if every government building, council building, whatever, it had solar panels they could give out free or discounted charging."*
>
> **Abigail, Female, WA, EV owner.**

Overall, these findings show that EV policy needs to do more than stimulate aggregate uptake. It needs to build public confidence, reduce practical barriers, support different household circumstances and demonstrate that the transition is being managed fairly. Policy credibility will depend on whether consumers can see practical, trusted and inclusive pathways into EV adoption, including through affordable purchase options, reliable charging infrastructure, clearer information, visible public-sector leadership and support for households and regions that face greater barriers.

Implications for state governments

The findings suggest that state governments have a critical role in making EV policy visible, trusted, fair and practical. This includes ensuring that incentives and infrastructure investments are not perceived as benefiting only higher-income, metropolitan or early-adopter households. State-level action should focus on visible charging infrastructure, support for renters and apartment dwellers, regional and outer-suburban access, trusted consumer information, more affordable uptake pathways, and public-sector leadership through EV fleets, charging access and solar-enabled public buildings.

7 Meso level socio-cultural factors

Key insight

EV readiness is shaped by the social and cultural environments in which consumers make sense of EVs. Misinformation, trust, geography, car culture, peer influence, social norms and collective efficacy all influence whether EVs feel familiar, credible, desirable and relevant.

Meso-level socio-cultural factors sit between macro-level structural conditions and micro-level individual perceptions (French and Gordon, 2020). They shape how consumers make sense of EVs through their social networks, communities, places, cultural meanings, trusted information sources and everyday mobility experiences. In a systems-oriented view of the EV transition, these factors are important because they influence whether EVs are seen as familiar, credible, desirable, risky, socially approved or culturally aligned with existing ways of travelling.

This section examines four meso-level influences on EV readiness: EV misinformation, objective knowledge and trust; geography, place and mobility context; car culture, identity and meanings of mobility; and social norms, peer influence and collective efficacy. Together, these factors show that EV uptake is not only shaped by infrastructure, price or individual attitudes, but also by the social and cultural environments in which consumers interpret the transition.

7.1 EV misinformation and objective knowledge

Key insight

EV misinformation is an important socio-cultural barrier to EV readiness, but it is not simply a knowledge deficit. Misinformation endorsement is associated with lower objective EV knowledge and lower purchase intent, while the qualitative findings show that misinformation can also be reinforced by distrust, identity, car culture, social networks and uncertainty about change.

Our qualitative ethnographic findings and survey results identify EV misinformation as an important emerging factor shaping behavioural intentions, EV uptake and the prospects for a successful transition (McEwen et al., 2026). Research on the extent, nature and impact of EV misinformation remains relatively nascent, as do insights into how it can be effectively countered (Bretter et al., 2025; Broadbent et al., 2022). Misinformation refers to false or misleading information that is shared or circulated without necessarily involving an intention to deceive (Lewandowsky et al., 2017). It can include inaccurate claims, misunderstandings or erroneous assertions that spread through interpersonal communication, digital platforms and media systems (Altay et al., 2023; Broda and Strömbäck, 2024).

Misinformation endorsement refers to respondents' level of agreement with the misinformation statements included in the survey. It does not imply that respondents knowingly created or circulated false information. In our own statistical analyses of the factors correlated with misinformation endorsement, demographic factors such as education level, age, income etc. showed little or no relationship with inaccurate beliefs about EVs. Instead, the most influential factors were more malleable. Objective knowledge, EV anxiety, perceived value (ecological), and increased EV experiences (e.g., driving an EV) were significantly related to misinformation endorsement levels. While it is not possible to prove from correlational results that pressing any of these levers would

reliably reduce misinformation, they do suggest that accurate beliefs correspond with attitudes that motivate positive engagement with electric vehicles, rather than simply demographic factors.

Our qualitative findings suggest that there is widespread recognition of EV misinformation by both ICEV and EV owners (McEwen et al., 2026). Participants tended to encounter and engage with misinformation because of its ease of access and high visibility in their existing information and communication networks and practices. These included word of mouth through conversations with family, friends and colleagues and being shared on digital media (e.g., Facebook, YouTube), press and television.

> *"There are people out there pitching their point of view real hard and it may not be that centre line balanced point of view. Do you know what I'm saying? So yes, I think there's a lot of information out there, but I also think you need to be careful because as I say, there's a lot of misinformation as well."*
>
> **Susana, Female, WA, ICEV owner.**

Many participants admitted that they lacked accurate information about EVs and related technologies and this was often related to a lack of trust in the source of information. For example, information from retailers and vehicle manufacturers is often not perceived as objective or particularly accurate. Instead, participants preferred to draw on lived experience insights from family, friends and colleagues and engaged with social media, Facebook Groups, Reddit forums, and Tik Tok for EV information. Without accessible, credible and reliable information about EVs and a lack of critical literacy skills, most participants expressed confusion about the advantages of EVs.

> *"There seems to be a big divide. There are a lot of people who are a hundred percent for it (EV uptake) and a lot of people who are a hundred percent against it. There doesn't seem to be a lot of, I guess, objective opinions that are just in mainstream. So, I've heard both angles, but they're always just one eyed."*
>
> **Georgina, Female, WA, ICEV owner.**

The survey findings also indicated that there was a high correlation between levels of misinformation endorsement and levels of objective knowledge. Higher misinformation endorsement was associated with lower objective EV knowledge, suggesting that factual knowledge matters. However, the qualitative findings also show that accurate information alone is unlikely to be sufficient where misinformation is reinforced by distrust, identity, social networks, car culture or resistance to change.

Participants who agreed with misinformation about EVs possessed lower levels of factual information about EVs (Figure 15). Data here also showed that high-knowledge EV owners are not fully immune to misinformation as the negative relationship persists among EV owners, though with a narrower range.

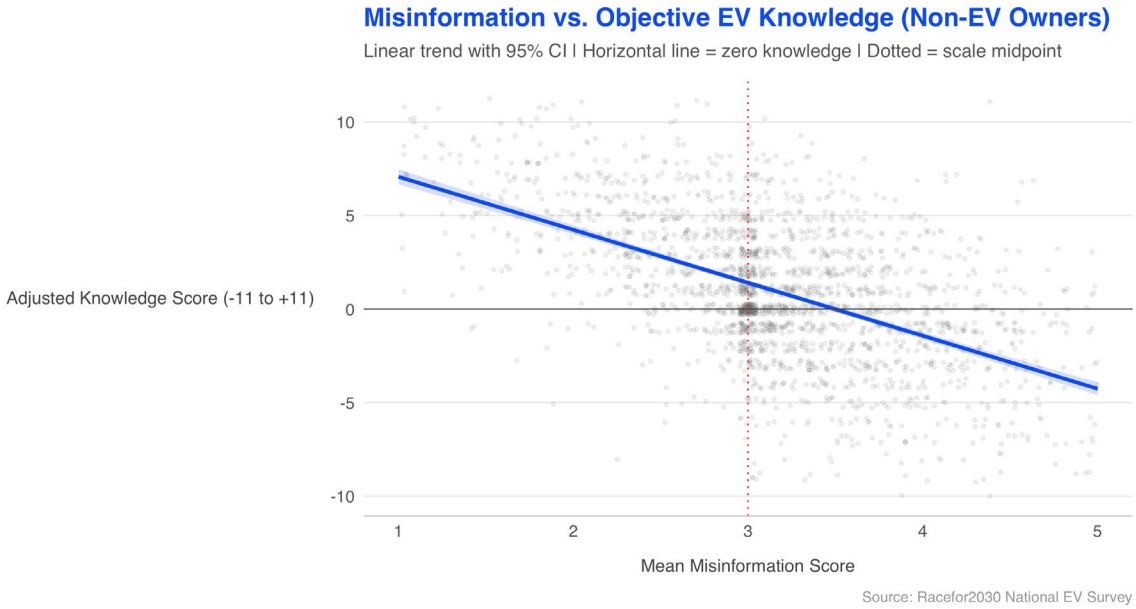


Figure 15. Misinformation endorsement vs objective knowledge for non-EV owners

Survey analysis also identified differences in self-reported EV knowledge between EV owners and non-EV owners, and between those with stronger and weaker EV purchase interest. This suggests that knowledge, interest and experience are mutually reinforcing and that people who own, are interested in, or are actively considering EVs are more likely to seek information and develop greater familiarity. However, this does not mean information provision alone will counter misinformation. Trusted sources, direct experience, practical demonstrations and peer learning are also needed.

Survey data revealed that safety-related misinformation (fire risk, battery failure) received the highest endorsement among non-EV owners, and they displayed higher levels of endorsement across all (verified misinformation) items compared to EV owners (Figure 16). These statements should be interpreted as misinformation endorsement items included in the survey, not as evidence that respondents were deliberately spreading disinformation.

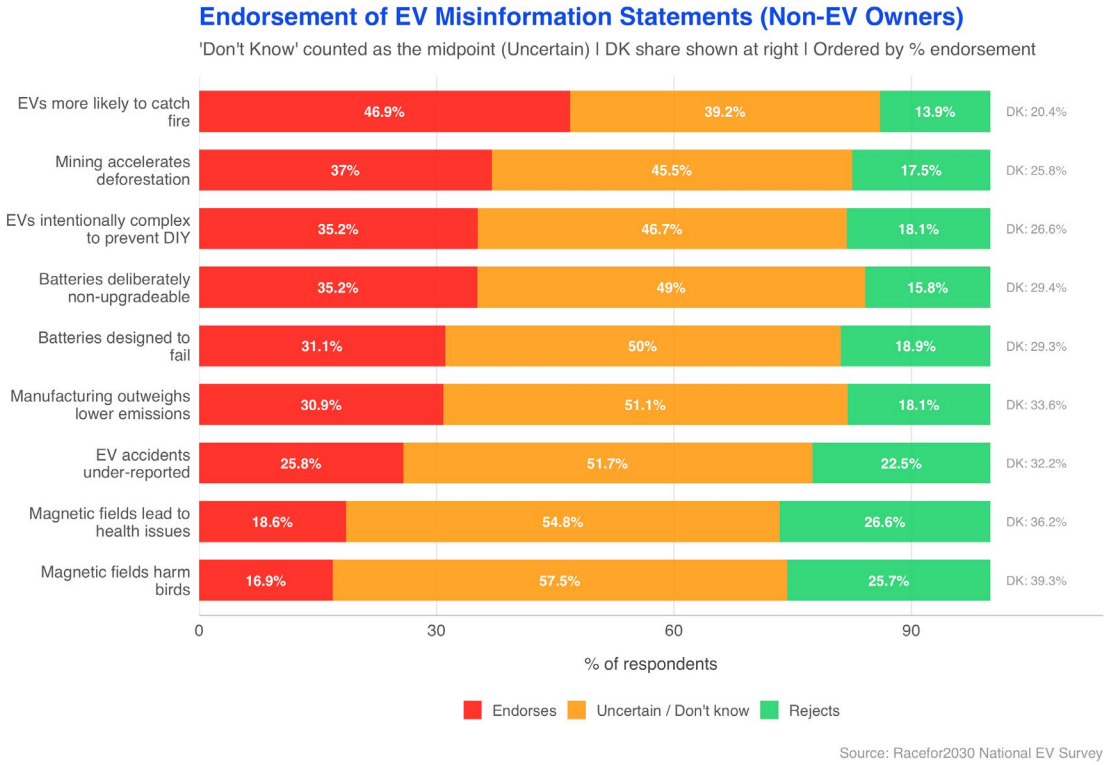


Figure 16. Non-EV owners' agreement with misinformation statements

Misinformation about EVs may create significant psychological barriers to adoption because it creates uncertainty and anxieties about how new technologies will disrupt not only established routines, but also wider belief systems such as environmental and political beliefs. For example, the qualitative data pointed to how battery production, life span, disposal and recycling processes are contentious topics, with some arguing that EV manufacture was strongly associated with "raping and pillaging the earth" (Donna, WA ICEV owner). Others suggested that greater electricity demand for EV charging would increase carbon emissions.

> *"There's a lot of bad press about the generators to run the charging and the gas stations are run by gasoline or you're plugging into a coal fired power station to run your charger. And if you plugged it in here, your electricity is coming from, at this stage, a coal fired power station."*
>
> **Buck, Male, WA, ICEV owner.**

Misinformation about EVs therefore worked to obscure the environmental impact of ICEVs, undermine the environmental benefits of EVs, and confirm existing political viewpoints:

> *"But the whole net zero thing, it's dodgy. It's a dodgy goal and we are not on track for it. We are not."*
>
> **Susana, Female, WA, ICEV owner.**

Those who circulated and believed in the misinformation about EVs tended to do so because it resonated with their identities, beliefs and interests (McEwen et al., 2026). Misinformation reinforced their worldview, supported their circumstances, and legitimised their lifestyle choices. For example, some participants rejected the need to transition to net zero, others pointed to vested interests as driving the transition, while others had high levels of distrust that the transition would benefit them personally.

> *"It's not so much a distrust of mainstream media, they're just pumping what the government wants. I see that as not so much a mistrust, but a vote of no confidence in them. I see it more; you've got to be convinced in your own mind. And that's not through listening to what they're all pumping because they've got that bigger agenda, which is, what is it, 2030, isn't it? The neutral date. That's their agenda and that's a bigger issue than just what's the best car for you."*
>
> **Aldo, Male, VIC, EV and ICEV owner.**

These findings suggest that EV misinformation is not only a matter of incorrect information. It can become socially meaningful when it provides reassurance, validates existing beliefs, supports car-based identities, or explains distrust in government, industry or the net zero transition. This aligns with recent Australian research showing that EV misinformation can develop through shared narratives, networked validation and reassurance (McEwen et al., 2026). Countering misinformation therefore requires more than factual correction. It requires trusted messengers, direct experience, peer learning, practical demonstrations and responses that acknowledge legitimate concerns while addressing misleading claims.

Survey findings also showed a clear relationship between misinformation endorsement and EV purchase intent. Participants not interested in EVs were more likely to endorse misinformation, while those with definite purchase intent were less likely to do so. Figure 17 shows that participants not interested in EVs are far more likely to endorse misinformation compared to those with definite purchase intent. The survey findings also showed that as intended purchase timelines shorten, misinformation endorsement decreases. It also shows participants who selected 'Never' as their timeline intention to purchase an EV have the highest misinformation endorsement.

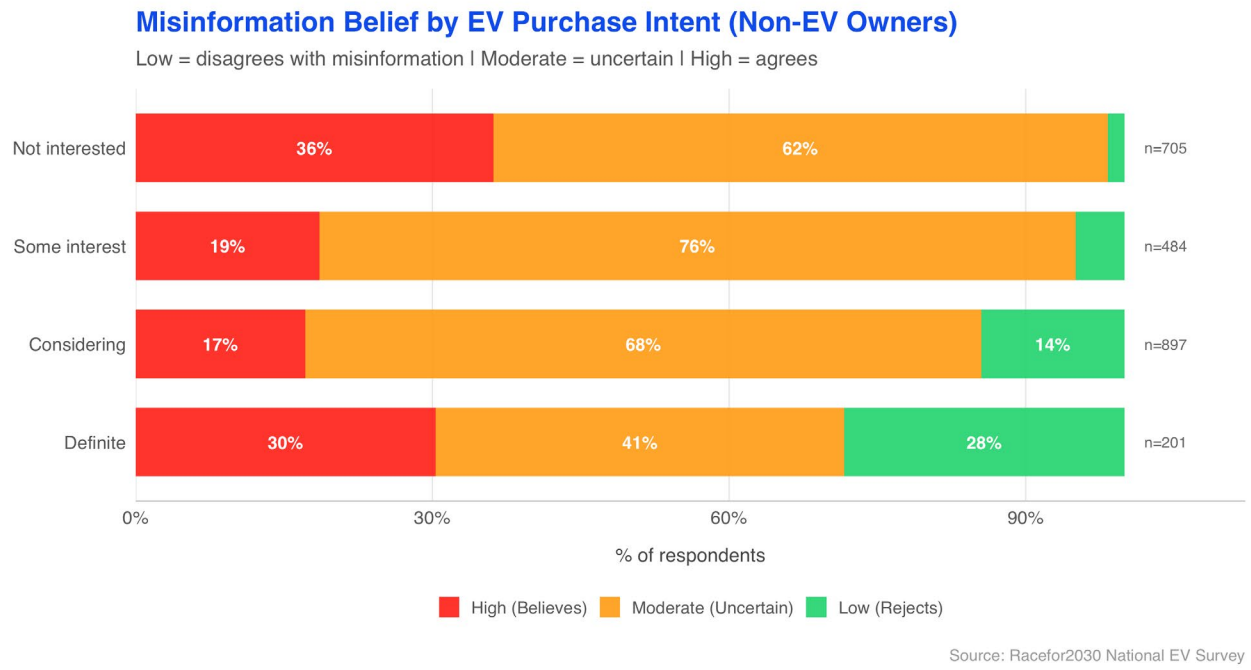


Figure 17. Misinformation belief and intention to purchase an EV

Overall, the qualitative and quantitative findings show that misinformation endorsement is associated with lower objective knowledge, lower purchase intent and longer purchase timelines. Referring back to the predictor analysis in Table 2, it was found that EV misinformation endorsement was associated with lower purchase intent and later expected purchase timelines. The practical impact estimate suggests that higher misinformation endorsement was associated with EV purchase timelines approximately 1.4 years later. This does not mean misinformation alone causes delayed uptake, but it shows why misinformation remains an important factor to address alongside stronger predictors such as perceived value, policy and governance trust, EV familiarity and social norms.

The findings also show that misinformation is embedded in trust, identity, social networks and wider beliefs about technology, government and the net zero transition. Reliable information is therefore necessary, but not sufficient. Consumers need accessible and trusted information sources, but misinformation responses should also include trusted messengers, direct EV experience, peer learning, practical demonstrations, pre-bunking or myth-response resources, and clear acknowledgement of legitimate concerns about cost, charging, batteries, safety and environmental impact. This is particularly important for consumers who are interested but uncertain, including Cautiously Interested and the Undecided Mainstream, while recognising that information alone may have limited impact for consumers who are strongly disengaged.

Facts are necessary, but not sufficient

Misinformation endorsement is associated with lower objective EV knowledge, but misinformation can also be reinforced by distrust, identity, social networks and resistance to change. Information responses therefore need to be paired with trusted messengers, direct experience, practical demonstrations and peer learning.

7.2 Geography, place and mobility context

Key insight

Geography shapes EV readiness through more than state or postcode differences. Place influences charging access, charging awareness, travel distance, public transport alternatives, housing and parking arrangements, and whether EV ownership feels practical, fair and low risk.

The survey found that EV interest was present across states and territories (Figure 18) and across geographical area types (Figure 19). Most survey participants were either considering, interested in, or definite about purchasing an EV as their next vehicle, and similar patterns were evident in intended purchase timelines. There was a slight reduction in EV purchase interest in areas further from larger cities; however, the number of participants classified as remote was very small (n = 5), so this result should be interpreted cautiously. Rather than treating geography as a simple predictor of EV interest, the findings suggest that place shapes EV readiness through charging visibility, infrastructure confidence, travel distance, public transport alternatives and whether EV use appears practical within everyday mobility routines. This aligns with Australian EV adoption research showing that public fast charger availability, driving range, fast charging time and consumer awareness are significant factors shaping EV purchase preferences in car-dependent markets such as Australia (Philip et al., 2023), and with Australian research highlighting the role of local charging infrastructure planning in a large, low-density country where EV uptake has been slower than in comparable economies (Dwyer et al., 2021).

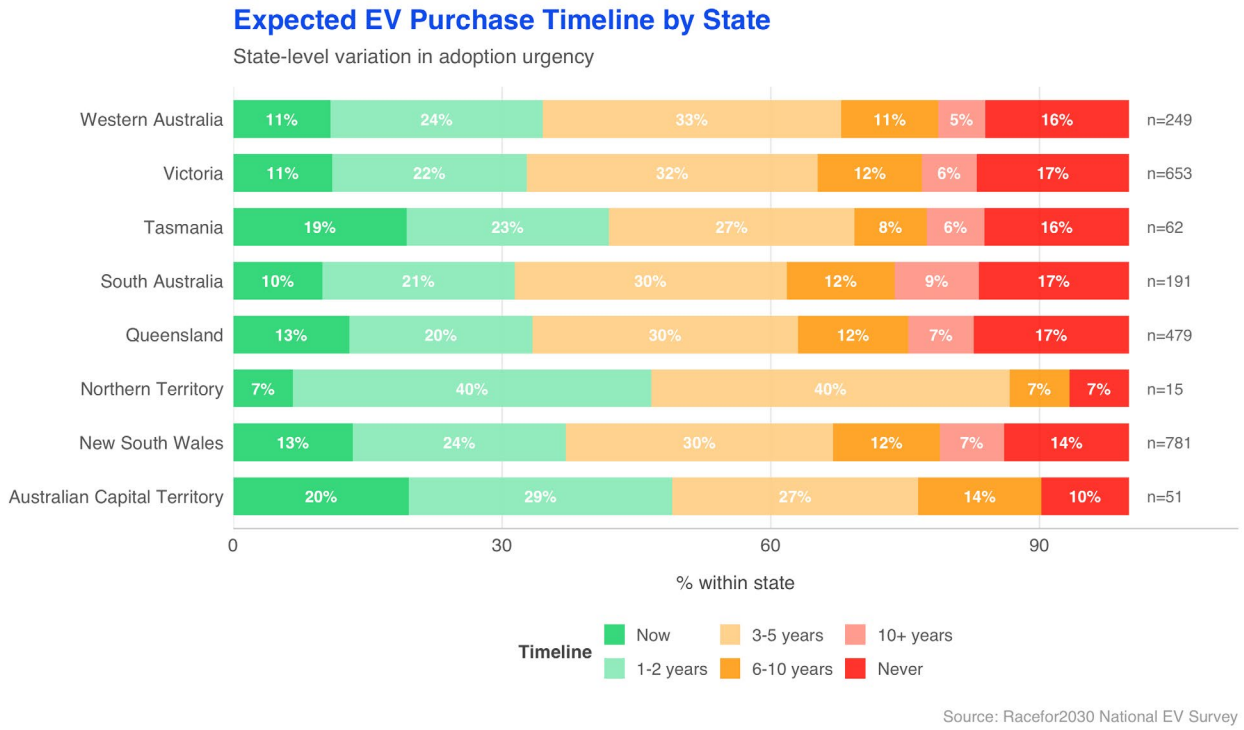


Figure 18. Timeline of intention to purchase an EV by State

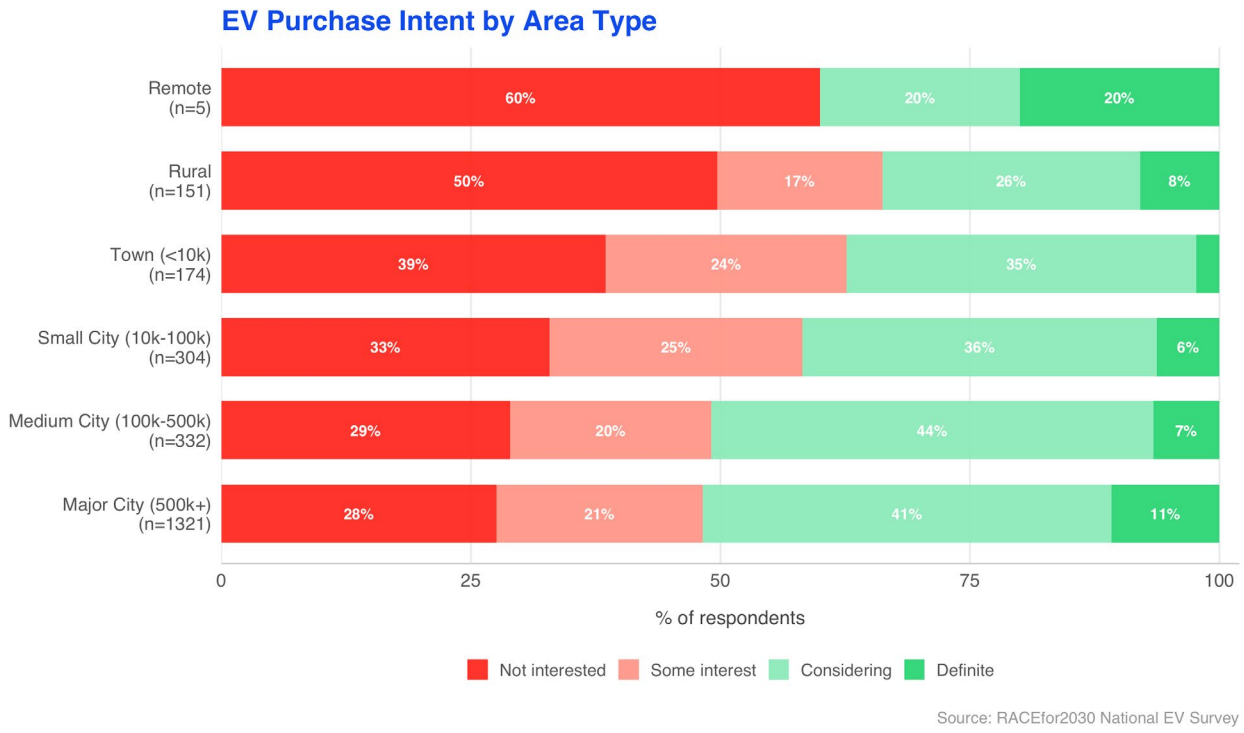


Figure 19. EV purchase intention by geographical area type

The qualitative data analysis shows that geographical area of residence shaped EV adoption readiness, particularly for non-EV owners in regional, rural and under-served areas. Participants did not discuss geography only in terms of distance from major cities. Rather, they connected place with charging visibility, infrastructure reliability, travel distance, public transport alternatives and confidence that an EV could support everyday mobility. This finding is consistent with previous Australian evidence that public fast charger availability and EV awareness influence adoption preferences, and that regional/rural consumers can have heightened concerns about range and charging infrastructure (Consumer Policy Research Centre, 2022; Philip et al., 2023). In practical terms, this suggests that place-based EV readiness depends not only on whether charging infrastructure exists, but whether consumers know where chargers are, trust that they will work, and believe they can fit charging into ordinary routines.

In regional and under-served areas, limited charging access could therefore create forms of spatial inequality in the EV transition:

> *"I don't think it's really fair for people that live in regional areas where you don't have a lot of charging ports. So, when you think of, well there's not a lot of people living in that area, but it's unfair for people living locally because they might have to travel to the next place, which is 30 kilometres to have them charge - fast charge- if they don't have the instal at home."*
>
> **Cheryl, Female, NSW, ICEV owner.**

This qualitative finding connects with the survey evidence that public charging location awareness was associated with EV readiness. In Table 2, public charging location awareness was positively associated with purchase intent (r = +0.32) and shorter expected purchase timelines (r = -0.30), with an estimated practical impact of 1.6 years sooner. This suggests that consumers' confidence in knowing where and how to charge is part of place-based readiness, not simply a technical infrastructure issue.

Low levels of reliable and visible charging infrastructure were an additional barrier for people experiencing intersecting vulnerabilities, including those living in regional and rural areas, apartments with shared garages, on-street parking arrangements, or lower-income areas. In these cases, limited local charging access could compound other barriers such as income, housing tenure, disability, limited public transport alternatives and reliance on older ICEVs. Taken together, the survey and

qualitative findings suggest that place-based EV readiness depends not only on whether chargers exist, but whether consumers can see them, trust them, access them reliably, and fit charging into everyday travel routines. This positions geography as a meso-level readiness factor because place shapes the social and practical conditions through which consumers judge whether EV ownership is realistic, fair and compatible with everyday mobility.

7.3 Car culture, identity and meanings of mobility

Key insight

Car culture shaped EV readiness by influencing whether EVs were seen as capable, familiar, independent, powerful and socially legitimate. For some participants, resistance to EVs was not only about cost, range or charging, but about whether EVs fitted existing meanings attached to cars, including freedom, toughness, technical skill, masculinity, status and everyday capability.

Australia's car culture shaped how participants interpreted EVs beyond technical functionality or utility. Car culture refers to the social meanings, identities, practices and attachments that form around cars, including ideas of freedom, independence, lifestyle, capability, status, technical skill and belonging. Existing cultural research shows that cars are not simply transport technologies, but familiar and significant forms of material culture that can generate emotion, identity and social meaning (Miller, 2001). Australian driving cultures have also been linked to everyday mobility, social norms, independence, suburban belonging, classed and gendered identities, and embodied attachments to driving (Redshaw, 2006; Waitt and Harada, 2012; Warren and Gibson, 2011).

The ethnographic data showed that some non-EV owners assessed EVs against culturally familiar expectations of what cars should do. ICEVs were often associated with familiarity, autonomy and the ability to "fill and go", while EVs were sometimes perceived as less capable, less rugged or less suited to long-distance travel, outdoor recreation and regional mobility. These concerns overlap with infrastructure and range issues, but they also carry cultural meaning because they relate to whether EVs are seen as compatible with valued Australian mobility practices such as camping, fishing, towing, long-distance travel and travel through remote or difficult conditions.

For example, one participant framed EVs as poorly suited to regional and remote travel conditions, linking practical concerns about range and vehicle durability to broader expectations of ruggedness and capability:

> *"Electric cars are not going to last because, and not only that red dirt. The road, the red dirt is very fine. So, if it gets into the computer and all that, it's just going to burst into flames...I'm not sure, but I know up north it (an EV) definitely won't make it (for range). Or even to go from here to Kalgoorlie, it won't make it."*
>
> **Valerie, Female, WA ICEV owner.**

This quote reflects practical concerns about range and vehicle durability, but it also shows how EVs were judged against culturally important expectations of ruggedness, reliability and capability in Australian regional and remote mobility contexts.

While the car culture insights are primarily grounded in the qualitative data, they also connect with survey measures of perceived social value and social approval. For instance, 67 percent of survey participants indicated that they would feel proud or socially accepted if they were to own or drive an EV. These measures capture whether EVs are seen as socially desirable, identity-consistent or approved by others, rather than directly measuring "car prestige" as a standalone concept. Together, the findings suggest that EV adoption is shaped not only by practical considerations, but also by whether EVs are seen as legitimate, capable and desirable within existing car cultures.

A more explicitly cultural barrier concerned the symbolism of ICEVs as vehicles of independence, strength, freedom, capability and personal choice. Prior Australian transport and cultural research has shown that cars and driving can be tied to identity, gendered meanings, independence and attachments to mobility (Clarsen, 2017; Hinde and Dixon, 2005; Redshaw, 2006; Tranter, 2003). In this study, some participants interpreted EVs as limiting choice or weakening familiar forms of vehicle identity. This was evident in comments such as "Never enforce electric vehicles please" (survey participant), which framed the EV transition not only as a technology change, but as a perceived threat to autonomy and freedom of choice.

ICEVs also provided some participants with opportunities to display mechanical knowledge, technical skill and independence through repair, maintenance and modification. This aligns with research on driving cultures and custom-car cultures that highlights cars as sites of practical skill, vernacular creativity and identity formation (Redshaw, 2006; Warren and Gibson, 2011).

> *"So, it's almost like the pride in, I can fix this myself. With the EV, not a chance, but there's nothing going on with it. So, I think that's going to be the shift."*
>
> **Brock, Male, VIC, EV and ICEV owner.**

Gendered meanings were also evident. Some participants described EVs as feminised, weak or not aligned with conventional ideas of vehicle toughness and capability. This matters because it shows that EV resistance can be tied to social perception and identity, not only functional concerns about range or charging. In some occupational or social contexts, such as trades or construction-related settings, EVs could be positioned as lacking the status, toughness or legitimacy associated with familiar ICEVs:

> *"Oh, I get some shit over that.* [...] *You're driving a little girl's car."*
>
> **Mark, Male, VIC, EV and ICEV owner.**

Overall, these findings show that EV adoption is shaped by the cultural meanings attached to cars as well as by practical considerations. For some consumers, EVs need to be repositioned not only as efficient or environmentally responsible, but as capable, reliable, technically sophisticated, enjoyable and compatible with valued lifestyles. This does not mean reinforcing narrow or exclusionary stereotypes of vehicle ownership. Rather, it suggests that EV engagement should create alternative meanings around capability, skill, confidence, performance, practicality and technological mastery.

7.4 Social norms, peer influence and collective efficacy

Key insight

Social norms, peer influence and collective efficacy shaped EV readiness by influencing whether EVs felt familiar, socially approved and part of a shared transition. Seeing EVs on the road matters, but the stronger signal appears to be whether people believe important others approve of EV adoption and whether collective EV uptake can contribute to wider environmental change.

Social norms are defined as the shared, unwritten rules and behavioural expectations that govern acceptable conduct within a specific group or society. These norms are commonly understood to operate through two distinct mechanisms: descriptive norms, which reflect what people actually do based on observed common behaviours, and injunctive norms, which dictate what people ought to do based on perceived social approval or moral consensus (Cialdini et al., 1990).

In the EV context, this distinction matters because visibility and approval may work differently. Seeing more EVs on local roads can make the technology feel more familiar, but believing that family, friends, peers or colleagues approve of EV adoption may create a stronger social signal. Regarding electric vehicle (EV) uptake, researchers have found that positive social influence and peer-to-peer validation can enhance consumers' intentions to adopt sustainable transport by making EV ownership more visible and socially desirable (Jansson et al., 2017). Conversely, when market penetration is low, a lack of visible EV adoption within local neighbourhoods reinforces technological uncertainty and risk aversion, which can stall wider public adoption (Tzeng et al., 2026).

These beliefs were often spread through family, friends and peers, particularly through conversations and shared lived experience of EV ownership and use.

> *"I think research wise it's more like recommendations from friends really. So, there's more people that have them. There'll be more word of mouth."*
>
> **Emery, Male, NSW, ICEV owner.**

Proximity and access to other's lived experience was often a tipping point for EV purchase. The qualitative data analysis also illustrated how the physical experience of driving an EV—its smoothness, quietness, and acceleration—could become a catalyst for purchase. This suggests that peers can influence not only how EVs are perceived, but also whether consumers become willing to test, consider or purchase one.

> *"My best friend downstairs, we bought a Tesla at the same time, so we went together to view the Tesla. She was against it. She wanted an EV but was totally against Tesla. She just didn't like them. She just thought it was joining the herd of people, and they weren't that good basically. So, I said, oh well we are looking at Tesla, why don't you come with me, and you can just have a look and see how you feel about it. It's really funny. Before we went, she said, I'm definitely not getting a Tesla and I'm definitely not buying a white car. She bought a white Tesla."*
>
> **Genevieve, Female, NSW, EV owner.**

Our survey findings indicated that non-EV owners are influenced by descriptive norms. Descriptive norms refer to how people have perceptions and beliefs about what most people do in a situation – they define how people normally feel, act or think (Cabra, 2020). Driving fossil fuel vehicles is seen to be the common practice. EV owners however exhibit a lower overall density score (which means that there were fewer EV owners) but display a shift towards driving an EV as becoming an increasingly accepted common practice. As EV purchases increase, there is greater visibility on roads which works to normalise this form of transport. This was reinforced by the qualitative data where most people

had noticed EVs on the roads, in their neighbourhoods, and had connections with EV owners through social networks.

Injunctive norms refer to perceptions of what important others approve or disapprove of. In this study, injunctive norms showed a stronger ownership gap than descriptive norms: EV owners perceived greater social approval for EV adoption than non-EV owners (EV M = 3.79; non-EV M = 3.15; gap = 0.64), more than double the descriptive norms gap (0.30). This suggests that perceived social endorsement may be more closely tied to EV ownership and readiness than simple visibility (Figure 20).

Injunctive norms also showed strong differentiation by purchase intent. High injunctive norms increased from 8% among those not interested in EVs to 72% among those with definite purchase intent, while low injunctive norms fell from 35% to 1%. This distinction is important for policy and programme design: interventions should not only make EVs more visible, but also make EV adoption feel socially supported, credible and approved by trusted peers and communities.

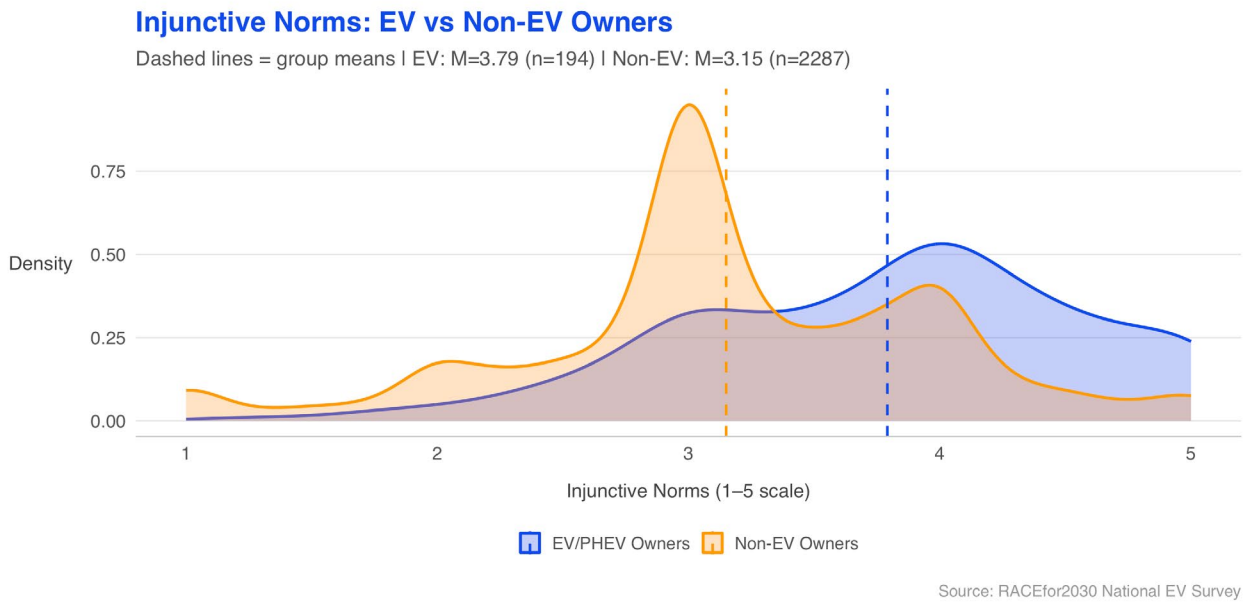
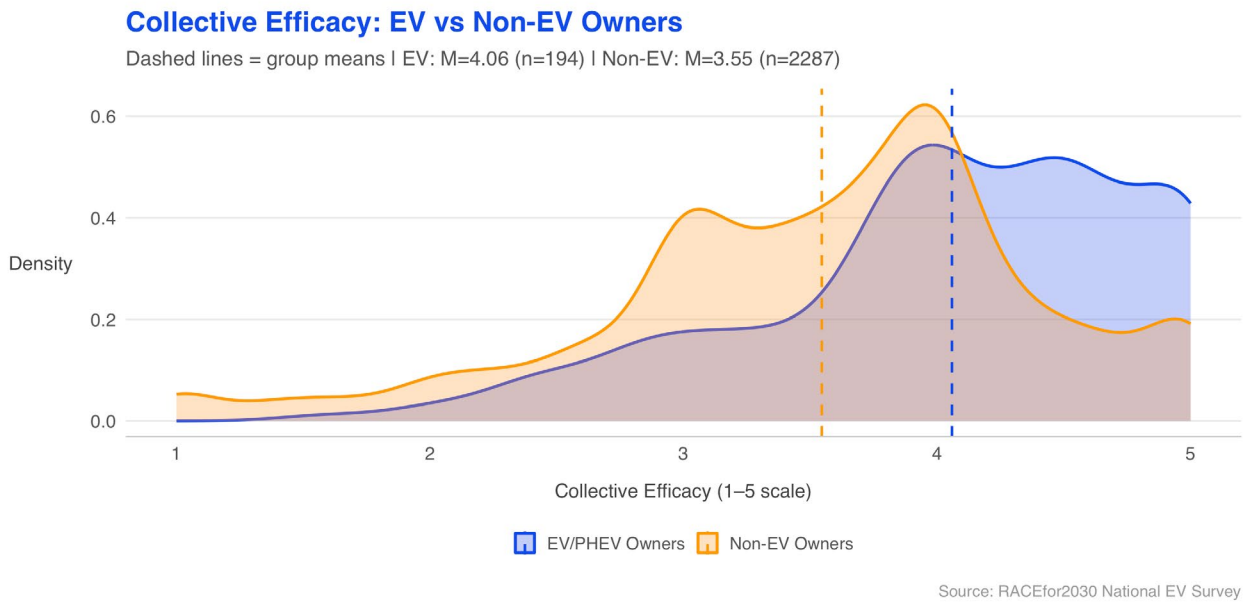


Figure 20. EV and non-EV owners upholding of injunctive norms

Collective efficacy refers to a group's shared belief that people can act together to achieve a desired outcome (Bandura, 1993, 1997). By fostering a shared community confidence that sustainable habits are achievable, collective efficacy can normalize green choices and motivate neighbourhoods to invest in shared charging infrastructure or adopt electric vehicles together (Barth et al., 2016).

Collective efficacy was scored as the mean of collective efficacy items on a 1–5 scale. Scores were relatively high for both EV owners and non-EV owners, but higher among EV owners (EV M = 4.06; non-EV M = 3.55; gap = 0.51). This suggests that belief in the collective value of EV adoption is not created only by ownership but may be reinforced by ownership experience.

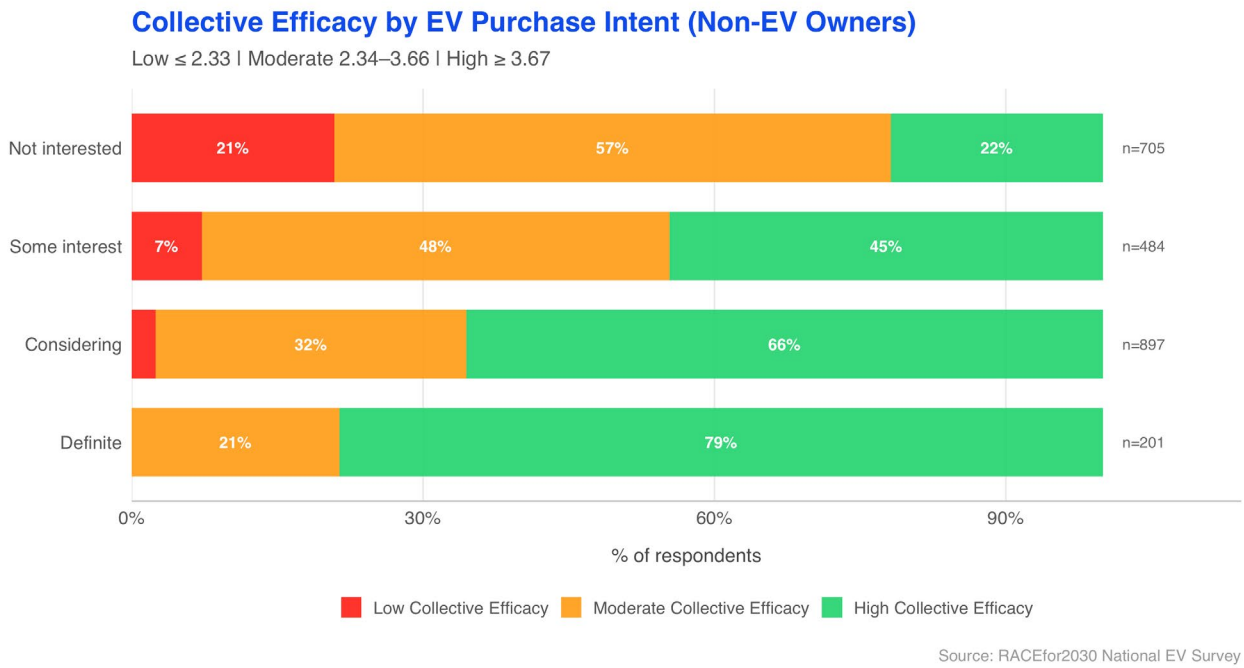
Collective efficacy also showed a clear relationship with purchase intent. High collective efficacy increased from 22% among those not interested in EVs to 79% among those with definite purchase intent (Figure 21). The 22% of disinterested participants with high collective efficacy are important: it suggests that some consumers may believe EVs matter collectively while still not intending to purchase one themselves. This points to an attitude-behaviour gap that may be shaped by practical barriers such as price, charging access, housing, vehicle suitability or lack of direct EV experience. Collective efficacy also followed a consistent gradient across purchase timelines, with high collective efficacy increasing as intended purchase timelines shortened. This suggests that belief in the collective value of EV adoption may strengthen as consumers move closer to a purchase decision.



Source: RACEfor2030 National EV Survey

Figure 21. Measure of collective efficacy for EV and non-EV owners

Overall, the survey analysis found that injunctive norms and collective efficacy appeared more closely connected to EV purchase intent than descriptive norms. In other words, purchase readiness was associated less with simply seeing EVs on the road, and more with believing that EV adoption is socially approved and collectively worthwhile. Participants with stronger injunctive norms and higher collective efficacy reported stronger intention to purchase an EV, and shorter intended purchase timelines, than those with lower levels of belief (Figure 22).



Source: RACEfor2030 National EV Survey

Figure 22. EV purchase intention by collective efficacy among non-EV owners

These findings suggest that EV programmes should not rely only on visibility or information provision. They should also build social approval, peer endorsement and shared confidence that EV adoption can contribute to broader environmental and community outcomes.

8 Micro level individual factors

Key insight

Micro-level factors shape whether consumers personally see EVs as useful, affordable, enjoyable, socially meaningful, environmentally worthwhile and compatible with everyday life. Perceived value is central because EV readiness depends not only on whether consumers know about EVs, but whether they believe EVs offer benefits that matter in their own circumstances.

Micro-level individual factors refer to the personal perceptions, characteristics, experiences and psychological orientations that shape behaviours and behavioural change (French and Gordon, 2020) - and in this context whether EV adoption feels relevant, feasible and worthwhile. In a systems-oriented view, these factors do not operate in isolation. They interact with macro-level structural conditions, such as policy, affordability, housing and infrastructure, and meso-level socio-cultural factors, such as place, car culture, social norms, trust and misinformation.

This section examines how perceived value, demographics, household circumstances, environmental concern, knowledge, attitudes and psychological traits shape EV readiness. It begins with perceived value because this was one of the strongest and most practically important findings in the study, showing that consumers assess EVs across functional, economic, emotional, social and ecological dimensions

8.1 Perceived value of EVs

Key insight

Ecological value received the highest average rating, but emotional, functional and economic value were more closely associated with purchase intent and purchase timeline. This suggests that EV uptake depends not only on whether consumers see EVs as good for the environment, but whether they also see them as enjoyable, practical and financially worthwhile.

One of the most significant findings from this research is that EV readiness and adoption were strongly associated with perceived value of EVs across multiple dimensions: functional, economic, emotional, social, and ecological.

Perceived value refers to consumers' overall assessment of the benefits, costs and trade-offs associated with a product, service, behaviour or practice. Rather than treating value as only a financial concern, perceived value research shows that consumers can evaluate value across multiple dimensions, including functional, economic, emotional, social and ecological value (Sweeney and Soutar, 2001; Gordon et al., 2018). In behaviour change research, perceived value has been associated with behavioural, and behaviour change outcomes and has been applied to various contexts including energy efficiency, where value is shaped by everyday household contexts, constraints and perceived benefits (Butler et al., 2016; Gordon et al., 2025).

In this report, functional value refers to perceived usefulness, quality, reliability, convenience and ease of use associated with EV uptake and use. Economic value concerns affordability, value for money and financial or time-related savings. Emotional value relates to affective responses such as enjoyment, confidence, reassurance, anxiety or frustration. Social value concerns belonging, identity, peer influence, approval and social meaning. Ecological value reflects perceived environmental and

sustainability benefits (Zainuddin and Gordon, 2020). In the EV context, perceived value is especially useful because EV adoption is not only a technical or environmental decision. Existing EV research shows that perceived value, including economic, emotional, technical/performance-related and environmental dimensions, can shape attitudes and purchase intentions (Higueras-Castillo et al., 2019; Philip et al., 2023).

Perceived value was analysed across five dimensions — functional, economic, emotional, social and ecological — using survey items grouped under each dimension, as well as by creating a composite score for each participant for overall perceived value of EVs. Figure 23 shows average perceived value scores across the sample, while Table 2 reports how each value dimension relates to EV purchase intent and purchase timeline. Ecological value received the highest average rating, followed by functional and economic value. This indicates that many consumers recognise the environmental, functional and economic benefits of EVs, while emotional and social value were also positively rated.

It should be noted here that average perceived value is not the same as predictive strength and therefore Table 2 should be read alongside Figure 23 to aid interpretation of the findings. This is because Figure 23 shows average value ratings, while Table 2 shows which value dimensions were most closely associated with purchase intent and purchase timeline. In Table 2, emotional, functional and economic value were more closely associated with purchase intent and purchase timeline than ecological value. This suggests that EV engagement should promote the full value proposition of EVs, including environmental benefits, but should also make EVs feel enjoyable, practical and economically worthwhile.

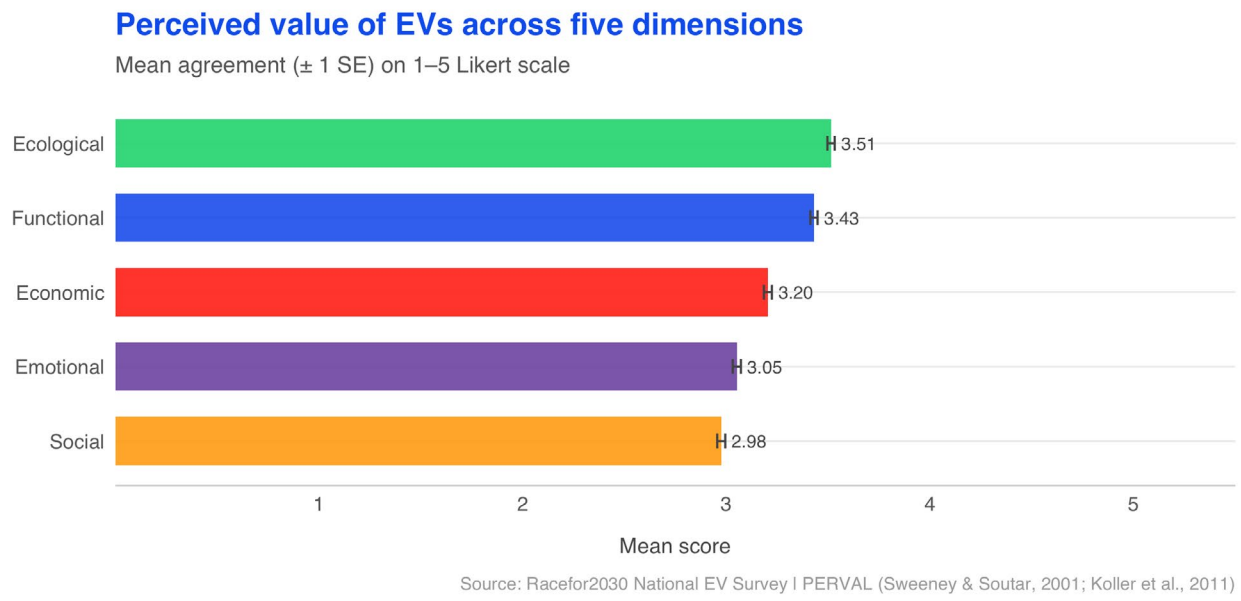


Figure 23. Perceived value of EVs across five dimensions

While ecological and functional value were highly rated in the survey, the qualitative data underscored that EV purchase decision-making was still often shaped by economic considerations, with functional and ecological value often realised or strengthened after direct EV experience. For some EV owners, driving an EV also increased awareness of the environmental impacts of driving an ICEV.

> *"It does give you a sense of self-worth or you're feeling good about yourself because driving a nice, smart, safe car, seeing someone speed off into the distance and have a big plume of smoke come out the back of the car is also that sort of, okay, well that's not me. I'm doing my little bit."*
>
> **Richard, Male, VIC, EV and ICEV owner.**

Also, the benefits of EVs extended beyond individual users to broader societal and ecological gains, highlighting the multifaceted value of the electric vehicle transition. However, the perceived value of EV varied according to people's circumstances. For example, EVs were seen as offering functional value particularly for younger and older people living in urban areas, and activities requiring short trips:

> *"Probably be younger, even though some of the older generation could definitely benefit more from some of the smaller cars, I guess if they're only doing short trips like shopping and that sort of thing."*
>
> **Shawn, Male, WA, ICEV owner.**

Together, these findings show why perceived value needs to be understood as multi-dimensional. EV adoption is not driven by one form of value alone. Consumers assess EVs through overlapping judgements about cost, practicality, enjoyment, social meaning and environmental benefit, and these judgements vary depending on household circumstances, mobility needs, infrastructure access and direct EV experience. The following sub-sections examine each value dimension in turn.

Economic Value

Economic value reflects perceptions of monetary benefit and worth, including whether EVs are seen as affordable, cost-effective and good value for money over time. Our survey findings indicated that economic value was associated with the second-largest ownership gap across the different dimensions of perceived value: (EV M=4.09 vs Non-EV M=3.13, gap=0.96).

Non-EV owners cluster around the midpoint, suggesting uncertainty about EV cost-effectiveness while EV owners rate economic value much more positively. This suggests that ownership experience may shift perceptions upward, although upfront cost remains a major barrier before purchase. Economic value was strongly differentiated by purchase intent. Among non-EV owners not interested in purchasing, only 9% score High on economic value, rising to 80% among definite intenders. The economic value dimension shows a particularly steep gradient, suggesting that perceptions of cost-effectiveness are a key differentiator between those who will and won't consider EVs (Figure 24).

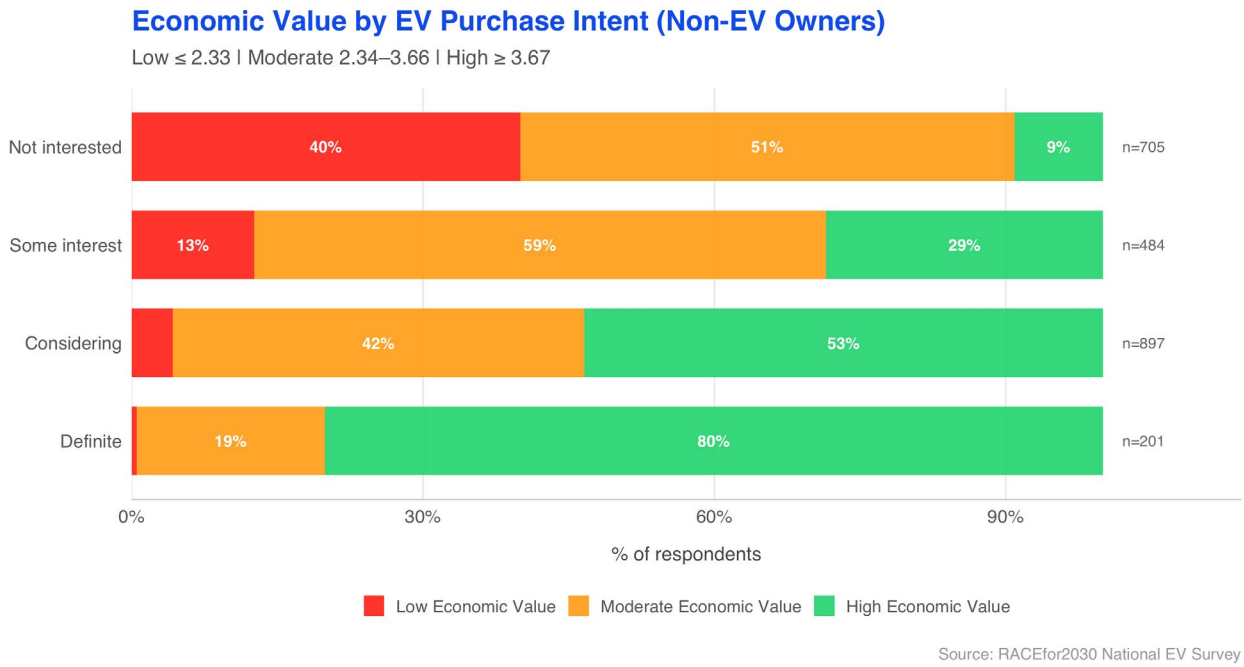


Figure 24. Non-EV owners' intention to purchase an EV based on their perceived economic value of EVs

Economic value perceptions tracked closely with purchase timeline in the expected direction. Among 'Never' participants, 47% score Low and just 6% score High on economic value, while '1-2 years' participants show the inverse (3% Low, 64% High). This strong gradient suggests that perceived economic value is a key differentiator between near-term intenders and those who have ruled out EV purchase entirely. In practical terms, economic value appears to matter most when consumers are moving from general interest to active consideration, because they need to believe that the higher upfront cost can be offset by lower running costs, reduced maintenance, incentives, financing arrangements or household energy benefits.

The qualitative analysis highlights that, overall, participants see EVs as offering strong economic value through lower running costs, reduced maintenance, and policy incentives, especially when paired with solar charging. Financial incentives and financing mechanisms further strengthened this value proposition for some participants. The novated leasing arrangements, EV loans and rebates made owning EV an "attractive" proposition. Cliff, Male, VIC, EV owner.

The qualitative findings that follow relate primarily to EV cost uncertainty and perceived total cost of ownership. It was found that, non-EV owners often expressed concerns over not only the upfront purchase price of EVs, but also about the potential cost of expensive repairs or battery replacement. For non-EV owners, the uncertainty around the economic benefits of EVs was perceived as a major barrier. For these consumers, economic uncertainty was not only about purchase price, but also about perceived exposure to unfamiliar future costs:

> *"Obviously, you've got your electricity cost, but things like battery replacement. Battery in my car right now is like 200 bucks to replace. One in an EV is probably 15 grand, 10 grand...Yeah, I dunno the lifespan of them."*
>
> **Deanne, Female, VIC, ICEV owner.**

Yet, some participants also identified indirect economic advantages of EV ownership. These included less frequent servicing, the potential for EV charging infrastructure to add to property value and the use of EV batteries as backup household power during outages, which was viewed as a low-cost alternative to dedicated home battery systems:

> *"This is not just a car. When you've lost your power, you can still power your house for a while from your car costs you about $120 to set up the capacity to do that, versus $20,000 for solar and a battery."*
>
> **Jacob, Male, VIC, EV and ICEV owner.**

Despite these incentives and the understanding that owning an EV could make financial sense, positive attitudes and intentions are constrained by high upfront costs, unequal access to enabling resources, and uncertainty about long-term value, particularly for lower-income households and non-homeowners. For some consumers, EV ownership remained unattainable even where they recognised the potential long-term value. As a result, the financial benefits derived from the direct and indirect economic value of EV ownership were often more accessible to higher-income households with access to upfront capital, home charging, solar PV or favourable finance arrangements:

> *"We're somewhat in a privileged position to be able to spend, I don't know what it was, maybe seven or eight grand on a rooftop solar system, 31 grand on a new car. So, we absolutely get the benefit of that, but that's approaching 40 K out of pocket expenses. So, we're lucky. We're not high-income earners, but we're not low-income earners either. So, I think we've been able to realise the opportunity that it provides but appreciate that not everyone can afford a new car buying outright in particular."*
>
> **Peter, Male, VIC, EV owner.**

Overall, economic value is a strong driver of EV readiness, but it is unevenly accessible. Lower running costs, reduced maintenance, incentives, solar charging and household energy benefits can make EVs attractive, but high upfront costs, uncertainty about long-term expenses and the limited second-hand EV market continue to constrain uptake for lower-income households and budget-constrained consumers.

Ecological value

Ecological value is the established dimensional label used in this report for the perceived-value dimension capturing consumers' assessment of the environmental and sustainability benefits of EVs (Koller et al., 2011). It is distinct from general environmental concern, which measures respondents' broader pro-environmental orientation.

Our survey analysis found that ecological value was associated with the smallest ownership gap of all perceived value dimensions towards EV uptake and use (EV M=4.04 vs Non-EV M=3.47, gap=0.57). Both groups rate environmental value above the midpoint, indicating broad consensus on EVs' environmental benefits regardless of ownership status. This dimension is less dependent on direct experience. In the purchase intention figure below, ecological value shows a strong association with intent: 84% of definite intenders score High, while only 23% of non-interested participants do.

Yet 23% of high scorers among the disinterested is notable — these consumers recognise environmental benefits, but other factors override that recognition. This helps explain why ecological value alone is not sufficient: for some consumers, environmental recognition needs to be supported by practical, economic and emotional value before it translates into purchase intention (Figure 25).

Targeting this segment's specific barriers could therefore help convert environmental recognition into stronger EV consideration and uptake. The data interpretations here should be read alongside Table 2: ecological value was highly recognised and strongly differentiated purchase intention groups in this figure, while emotional, functional and economic value were more closely associated with purchase intent and expected purchase timeline in the predictor analysis.

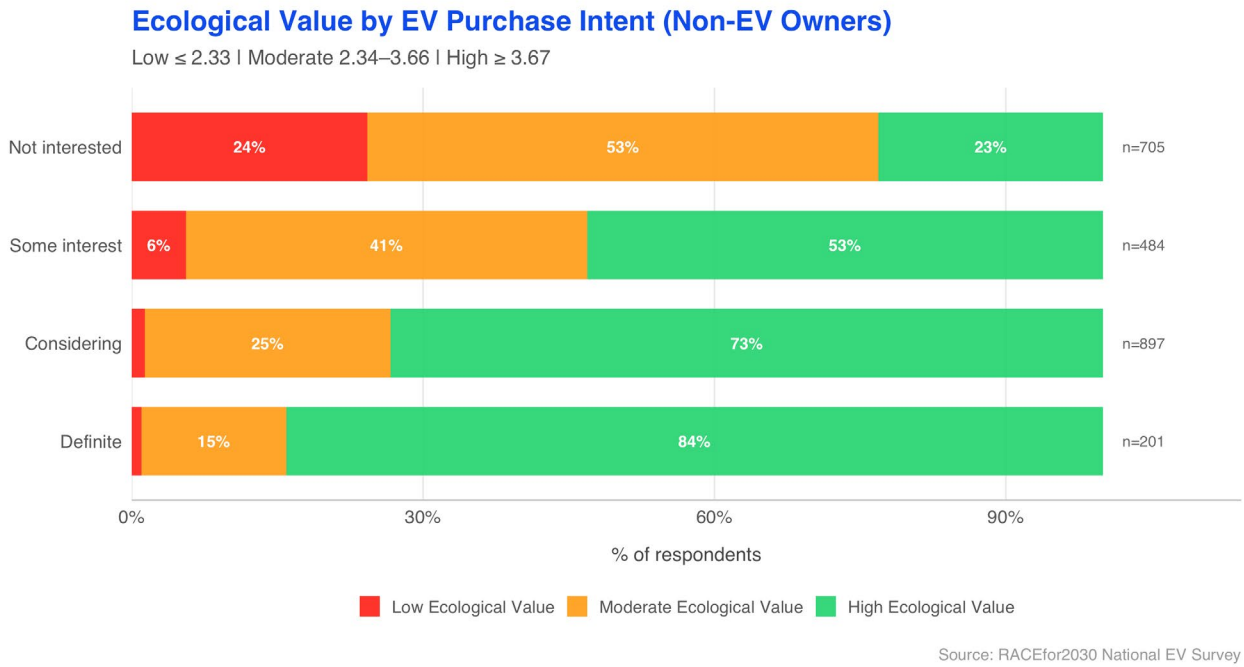


Figure 25. EV purchase intention by perceived ecological value among non-EV owners

The survey analysis found that ecological value perceptions increase steadily as purchase timelines shorten, with the High category growing from the 'Never' group through to immediate purchasers. Environmental concern appears to be a consistent enabler of earlier adoption across the purchase timeline. Findings from our qualitative ethnographic research show that EVs are perceived as providing environmental and health benefits. In particular, EVs are appreciated for their lower environmental footprint compared with ICEV. Specifically, participants saw great value in the fact that EVs produce less air pollution:

> *"Electric vehicles emit much less greenhouse gas and contribute less towards climate change and global warming."*
>
> **Morris, Male, WA ICEV owner.**

In addition to reduced air and noise pollution, the perceived reduced waste associated with the maintenance of the car was an added environmental benefit:

> *"It's really good for the environment because you have less emission and you have less wear and tear of the different parts of the car, which then created the waste because when you service your car, things broke or things are too old, they have to be replaced. Those then become rubbish, which has to be disposed."*
>
> **Cheryl, Female, NSW, ICEV owner.**

While these views were held by participants who didn't consider themselves as "a huge greenie" (Arturo, VIC EV owner), they were often stronger for those who had SPVs or used other renewable energy sources. However, there were also sceptical views from those who were concerned about the environment and others about the environmental value of EVs, especially around the battery production, mining, and recycling:

> *"I think the environmental benefits are currently overstated because they don't take the whole of life environmental impact into account. They're only looking at just the trip, but then they're not looking at how much, I think most of the batteries are still lithium batteries, how much it costs to dig all that lithium out of the ground and transport it and then turn it into batteries. And then I believe at the moment all the lithium batteries are going to landfill."*
>
> **Darrin, Male, NSW, ICEV owner.**

Environmental views thus coexist with concerns about the broader supply chain and whole-of-life environmental impacts of EV manufacture and production. This points to opportunities for addressing consumer concerns about the future of EV components, end of life processing, reuse and recycling of critical minerals in policy and planning.

Functional Value

Functional value captures the practical utility of EVs — performance, reliability, quality, and convenience. Our survey analysis found that EV owners rate functional value substantially higher than non-owners (EV M = 4.21; non-EV M = 3.36; gap = 0.85). Both distributions are left-skewed (above midpoint), indicating broad recognition of EVs' practical utility, though the ownership experience shifts perceptions markedly upward (Figure 26).

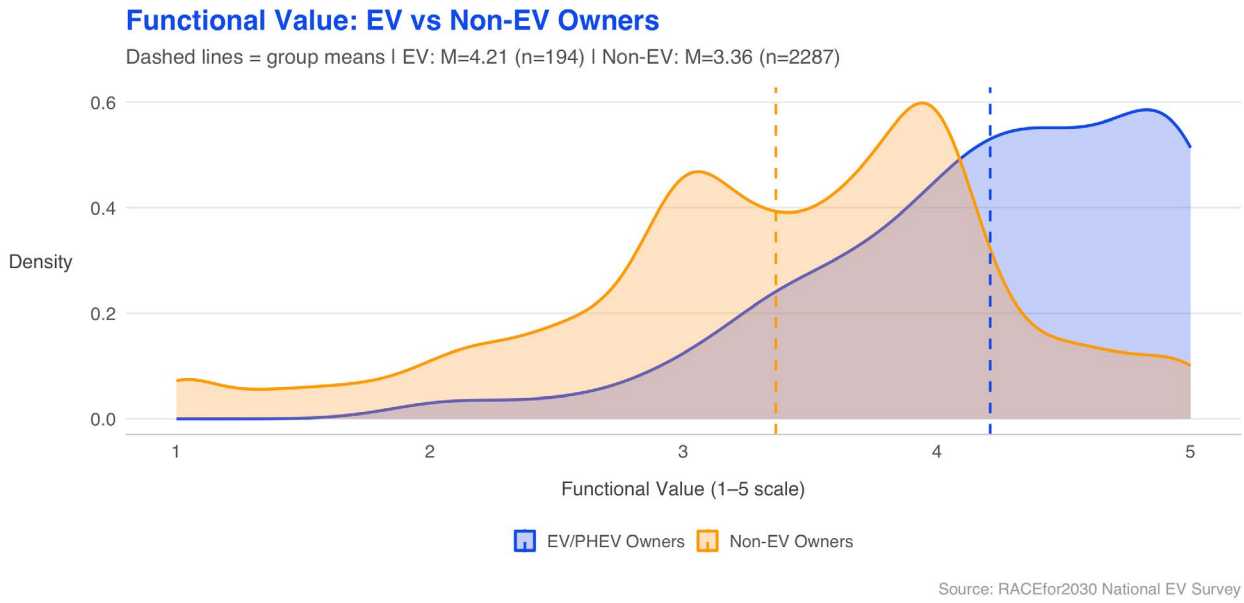


Figure 26. Perceived functional value of EVs by ownership status

The survey findings also showed that high functional value rises sharply with purchase intent — from 14% among those not interested to 84% among definite intenders. The near-absence of Low functional value among those considering or definitely intending to purchase (2% and 0%) suggests that perceiving EVs as practically useful is a near-prerequisite for serious purchase consideration.

Those planning to purchase now show the highest concentration of high functional value (71%), while those saying 'Never' show only 10% High. The gradient was consistent across all timeline categories, reinforcing that perceived practical utility is closely tied to purchase readiness. This suggests that engagement strategies should make the practical benefits of EVs tangible, trusted and easy to relate to everyday mobility needs.

The qualitative analysis reveals that EV owners found their cars highly practical and comfortable. Many participants "really enjoy the convenience" (Michelle, Female, WA, EV owner) of EVs and how "quiet and comfortable" (Sal, Male, WA, EV and ICEV owner) they are. Others valued the advanced safety and assistance technology, including crash avoidance, autopilot features, pretension seat belts, airbags and cameras, which gave the car a "safe feeling" (Richard, Male, VIC EV and ICEV owner) and made it easier to drive.

Further, the ability to use and generate energy from EV batteries was an added functional versatility, especially as a backup power source for the home:

> *"You can regenerate your electricity in terms of when you slow at the lights, you regenerate your electricity rather than it being lost in braking. And for example, you could recharge, if you do have solar, you can charge your car from the sun. If you have bidirectional charging, you can use your car as a battery and that's where you have your home. If you have storms and all that, you can use a car and power a house."*
>
> **Tuan, Male, VIC, EV owner.**

Positive attitudes were driven less by abstract ideals and more by how easily EVs fit into routines, reduce effort, and improve the driving experience. In addition, familiarity translated quickly into a sense of ease, with EV ownership often described as straightforward and intuitive (e.g., apps simple to use, tapandgo charging familiar, and charging part of a routine habit at night or while shopping). However, functional value was not uniformly positive. Some EV owners and prospective buyers also described practical frustrations or uncertainties, including charging reliability, range limitations, towing capacity, trip planning and whether EVs could replace an ICEV for all household needs.

This suggests that functional value can increase with direct experience, but negative or uncertain experiences can also shape ongoing confidence and engagement.

The functional value of EVs was also viewed by some as conditional on EVs being a complement to, rather than a replacement for, ICEVs. For these participants, EVs were seen as a practical addition to a mixedvehicle household, offering benefits where suitable while retaining ICEVs for specific needs such as towing, longdistance travel, or use in areas with limited charging infrastructure:

> *"BEVs are becoming more affordable. We will end up with a short-range small BEV - but still a larger ICE to visit family who live in non-network accessible areas. We won't consider a PHEV."*
> **Anonymous Survey participant.**

The perception that EVs are not suitable for outdoor recreation, towing or long-distance travel was also evident among some non-EV owners. These participants reported that caravanning, boating or other irregular but important travel needs made full EV replacement feel impractical, even where they were otherwise interested in EVs:

> *"I'd love an EV that could tow and do that, but I don't think the tech's there yet in terms of the battery range or the powers there."*
> **Brock, Male, VIC, EV and ICEV owner.**

Interview data also surfaced a possible unintended consequence of EV ownership: some participants described being more willing to drive because trips felt cheaper, easier or more enjoyable. This was a qualitative finding rather than a statistically measured increase in kilometres travelled, and would require further analysis using travel or telematics data to compare EV and ICEV driving patterns more directly:

> *"We have been buying a lot of stuff on Facebook marketplace and going around Sydney to try and pick things up for the baby and having an EV kind of helps justify or justify the purchase because it costs us barely nothing to get, I don't know if we need to go to Quakers Hill or something, if we had a fuel car we probably wouldn't drive that far, but it's kind of given us access to more items and made us more willing to drive to get the items."*
> **Rose, Female, NSW, EV owner.**

Conversely, non-EV owners reported limiting their driving due to rising fuel costs and sourcing cheaper fuel through apps and loyalty programs. This contrast suggests that functional and economic value can reshape everyday mobility practices in different directions: EV ownership may make some trips feel easier or cheaper, while petrol costs can constrain ICEV travel.

> *"Always go to the cheap petrol. There's one up the road that's pretty close. Tuesday's our cheap petrol day, which is really sucky. It's the day before payday so it's very annoying."*
> **Ivanka, Female, WA, ICEV owner.**

Overall, functional value was closely tied to purchase readiness because consumers needed to see EVs as practical, reliable and compatible with their everyday mobility needs. Direct experience often strengthened perceptions of convenience, comfort and ease of use, but concerns about towing, range, charging and full household replacement remained important for consumers whose mobility needs extended beyond routine urban travel.

Emotional value

Emotional value captures affective responses to EVs — the enjoyment, excitement, and positive feelings associated with ownership. Our survey findings showed that emotional value had the largest ownership gap across all value dimensions (EV M=3.99 vs Non-EV M=2.97, gap=1.02).

Non-EV owners score below the midpoint on average, indicating that the affective appeal of EVs is not well understood by prospective buyers — or may only be fully appreciated through experience. Emotional value is the strongest differentiator of purchase disinterest: 59% of non-interested participants score Low, and only 6% score High. Among definite intenders, 72% score High.

This suggests that experiential activities, such as test drives, ride-and-drive events and peer demonstrations, could help prospective buyers experience the affective appeal of EVs before purchase. That said, the slow diffusion of EVs through communities may provide an organic environment where consumers have the opportunity to engage with EV owners, draw on stories of lived experience, and therefore create the conditions for emotional engagement with EVs. The findings suggest that consumers who feel little emotional connection to EVs are less likely to move into active consideration (Figure 27).

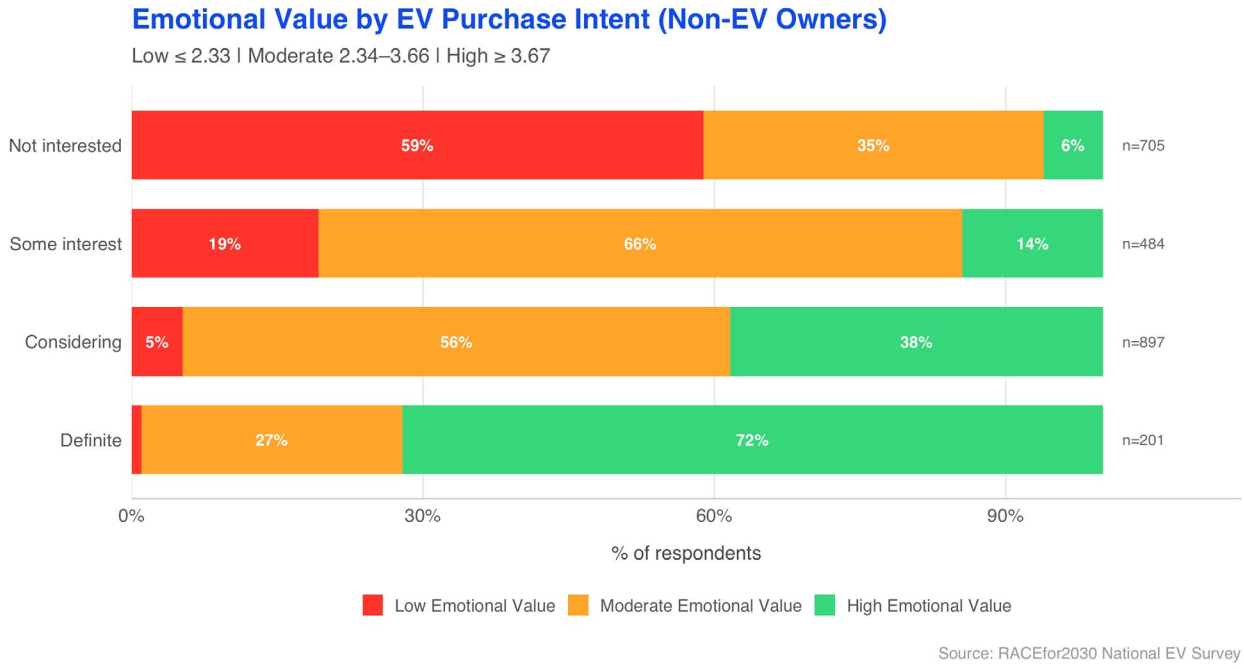


Figure 27. Relationship between non-EV owners ascribed emotional value and intention to purchase an EV

Our survey findings also indicated that emotional value follows a clear gradient across timelines, with the proportion of High scorers increasing as the intended purchase date draws closer. This suggests that affective connection to EVs intensifies as the purchase decision becomes more concrete and proximate.

In addition to practical driving and financial benefits, the ethnographic analysis showed that participants' views about EVs are also influenced by emotional enjoyment, technological appeal, and alignment with personal environmental values. The positive driving experience was a key aspect of the emotional value of EVs, including for participants who had experienced driving or trialling an EV. Many described EVs as easy, smooth and quiet to drive:

> *"It's just really easy to get out the driveway. The other cars you'd have to warm up really on the manual ones almost burn the clutch out and it was a struggle but the EV just effortlessly without any noise just can go up the driveway that's quite steep. So yeah, that was one thing I noticed. It's a lot better. No noise, not struggling at all, just using five to 10% of its available kind of torque to reverse up that and with full cameras you don't hit things being an angle and steep and all that."*
>
> **Emery, Male, NSW ICEV owner.**

These experiences enhanced confidence and created emotional and aesthetic attachment to EVs: "I love it. It's a real pleasure to drive" (Jacob, Male, VIC, EV and ICEV owner); "I really like my car. It's beautiful. If anything else, it's a pretty car" (Claudine, Female, NSW, EV owner). These accounts also connect emotional value to the symbolic and cultural meanings of cars, where enjoyment, aesthetics, identity and attachment shape how vehicles are experienced (Clarsen, 2017; Redshaw, 2006).

In addition, feelings of self-worth and pride in making environmentally conscious choices were often discussed by EV owners who felt they were doing the right thing by reducing fossil fuel use:

> *"I feel proud that I'm driving that car and that I am contributing to a better environment. So, I am happy about that."*
>
> **Corine, Female, NSW, EV and ICEV owner.**

While many owners accepted that EVs were not a universal answer to people's mobility needs, they considered EVs as part of a more sustainable future:

> *"When I first drove my car into the car park at work, I think people thought it was a client visiting and then when they realised it was my car, it was like, oh shit, you got an EV. One guy, why would you buy an EV? Seriously? I'm like, well mate, it's the future. Welcome to the future."*
>
> **Thomas, Male, VIC, EV and ICEV owner.**

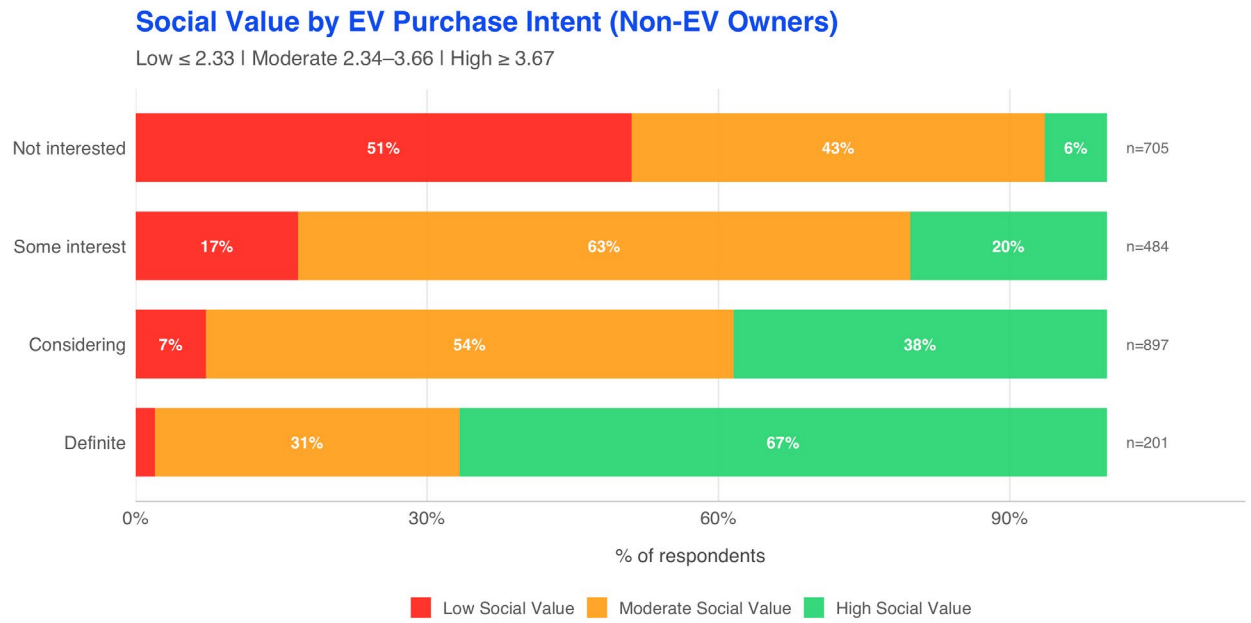
Overall, emotional value appears to be closely tied to direct experience. For many non-EV owners, the affective appeal of EVs may remain abstract until they experience the quietness, smoothness, acceleration, aesthetics, technological features or environmental pride associated with EV use. This supports the role of test drives, peer demonstrations and lived-experience storytelling in building EV readiness.

Social value

Social value reflects the perceived benefits and worth that EV uptake and use can realise through social meaning, social signalling, identity and approval — including how EV ownership is perceived by others and whether it affects social standing. Our survey findings indicated that social value had the lowest absolute means of all value dimensions (EV M = 3.76; non-EV M = 2.91).

Non-EV owners score below the midpoint, indicating that social signalling is not a primary driver for most consumers. This suggests that EVs were not broadly perceived as aspirational status objects across the whole sample. However, the ownership gap (0.85) suggests that the social benefits of EV ownership may become more apparent once experienced, particularly for consumers who already see EVs as aligned with identity, responsibility or future-oriented values.

Social value shows a strong intent gradient: 51% of non-interested participants score Low (the highest Low proportion of any value dimension), while 67% of definite intenders score High. However, social value alone appears insufficient — even among definite intenders, the High proportion (67%) is lower than for functional (84%) or ecological (84%) value (Figure 28).



Source: RACEfor2030 National EV Survey

Figure 28. EV purchase intention by perceived social value among non-EV owners

Our survey findings also indicated that perceived social value follows a clear gradient across purchase timelines. 'Never' participants show 54% Low and just 5% High, while '1-2 years' participants show 50% High and only 5% Low. The strong pattern indicates that social identity and signalling value are closely linked to purchase readiness — those who see EVs as socially desirable are substantially more likely to be near-term intenders.

Based on the ethnographic data, our analysis shows that EVs were viewed by some participants as part of a broader social investment. Those who saw the social value of EVs tended to align EV adoption with collective responsibility and long-term public benefit. This positioned EV owners as not acting only out of self-interest, but also contributing to social good:

> *"My argument is it is no great benefit to me necessarily other than the things I've mentioned before about wanting to get a different car, but making a little bit of a contribution, which is what we've done similarly with solar panels and things. Even though we probably won't save in the long run, it's good for the community."*
>
> **Abdul, Male, NSW, EV owner.**

These findings highlight how the social value of EVs turned ownership into a visible commitment to broader social actions and outcomes such as sustainability, climate action, community wellbeing and public health:

> *"Hopefully I am contributing to a cleaner planet in my little way."*
>
> **Jamel, Male, VIC, EV owner.**

Overall, social value was not the strongest perceived value dimension across the sample, but it mattered more for consumers closer to adoption. This suggests that EVs may become socially meaningful not simply as status symbols, but as visible signals of responsibility, future orientation and contribution to collective benefit.

8.2 Knowledge, financial capability, cost uncertainty and attitudes

Key insight

EV knowledge, financial capability, cost uncertainty and attitudes towards charging, range and technology shape whether EVs feel understandable, manageable and financially realistic. Direct experience and clearer total-cost-of-ownership information can reduce uncertainty, but information alone cannot overcome affordability, charging and infrastructure barriers.

This section considers several related but distinct micro-level factors: EV knowledge, objective financial literacy, self-assessed financial skills and confidence, EV cost uncertainty, and attitudes towards EV use. EV knowledge concerns familiarity with EVs and their operation. Objective financial literacy concerns tested financial knowledge, while self-assessed financial skills and confidence capture consumers' perceived ability to assess costs, savings and financing options. EV cost uncertainty relates specifically to unfamiliar purchase, charging, maintenance, battery replacement and resale costs, including uncertainty about total cost of ownership. Attitudes concern affective and evaluative responses to EV technology, charging and trip planning. The self-assessed EV knowledge findings should be read alongside the objective knowledge results discussed earlier in relation to misinformation: both indicate that lower familiarity can make consumers more uncertain, more reliant on informal sources and less confident in assessing claims about EV costs, charging, batteries and environmental impacts.

The survey findings indicated that EV owners reported higher EV knowledge, stronger financial confidence and more positive attitudes towards EVs than non-EV owners. Among non-EV owners, 53.7% reported that they had never heard about EVs or did not know much about them, while 54% reported moderate self-assessed financial skills.

53.7%
of non-EV owners reported low EV knowledge

54%
reported moderate self-assessed financial skills

Our findings suggest that experience with EVs is associated with greater familiarity and confidence in understanding the technology. This type of knowledge often develops through direct experience, including test drives, household exposure, peer demonstrations and everyday use. An EV owner explained how her partner, a confirmed V8 petrol car enthusiast had been impacted by direct experience:

> *"That's the interesting thing. He has now said that if he was buying a new car, he would probably get an EV, but it's been because he's been experiencing mine."*
> **Claudine, Female, NSW, EV owner.**

This aligns with EV adoption research showing that consumer awareness, driving range, charging time and public fast-charger availability influence EV preferences, particularly in car-dependent markets such as Australia (Philip et al., 2023).

The qualitative data also shows how uncertainty can sit between knowledge, attitudes and critical assessment of information. Some participants were not simply uninformed; they were trying to weigh competing claims about EV benefits, costs and whole-of-life environmental impacts, but lacked clear, trusted, side-by-side information:

> *"A lot of what I hear is anecdotal from opinionated people, friends and colleagues, that sort of thing who have a definite view on it. I'm sitting on the fence. If I look at it from a very narrow perspective, electric vehicles are great, they use less fossil fuels and everything. Awesome. But then I work in the mining industry, so I'm aware that the batteries and everything that we need for these electric vehicles and for their electricity production and everything that comes at a very high cost to the environment as well. So, I don't know enough about exactly what that cost is compared to using fossil fuels than that. And it's just not something that I, well, I don't think that there is very much information available making that comparison side by side."*
>
> **Georgina, Female, WA, ICEV owner.**

This highlights that reliable EV information is necessary, but not sufficient. Consumers also need the capacity to assess claims critically, compare whole-of-life costs and benefits, and understand the financial implications of EV ownership, including purchase price, financing, running costs, charging, battery life and resale value. This reflects wider total cost of ownership research showing that EV affordability depends not only on purchase price, but also running costs, maintenance, incentives, charging access and ownership context (Soszynska et al., 2024).

Knowledge and financial confidence also shaped how participants interpreted the practical demands of EV use. This was particularly evident in attitudes towards trip planning, charging, range and trust in EV technology. These attitudes matter because they influence whether EVs feel manageable in everyday mobility routines, not only whether consumers understand EVs in principle.

There were marked differences in attitudes towards EVs on a range of issues between participants who owned, and those who did not own an EV (Figure 29). Non-EV owners were less trusting in EV technology than EV owners. Specific concerns included needing to plan more than with an ICEV when going on road trips, limited battery capacity and the inconvenience of charging.

Trip planning concern was high for both groups (EV M = 3.81; non-EV M = 3.63), suggesting that some concerns reflect genuine infrastructure and planning challenges rather than lack of knowledge alone. The largest divergences appeared on range concern (non-EV M = 3.82; EV M = 3.19) and trust in technology (non-EV M = 3.67; EV M = 2.85), where ownership experience appears to reduce concern. Notably, the item "Charging an EV is easy" suggests a more complex pattern: EV owners' real-world charging experience may reveal practical challenges that non-owners underestimate.

This also aligns with recent work distinguishing range anxiety from charge anxiety, where concerns shift from vehicle range alone to charger reliability, location, compatibility, payment systems, time and cost (Ovchinnikov and Forestell, 2026). These practical concerns are also reflected in the top barriers to EV adoption, including lack of public charging stations and long charging times (Figure 30). However, the qualitative findings show a more nuanced picture. Many EV owners reported that charging anxieties faded as new routines were established, while others continued to experience frustration with charger access, interoperability, multiple apps and payment requirements.

> *"Usually because for me I do not always have access to a charger. So, any opportunity that I do have, I would actually find a charger. As long as wherever I go and I do see a charger, I'll just charge my car."*
>
> **Tuan, Male, VIC, EV owner.**

The qualitative analysis also suggests that interoperability problems, multiple apps and payment requirements can burden consumers and make charging more difficult.

> *"They (EV charging apps) don't all talk to each other because I started off with one and added on and added on. None of 'em talk to each other properly. It is, it's getting annoying. I'm trying to work out how to actually get it to everyone to talk to each other."*
>
> **Mark, Male, VIC, EV and ICEV owner.**

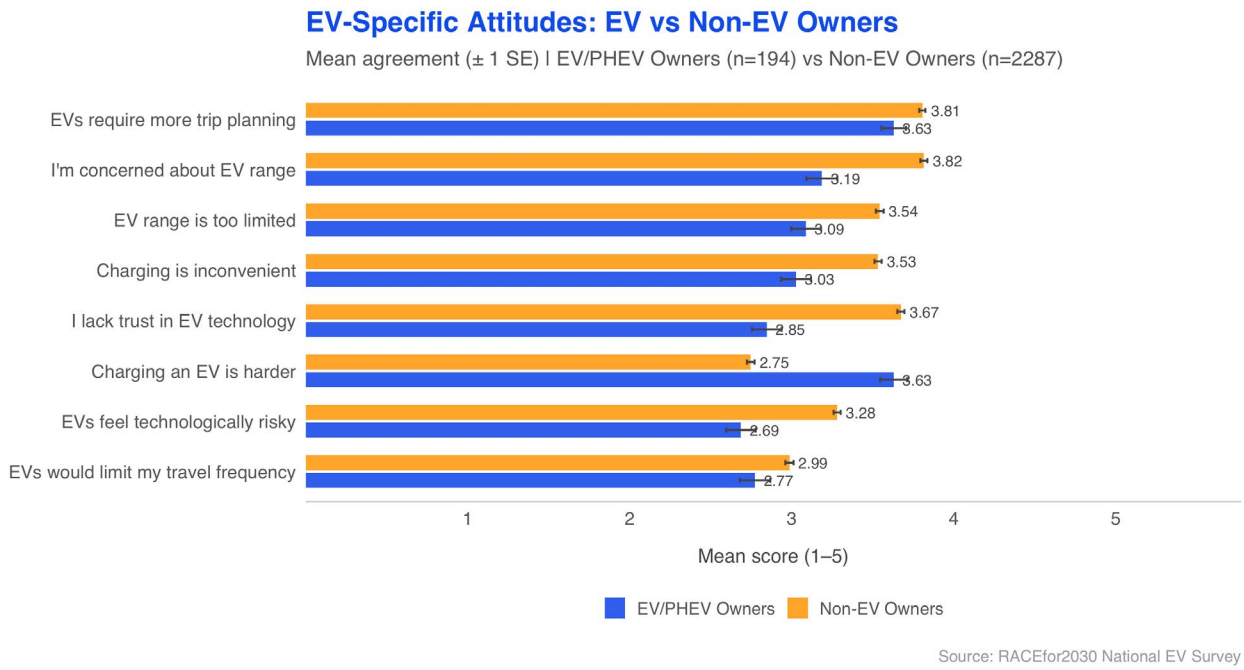


Figure 29. Attitudes towards EV use by ownership status

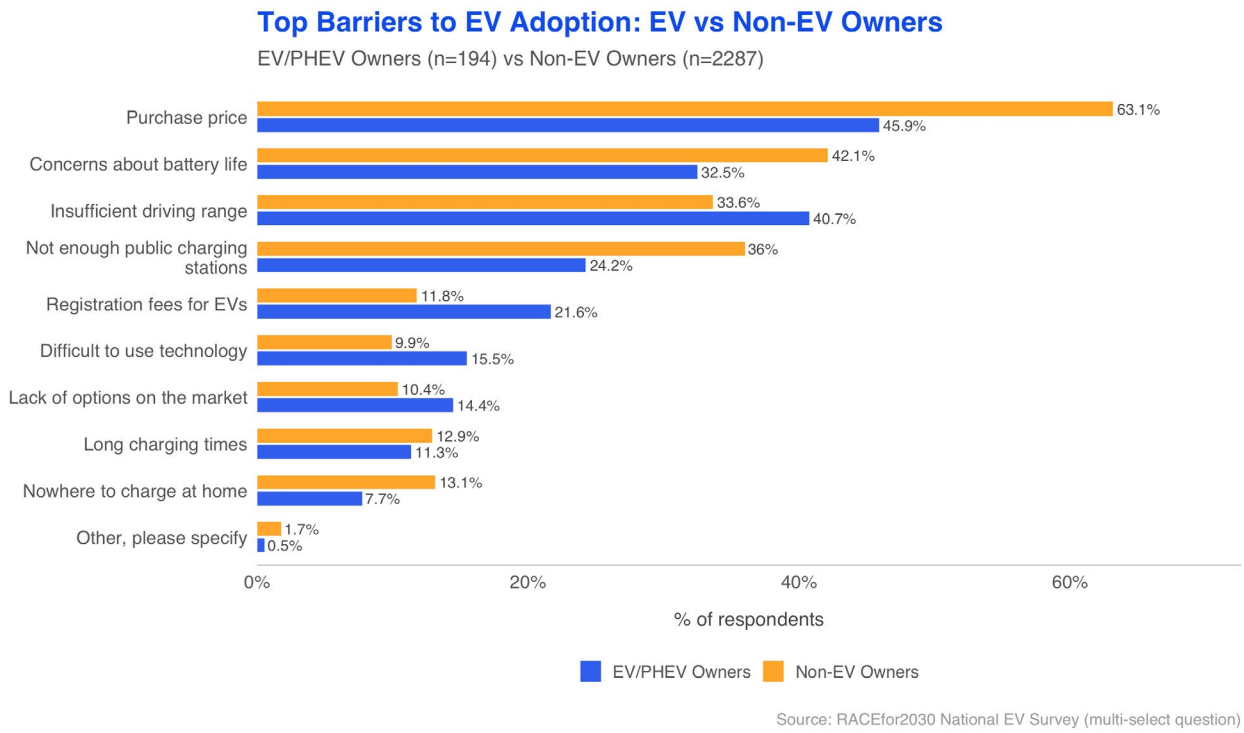


Figure 30. Top barriers to EV adoption by ownership status

The survey analysis found that both groups share concerns but prioritise them differently. For EV owners, the top concerns were purchase price (45.9%), insufficient driving range (40.7%) and registration costs (21.6%). For non-EV owners, the top concerns were purchasing price (63.1%), battery life (42.1%) and insufficient driving range (40.2%). The shared concern about purchase price reflects the relative newness of the Australian EV market and the limited availability of budget-priced EVs.

Non-EV owners reported greater concern about the financial implications of battery replacement, while EV owners focused more on registration costs. This may reflect the difference between anticipated risks before ownership and practical cost concerns after ownership. Battery replacement appears more salient for non-EV owners, while ongoing registration costs become more visible once consumers own and operate an EV.

EV owners and non-EV owners expressed similar levels of concern about insufficient driving range (40.7% vs 40.2%). This suggests that range remains a shared concern, linked to vehicle choice, travel needs and the ongoing need for more charging infrastructure as EV uptake grows. Yet, the qualitative data demonstrated that concerns about driving range are often overcome through familiarity and routine.

> *"It was more being worried about running out of electricity somewhere in the middle of nowhere and then you come to realise as you drive more and more you wouldn't, because at 400 kilometres we have plenty for one whole day."*
>
> **Renaldo, Male, WA, EV and ICEV owner.**

Overall, these findings show that knowledge, attitudes and financial literacy are connected, but distinct. EV knowledge and direct experience can reduce uncertainty, while financial confidence helps consumers assess whether EV ownership is realistic. However, attitudes towards charging, range and trip planning are also shaped by real infrastructure and market conditions, meaning that information alone will not be sufficient without practical improvements to charging reliability, interoperability, affordability and vehicle choice.

8.3 Age, sex, income and education

Key insight

Demographic differences in EV purchase intent were present, but they were not uniform across all groups. Income showed the clearest gradient, while age, sex and education differences were more modest. This suggests that demographic factors matter, but mainly because they interact with affordability, finance access, housing, charging access, life stage and exposure to EVs.

Our survey analysis found that EV interest was present across age groups, although purchase intent was somewhat higher among participants aged 25–34 and 35–44 (Figure 31). Participants aged 18–24 showed lower purchase intent than these groups, which may reflect life-stage factors such as income, employment status, study commitments or limited access to vehicle finance. These patterns suggest that age alone is unlikely to explain EV readiness; rather, age appears to interact with income, household circumstances, finance access, mobility needs and exposure to EVs. Across age groups, most participants expected that they would be likely to purchase an EV within the next five years.

This aligns with Australian EV adoption research showing that socio-economic characteristics, including income, education and occupational composition, are associated with early EV uptake, while consumer awareness and exposure to EVs also shape adoption preferences (Masters et al., 2026; Philip et al., 2023).

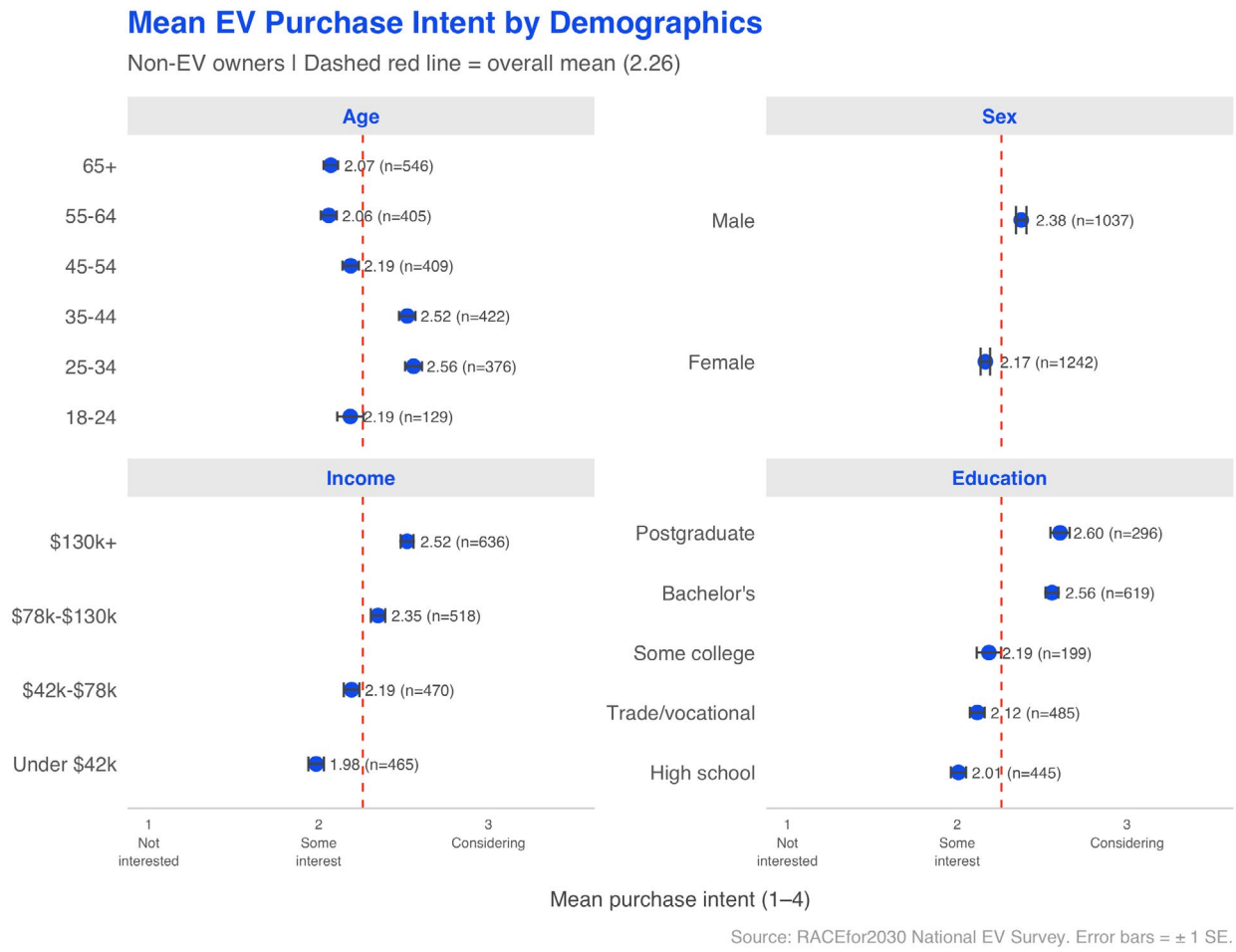


Figure 31. Mean EV purchase intent by demographics

Figure 31 also suggests modest differences by sex and education. Mean purchase intent was slightly higher among male than female participants, and higher among participants with postgraduate or bachelor's qualifications than those with high school, trade/vocational or some college education. These differences should be interpreted cautiously and in relation to other conditions, including income, occupation, housing, charging access and EV familiarity.

In relation to income levels, our survey results show that EV purchase intent increased with household income. A clear income gradient in EV interest emerges — 38% of those earning under $42k are 'Not interested' compared to just 22% of those earning $130k+. The highest-income group also has the largest 'Definite' share (14%), nearly double the lowest-income group. However, over a third of even the lowest earners are at least 'Considering' an EV. There was also a trend for considering an EV sooner as income increases. Lower-income participants report much longer purchase horizons. Under $42k has 24% saying 'Never' — more than double the rate of $130k+ earners (10%). The highest-income group leads on near-term purchases with 13% saying 'Now'. Middle-income groups cluster in the 3–5-year horizon in terms of intention to switch to an EV.

This income gradient is consistent with Australian evidence that early EV adoption has been concentrated among higher-income, more educated and metropolitan consumers, raising equity concerns about who can access the benefits of lower running costs, incentives and home charging (Masters et al., 2026; Mortimore et al., 2024). Overall, these findings suggest that demographic variables should not be treated as simple predictors of EV adoption. Income was the clearest demographic differentiator, but age, sex and education appear to matter through their relationship with life stage, affordability, finance access, EV awareness, charging access and household circumstances. This reinforces the need for segmented and equity-aware EV transition interventions rather than generic consumer messaging.

8.4 Employment status, family status, household composition and accommodation type

Key insight

Employment status and income-related household circumstances appear more clearly associated with EV purchase intent than home type alone. Accommodation type showed little difference in stated purchase intent, but housing and parking arrangements may still matter for charging access, installation options and confidence in day-to-day EV use.

> *"I mean they're (EVs) not cheap, but I think it's a real, I would say, and this is very general, but most people I know that have Teslas, they've got really good jobs."*
>
> **Genevieve, Female, NSW, EV owner.**

Our survey analysis indicated that the intention and timeline of intention to purchase an EV were also associated with employment status (Figure 32). Participants in full-time employment and those who were self-employed were more likely to purchase an EV and within the next five years, than people in part-time employment, those who were unemployed, and students. Households with more members (3, 4 or 5) also appeared more likely to consider purchasing an EV.

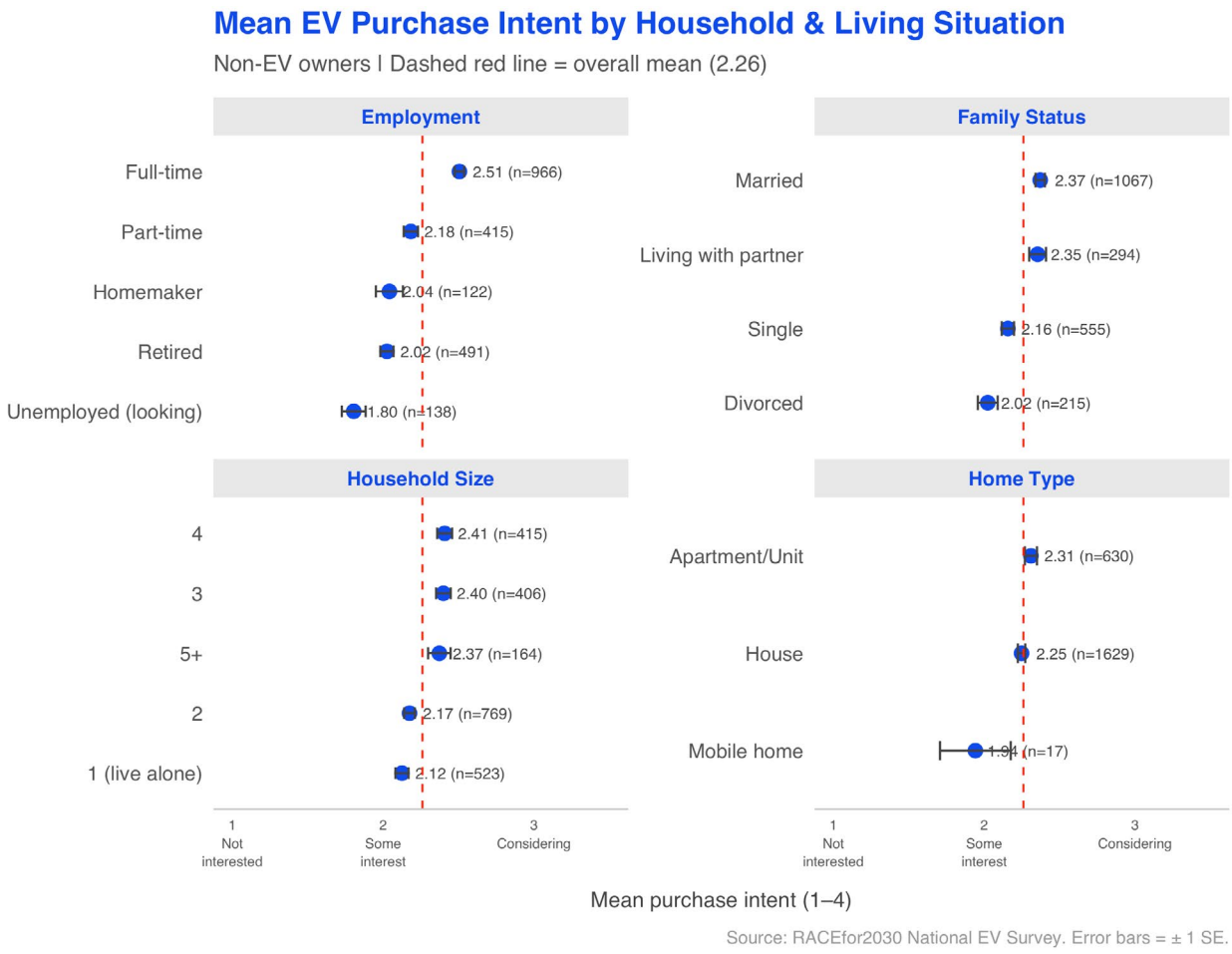


Figure 32. Mean EV purchase intent by household and living situation

In the survey, home type showed little difference in stated EV purchase intent, with mean scores for apartment/unit residents and house residents appearing very similar in Figure 32. This suggests that accommodation type alone may not strongly differentiate interest in EV purchase. However, this should be interpreted cautiously: housing and parking arrangements may still shape EV feasibility

through access to home charging, strata or landlord approval, shared garages, on-street parking and installation costs.

> *"I live, as you can see, it's an older apartment building, so I can't charge. There is a carport, just a carport at the back and there's no power points or anything near it."*
> **Leopold, Male, NSW, EV owner.**

This is consistent with Australian EV adoption research showing that socio-economic characteristics are associated with EV uptake, while housing and charging access remain important practical conditions for whether consumers can participate in the transition (Masters et al., 2026; Mortimore et al., 2024). Overall, these findings suggest that employment status, household size and income-related circumstances may shape EV readiness more clearly than home type alone. However, accommodation type should not be dismissed, because housing and parking arrangements can still affect the practical ability to charge an EV and realise its economic and functional value.

8.5 Environmental concerns

Key insight

Environmental concern is widespread, but it does not automatically translate into EV purchase intent. The findings suggest a concern-action gap: many consumers recognise the environmental benefits of EVs but still face practical, financial, charging, housing or trust barriers that prevent adoption.

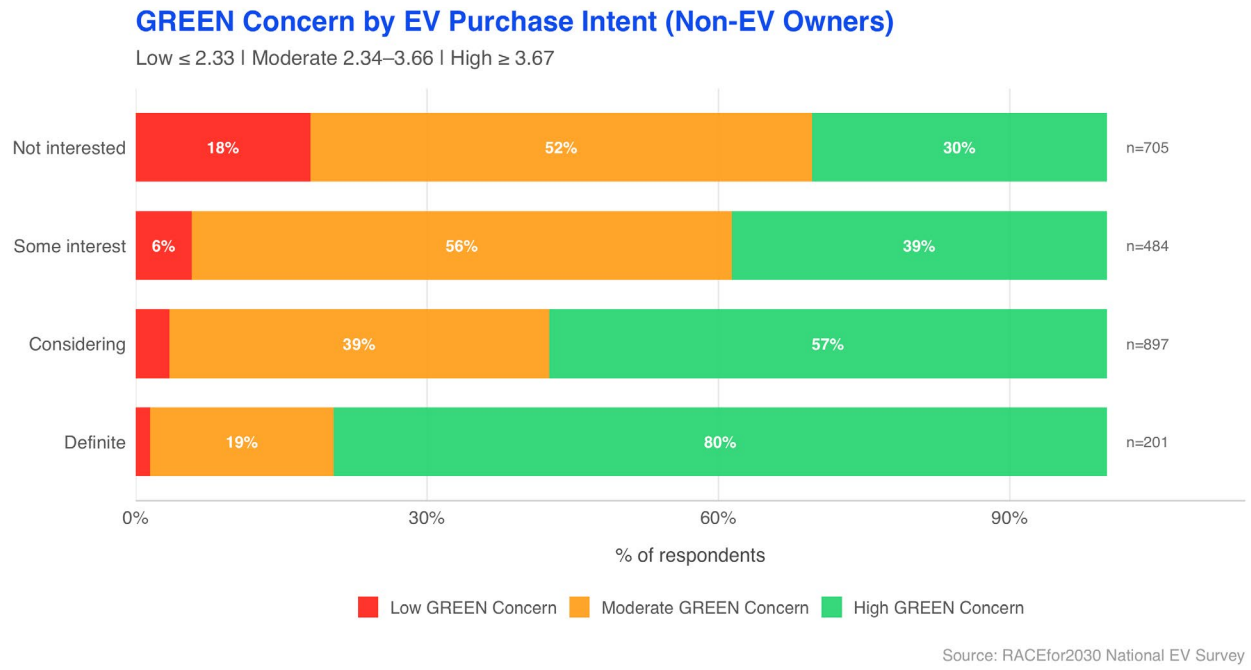
Environmental concern refers to people's broader pro-environmental orientation and their overall awareness, emotional worry and attitudes regarding threats to the natural world, which may motivate them to support eco-friendly actions (Dunlap and Jones, 2002). This is analytically distinct from consumer perceived ecological value, which captures the environmental and sustainability benefits consumers associate specifically with EVs.

The survey measured environmental concern using items that generated a GREEN score and reflected how concerned respondents were in relation to environmental issues generally. We found that Environmental concern is widespread in the population but, on its own, insufficient to drive EV adoption — other factors shape the concern-to-action pathway. Comparing EV and non-EV owners' levels of pro-environmental concern the survey findings show a relatively small ownership gap (EV M=3.89 vs Non-EV M=3.44, gap=0.45). Both groups score above the midpoint, and the non-EV distribution is broadly spread. This aligns with EV adoption research showing that environmental concern can support positive attitudes and purchase intentions, but its effect is shaped by other factors such as price, perceived value, infrastructure, social influence and practical feasibility (Kottala et al., 2025; Shalu and Pandey, 2025).

> *"I want to save money, basically I want to basically help the environment, whatever and basically save money on fuel."*
> **Dick, Male, NSW, ICEV owner.**

Holding pro-environmental concerns was not an unequivocal indicator of intention to purchase an EV, because even those having high levels of pro-environmental concerns are 'Not interested' in purchasing an EV. There was, however, a greater likelihood of intending to purchase an EV and sooner for those with pro-environmental views. High environmental concern increased from 30% among those not interested in EVs to 80% among definite intenders. Notably, even 30% of those not interested in EVs report High environmental concern. This indicates a clear concern-action gap: a

substantial segment of environmentally concerned consumers face barriers unrelated to green values such as price, infrastructure, housing or charging access (Figure 33).



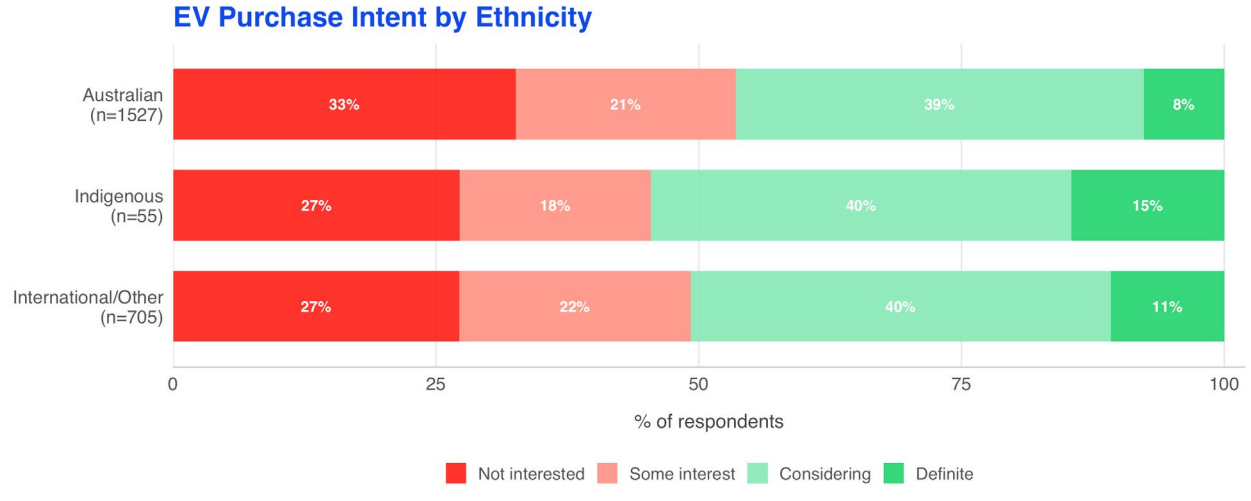
Source: RACEfor2030 National EV Survey

Figure 33. EV purchase intention by pro-environmental concern

Pro-environmental concern increases steadily as purchase timelines shorten, with the Low category shrinking from longer to shorter horizons. The consistent gradient suggests that environmental orientation serves as a steady background motivator rather than a sudden trigger for purchase decisions.

8.6 Cultural background

In relation to cultural and ethnic background, the survey findings showed small descriptive differences in EV purchase intent. Participants identifying with Australian ethnicity had a somewhat higher proportion reporting that they were not interested in purchasing an EV (33%) compared with participants identifying as Indigenous Australian or with other ethnic backgrounds (27%) (Figure 34). These descriptive differences should be interpreted cautiously and are not presented as evidence of a statistically significant association between cultural background and EV readiness.



Source: RACEfor2030 National EV Survey

Figure 34. EV purchase intent by ethnicity

While the qualitative data analysis does not enable us to establish any cultural trends, it illustrates a range of practices across different cultural backgrounds. The key qualitative insight is that household structure, shared expenses and family decision-making can shape how some participants think about transport, education access and future planning. For example, one participant from a culturally and linguistically diverse background described a multi-generational household where shared living arrangements, rooftop solar and family support shaped the feasibility of EV ownership. In this case, the EV was not only an individual transport choice, but part of a wider household strategy to reduce travel costs and support access to education:

Peggy, 20 years old, lives with her parents, brother and grandparents in an outer Sydney house with solar panels. Her parents bought her an EV to ease the time and cost of travelling to university where she is studying:

> *"I have a couple of friends who have Teslas as well in uni, or the parents have Teslas and they were raving about how much money they were saving from buying the car in terms of not putting in petrol and wasting that money on fuel, but at the same time how convenient it was."*
>
> **Peggy, Female, NSW, EV owner.**

This example suggests that cultural background, household composition and shared financial arrangements may shape EV feasibility in ways that are not captured by individual-level demographics alone. This aligns with evidence that EV adoption is shaped by cultural context as well as socio-economic conditions and consumer experience (Higueras-Castillo et al., 2023; Mortimore et al., 2024). However, the qualitative data should be treated as illustrative rather than evidence of a general cultural trend. Further research would be needed to understand how cultural background, household structure, intergenerational support and shared energy assets influence EV adoption.

Overall, the micro-level findings show that EV readiness is shaped by perceived value, knowledge, financial confidence, environmental concern, household circumstances and lived experience. However, these individual-level factors are closely connected to macro-level structures and meso-level socio-cultural conditions, reinforcing the need for segmented and systems-oriented EV transition interventions.

9 Discussion

This project shows that Australia's EV transition is not simply a matter of vehicle supply, purchase price or charging infrastructure. These factors are important, but EV readiness is shaped by the interaction of structural conditions, socio-cultural influences and individual-level perceptions. Consumers assess EVs in relation to affordability, charging access, housing arrangements, policy trust, social norms, experience, misinformation, perceived value and the practical fit of EV ownership within everyday life. Compared with conventional ICEV purchase decisions, EV adoption asks consumers to evaluate a wider system of interdependent conditions, including charging access, home energy arrangements, policy settings, information credibility and infrastructure confidence.

Key insight

The strongest implication of this project is that EV uptake should be understood as a systems-oriented behaviour and social change challenge. Accelerating adoption requires more than increasing vehicle availability or providing general information. It requires coordinated action to make EVs feel valuable, feasible, trusted, familiar and socially normal for different households and communities.

The findings point to the EV transition as a multi-level systems challenge. At the macro level, policy settings, infrastructure, market conditions, household energy technologies and equity shape whether EV adoption is feasible and fair. At the meso level, geography, car culture, social norms, collective efficacy and misinformation influence whether EVs are seen as credible, normal and desirable. At the micro level, perceived value, knowledge, attitudes, financial capability and household circumstances influence whether individual consumers see EV ownership as relevant, manageable and worthwhile.

What matters most for EV readiness

- **Perceived value**
- Policy and governance trust
- EV familiarity
- Social norms

A key data-led contribution of the report is that perceived value emerged as the strongest driver of EV readiness. Table 2 shows that perceived emotional value was the single strongest predictor of purchase intent among non-EV owners, with functional, economic, social and ecological value also strongly associated with purchase intent and shorter expected purchase timelines. Table 3 reinforces this pattern: perceived value was the strongest predictor domain in the dominance analysis, accounting for the largest share of explained variance in both purchase intent and purchase timeline. This finding has important policy and programme implications. It suggests that EV adoption cannot be supported only through technical information, generic awareness campaigns or infrastructure provision. Consumers need to see EVs as valuable in multiple ways: practical to use, financially worthwhile, enjoyable to drive, socially supported, environmentally credible and compatible with everyday household routines.

The segmentation analysis reinforces this interpretation. The four EV readiness profiles, Informed Enthusiasts, Cautiously Interested, Undecided Mainstream and Excluded or Resistant, show that Australian consumers are not moving through the EV transition in the same way or at the same pace. Informed Enthusiasts are relatively ready to act, with stronger knowledge, lower misinformation endorsement, greater EV experience and stronger perceived value. Cautiously Interested show interest, but also higher misinformation, anxiety and technology discomfort. The Undecided Mainstream is the largest group and is neither strongly opposed nor strongly committed, while



Excluded or Resistant are furthest from adoption and face a combination of lower perceived value, weaker social support, lower knowledge, greater misinformation and higher technology discomfort. These differences show why generic EV communication, broad policy incentives or infrastructure provision alone will not be sufficient. Different consumers need different combinations of support, reassurance, direct experience, practical incentives, trusted information and structural enablement.

Segmentation should therefore be understood as a strategic tool rather than a fixed classification of consumers. The profiles provide a practical way to identify current barriers, enablers and intervention priorities. They can support policy design, programme targeting, resource allocation and evaluation. However, because the survey is cross-sectional, the profiles should not be interpreted as evidence of actual movement between groups. Future longitudinal tracking is needed to understand whether consumers move between profiles over time and what drives those changes.

Equity remains a central structural concern. The findings show that EV uptake is currently easier for households that already have enabling conditions such as higher incomes, home ownership, off-street parking, solar PV, batteries, digital and financial capability, and the ability to absorb higher upfront vehicle costs. In contrast, lower-income households, renters, apartment dwellers, people relying on the second-hand vehicle market, regional and rural communities, and people with limited charging access or trusted information face greater barriers. These barriers can compound for people experiencing intersecting vulnerabilities related to income, housing, age, disability, cultural background, geography, car dependence and limited public transport alternatives. Without targeted support, the EV transition risks concentrating benefits among already advantaged households while leaving others locked into older, higher-cost internal combustion engine vehicles.

The findings also show that charging access is not simply an infrastructure quantity problem. Consumers assess charging in relation to where they live, where they park, whether they can charge at home, whether public charging is visible and reliable, and whether charging fits into everyday routines. Apartment dwellers, renters and households without off-street parking face distinctive barriers because they often have less control over charger installation, parking arrangements, electrical upgrades and shared infrastructure decisions. This means that charging policy and infrastructure planning need to be connected to housing, tenancy, strata, planning and equity considerations, not treated only as a transport infrastructure issue.

Misinformation could further complicate the transition, but it should be interpreted proportionately. The project found that EV misinformation circulates through word of mouth, social media, online forums, press and television, and that consumers often struggle to identify trusted sources of EV information. Misinformation was linked to concerns about charging, range, fire risk, battery life, manufacturing, environmental impacts, manufacturer reliability and suitability for Australian conditions. However, Table 3 shows that misinformation was not the strongest predictor domain when compared with perceived value, policy and governance trust, EV familiarity and social norms. This means that misinformation matters, but it should not dominate the intervention strategy. Countering misinformation should be integrated into broader efforts to build trust, familiarity, direct experience and perceived value.



Misinformation as an emerging concern

Misinformation should be addressed through research to better understand its nature, spread and impact and how to counter it. Evidence from domains such as health suggests that trusted information, peer learning, community engagement and social support may be important, alongside addressing the social value that misinformation can hold for some people.

The findings also show that EV ownership is increasingly connected to the wider household and grid energy transition. Solar PV, batteries, HEMS, smart charging and vehicle-to-grid options can strengthen the functional and economic value of EV ownership by connecting mobility, energy management, household cost savings and grid flexibility. However, awareness of HEMS is currently low, price sensitivity is high, and participants raised concerns about complexity, data, surveillance, loss of control and trust in energy providers. This suggests that technology-enabled transition models will only be accepted if they are designed around clear consumer value, transparency, safeguards, incentives and ease of use. Network and energy-sector benefits need to be aligned with household benefits, rather than assumed to override them.

A further implication is that behavioural and social science capability should be treated as core transition infrastructure. Policy and infrastructure investments need to be informed by evidence about how people make decisions, experience barriers, respond to misinformation, interpret value, and change behaviour over time. Longitudinal behavioural tracking, segmentation analysis, policy analysis, intervention design, pilot testing and independent evaluation are needed to understand what works, for whom, under what conditions and with what equity effects. This evidence base is essential if governments, industry, energy networks, automotive stakeholders and community organisations are to move from fragmented activity to coordinated, accountable and inclusive EV transition programmes.

Despite the central role of consumer behaviour in the EV transition, behavioural and social science research remains comparatively under-resourced within energy transition funding and industry partnerships. This creates a risk that policy and infrastructure investments are not sufficiently informed by evidence about how people actually make decisions, experience barriers, respond to misinformation, interpret value, or change behaviour over time. The recommendations presented in section 11 therefore focus on practical actions to make EV uptake more feasible, valuable, trusted and inclusive for different Australian households and communities.

10 Limitations and future research agenda

This project provides a substantial mixed-methods evidence base on Australian consumers' EV readiness, but the findings should be interpreted in light of several limitations. The research captures consumer perceptions, experiences and survey responses at a particular point in a fast-moving transition. EV policy, vehicle availability, charging infrastructure, fuel prices, household energy technologies, public debate and misinformation environments are all changing rapidly. As a result, consumer readiness, segment membership and perceived barriers may shift over time as the transition matures.

The qualitative component also deliberately included EV owners and non-EV owners across selected jurisdictions to support comparison across different contexts and experiences. This generated rich insight into lived experience, charging routines, household energy arrangements, value perceptions and barriers to adoption, but it should not be read as statistically representative of all Australian consumers. The nationally representative survey provides broader quantitative evidence, but it is cross-sectional. This means it identifies associations between factors such as perceived value, policy trust, EV familiarity, social norms, misinformation, housing, income and EV readiness, but it does not track actual movement between readiness profiles over time.

Key insight

Australia's EV transition is changing quickly. Future research should track how consumer readiness changes over time, test which interventions work for different groups, and evaluate whether policies, infrastructure and market offers are reducing or reinforcing inequities in EV uptake.



10.1 Future research priorities

Longitudinal tracking of EV readiness profiles

Future research should track whether the four EV readiness profiles remain stable over time, whether consumers move between profiles, and what factors predict movement towards or away from EV readiness. This would help assess the effect of changing EV prices, vehicle availability, charging infrastructure, policy settings, trusted information, misinformation exposure, direct EV experience and household circumstances. Longitudinal tracking would also allow the segmentation to be used as an evaluation tool for policy, infrastructure and behaviour change interventions.

Evaluation of policy and behaviour change interventions

There is a need to test which combinations of policy support, incentives, trusted information, direct EV experience, social norm strategies, charging support and segmented communication are most effective for different groups. Future research should evaluate not only whether interventions increase stated interest in EVs, but whether they shift perceived value, trust, confidence, charging awareness, misinformation endorsement and purchase timelines.

Equity-focused EV transition research

Future research should examine how EV policies, incentives, infrastructure investments and market offers affect different households and communities. Particular attention is needed on lower-income households, renters, apartment dwellers, people living with disability, older people, young people, culturally diverse households, regional and rural communities, and consumers reliant on the second-hand vehicle market. This research should assess who benefits, who remains excluded, and what forms of targeted support are needed to ensure the transition is inclusive.

Charging access in rental, apartment, regional and outer-suburban settings

Further research is needed on practical charging models for households without easy access to home charging. This includes renters, apartment residents, strata buildings, social housing, regional communities, outer-suburban households and people without off-street parking. Research should test legal, technical, financial and governance models for shared charging, streetside charging, workplace charging, destination charging and community charging infrastructure

Misinformation, trust and trusted information pathways

Future research should investigate how EV misinformation circulates, which claims are most influential, which groups are most exposed, and which sources are viewed as credible. However, misinformation should be examined alongside the stronger drivers of readiness identified in this project, including perceived value, policy trust, EV familiarity and social norms. Future work should test trusted messenger approaches, peer learning, myth-checking, direct experience and community-based communication without over-amplifying misinformation.



Smart charging, HEMS, V2G and household energy integration

Further research is needed on consumer acceptance of smart charging, home energy management systems, vehicle-to-grid, EV-solar-battery integration, community batteries and flexible tariffs. This should examine how consumers understand these technologies, what they perceive as valuable or risky, and what safeguards are needed around data, privacy, control, battery degradation, compensation and trust in energy providers. This area is particularly important for energy networks, technology providers and governments planning for future grid flexibility.

Second-hand EV market participation

Future research should examine how the second-hand EV market develops and how lower-income and budget-constrained consumers can participate. Key issues include used EV availability, battery health information, warranties, repair costs, finance options, consumer confidence, residual values and the risk that some households remain locked into older, higher-cost ICEVs for longer.

Implementation research with key stakeholders

Future research should work directly with state governments, DNSPs, technology providers, local governments, charge point operators, automotive stakeholders, community organisations and consumers to test practical implementation pathways. This could include pilots on apartment charging, regional charging, public-sector EV fleets, trusted information campaigns, EV test-drive programmes, HEMS and smart charging trials, and targeted support for equity-priority groups.

Together, these future research priorities point to the need for an ongoing applied research programme rather than a one-off snapshot of consumer readiness. As EV markets, policies, technologies and social norms change, consumer research will be needed to understand what is shifting, who is benefiting, who is being left behind, and which interventions are delivering practical, equitable and measurable outcomes.

11 Recommendations and priority actions

Based on the research findings, behavioural insights and stakeholder feedback, this report identifies six recommendations to support a more effective, equitable and consumer-centred EV transition in Australia. The recommendations are ordered to reflect both the overarching systems logic of the project and the relative strength of the evidence. The first recommendation provides the implementation architecture: EV transition interventions need to be systems-oriented, segmented and evaluated. The following recommendations then identify the major levers for action, including perceived value, equity, market supports, community-led interventions and trusted information pathways. Together, these recommendations are intended to help governments, industry, energy networks, technology providers, local councils, community organisations and research partners move from fragmented activity to coordinated, measurable and inclusive transition programmes.

1	**Develop systems-oriented, segmented EV transition interventions with embedded measurement and evaluation** so that policy, technology, infrastructure and behaviour change efforts are coordinated around priority consumer groups and measurable outcomes.
2	**Promote the multi-dimensional perceived value of EVs** so that adoption is framed not only as a financial or environmental decision, but also as a practical, emotional, social, household and community benefit.
3	**Address equity and inclusion in the EV transition** through targeted support, representative design, distributive fairness and restorative investment in underserved groups and places.
4	**Develop business models and market supports that reduce friction across the EV journey**, including model choice, charging access, second-hand EV markets, HEMS, smart charging, simplified payment systems and network-aware charging.
5	**Develop community-led EV transition interventions** that build local trust, shared assets, direct experience, peer learning and place-based transition pathways.
6	**Build trusted information pathways and counter EV misinformation** through evidence-led, behaviourally informed and independently evaluated interventions.

The following roadmap translates the six recommendations into short-, medium- and longer-term priorities, showing how immediate actions, scalable programme development and longer-term structural changes can work together to support a more effective, equitable and consumer-centred EV transition.

Figure 35. Implementation roadmap for the six recommendations

	Recommendation	Initiate and establish	Pilot, evaluate and refine	Scale and institutionalise
1	**Develop systems-oriented, segmented EV transition interventions with embedded measurement and evaluation**	Define target segments, priority behaviours and outcome measures; establish behavioural and equity baselines; design pilot interventions and identify delivery partners.	Implement and evaluate pilots using behavioural, equity and techno-economic measures; track changes in EV readiness and refine interventions by segment.	Scale effective interventions; maintain longitudinal tracking; embed behavioural, equity and intervention-impact evaluation across EV transition programmes.
2	**Promote the multi-dimensional perceived value of EVs**	Identify and test functional, economic, emotional, social and ecological value propositions for different readiness profiles and household circumstances.	Pilot value-based communication, test-drive and demonstration initiatives; evaluate effects on perceived value, confidence, purchase intentions and timelines.	Scale effective value-building approaches across consumer programmes and market engagement; maintain monitoring and adapt interventions as value perceptions change.
3	**Address equity and inclusion in the EV transition**	Define equity objectives, priority groups and locations; establish baseline measures of access, affordability, participation and realised benefits; assess existing policies and infrastructure plans through an equity lens.	Pilot targeted finance, renter and apartment charging, second-hand EV support and community charging models; evaluate distributional and participation outcomes.	Scale effective equity-oriented measures; apply and maintain equity assessment across major EV policies, infrastructure programmes and evaluations.
4	**Develop business models and market supports that reduce friction across the EV journey**	Identify priority consumer frictions and clarify the roles of relevant market, government and regulatory actors; improve signage, payment simplicity, consumer information and second-hand EV guidance.	Pilot and evaluate battery-health reporting, fleet-to-second-hand pathways, integrated EV-energy offers, shared-access models and consumer-friendly smart-charging arrangements.	Scale effective models and strengthen coordination, interoperability and consumer protection across vehicle purchasing, finance, charging, energy, servicing and resale.
5	**Develop community-led EV transition interventions**	Identify suitable communities and existing local assets; undertake community consultation and co-design; establish governance, access, funding and evaluation arrangements for initial pilots.	Pilot and evaluate EV demonstrations, shared vehicles, community charging hubs, social-housing initiatives and community energy models.	Scale effective and financially viable models; embed community-led mobility and energy approaches in local transport, planning and transition strategies.
6	**Build trusted information pathways and counter EV misinformation**	Audit existing information resources; map misinformation narratives, trusted sources and information gaps; establish baseline measures and co-design initial interventions.	Pilot and evaluate trusted-messenger, peer-learning, pre-bunking, driver-education, direct-experience and community communication approaches.	Scale effective interventions; maintain misinformation monitoring; periodically update trusted information and evaluate changing exposure, trust and behavioural outcomes.

Recommendation 1:

Develop systems-oriented, segmented EV transition interventions that integrate policy, technology, infrastructure and behaviour change for priority consumer segments

Recommendation 1 at a glance

WHY
EV uptake is shaped by interacting structural, socio-cultural and individual-level factors, so generic interventions are unlikely to work equally across different readiness profiles.

PRIORITY ACTIONS
Define priority segments, specify measurable behaviours, align policy, infrastructure, market and communication supports, pilot segmented interventions, and evaluate behavioural, equity and techno-economic outcomes.

LEAD ACTORS
Relevant Australian, state and territory transport, energy, climate, infrastructure and consumer-policy agencies, together with relevant evaluation partners.

Aims and rationale

The aim of this recommendation is to move beyond fragmented EV initiatives and develop integrated transition approaches that combine policy, technology, infrastructure delivery and behaviour change program activity around clearly defined priority consumer segments. The research findings show that EV uptake is not shaped by one factor alone. Instead, adoption readiness is influenced by interacting structural, socio-cultural and individual-level factors, including policy support, charging access, trust, social norms, EV experience, misinformation, anxiety, knowledge, household circumstances and perceived value. The segmentation analysis also shows that consumers differ markedly in their readiness for EV adoption, with Informed Enthusiasts, Cautiously Interested, the Undecided Mainstream and Excluded or Resistant requiring different forms of support. This recommendation is grounded in the report's core finding that EV readiness is shaped by interacting macro, meso and micro-level influences, and that the four EV readiness profiles require different combinations of policy, infrastructure, market, communication and behaviour change supports.

This means that isolated policy measures, generic awareness campaigns, or infrastructure roll-out alone are unlikely to deliver an inclusive and accelerated transition. Interventions could be designed as coordinated intervention systems with clear behavioural objectives, defined target segments, practical supports, funding commitments, delivery partners and evaluation mechanisms. This recommendation therefore calls for EV transition interventions that are not simply strategies, subsidies, information campaigns or infrastructure plans, but integrated behaviour change programs that align consumer needs with enabling policies, accessible infrastructure, trusted information, direct experience and tailored value propositions.

A further aim is to strengthen behavioural evidence and evaluation capability in the EV transition. Current policy and industry action can be supported by ongoing evidence about how consumers change over time, which segments are shifting, what barriers remain, and which interventions or policies are having measurable effects. This requires longitudinal behavioural tracking, segmentation analysis, policy analysis, intervention testing and independent evaluation to be built into EV transition programs from the outset.

Features and characteristics

Policies and programs can be designed around clear, measurable and segment-specific goals. These could include SMART objectives linked to funding commitments, technology and infrastructure rollout, and priority behaviours such as considering an EV, seeking trusted information, test-driving an EV, using public charging, installing or accessing home charging where feasible, choosing an EV as a next vehicle, or participating in energy management options such as smart charging or home energy management systems.

A systems-oriented approach would include multiple connected components rather than a single intervention. These could include policy and regulatory measures, financial supports, charging infrastructure provision, public and workplace charging visibility, trusted information channels, direct experience opportunities, community engagement, peer-to-peer advocacy, partnerships with local councils and community organisations, and ongoing monitoring of uptake, confidence and barriers across priority groups.

Interventions could be segmented in two senses. First, they can identify the institutional and sector actors required to deliver change across policy, technology, infrastructure and behaviour change systems. Second, they could tailor consumer-facing actions to different household circumstances, readiness profiles and equity needs. For instance, Informed Enthusiasts may be mobilised as early adopters, peer advocates and local champions. Cautiously Interested may need reassurance, factual information, charging support and opportunities to resolve anxiety through direct experience.

The Undecided Mainstream may require practical value propositions, visible infrastructure, cost comparisons, test drives and reduced transaction complexity. Excluded or Resistant are unlikely to be shifted through generic promotional campaigns and may require longer-term trust-building, locally credible messengers, practical demonstrations and careful engagement that acknowledges concerns rather than dismissing them.

Tangible actions could include EV roadshows, test-drive events, demonstration days and community information sessions in regional, rural, outer-suburban and lower-income communities. These activities would not simply display vehicles, but also allow people to sit in, drive, charge and ask practical questions about range, cost, servicing, safety, reliability, second-hand availability, insurance, home charging, public charging and longer-distance travel. Such programs could prioritise places and groups least likely to have direct EV exposure through existing social networks.

Another possible action is a government-backed peer-to-peer EV referral scheme. Existing EV owners could be supported to act as trusted advocates within their networks, with both the existing owner and new purchaser receiving a modest benefit, such as a vehicle registration discount or charging credit. This would draw on social proof and social contagion by turning early adopters into active transition intermediaries. To avoid becoming a benefit only for already advantaged consumers, such a scheme could be integrated with equity criteria, targeted outreach and safeguards to ensure benefits reach mainstream, regional, lower-income and renter households where possible.

Interventions – including policies, programs, technologies and infrastructure could also include embedded research and evaluation. This could include a longitudinal EV transition behaviours tracking study to monitor changes in adoption readiness, segment membership, barriers, perceived value, misinformation exposure, charging confidence and policy responses over time. Such a study would allow stakeholders to assess who is shifting, why they are shifting, whether segments are stable or changing, and whether specific policies, infrastructure investments or behaviour change interventions are associated with measurable changes in uptake and readiness. Where suitable data and comparison groups are available, methods such as difference-in-differences analysis could be used to evaluate policy and intervention effects. Evaluation can include behavioural, equity and techno-economic measures, including changes in purchase intent, purchase timeline, perceived value,

charging confidence, trust, infrastructure use, cost impacts, demand impacts and outcomes for priority groups.

Finally, systems-oriented interventions would be able to incorporate trusted information and counter-misinformation components where relevant, but these can be integrated with broader efforts to build perceived value, trust, direct experience and practical support. More detailed actions on trusted information pathways and misinformation are addressed in Recommendation 6.

Timing

Based on this research, we identify this recommendation as a core priority for enabling faster and more equitable EV uptake, supporting emissions reduction and improving the affordability of participation in the transition. Intervention design can be embedded into current and future EV policy, infrastructure and consumer engagement planning. Implementation could begin with targeted pilot programs in selected priority communities, followed by refinement and scale-up based on evaluation findings. Longitudinal tracking could ideally begin as early as possible to establish behavioural baselines and monitor change across time.

Resources required

Resources could include dedicated program funding, cross-sector coordination, policy and regulatory support, behavioural sciences and social marketing expertise, segmentation capability, community engagement expertise, and monitoring and evaluation capacity. Effective delivery will be expedited by partnerships between federal, state and local governments, energy providers, charging infrastructure providers, automotive manufacturers and dealers, fleet operators, insurers, motoring organisations, employers, community organisations, consumer advocacy groups and research partners.

Practical resources include funding for pilot programs, roadshows and demonstration events; staff and facilitators to support community engagement; multilingual and accessible information materials where needed; digital platforms for information, referral and tracking; data collection and analysis infrastructure; and evaluation tools to track behavioural outcomes and equity effects.

Independent research capability can also help. Universities and specialist behavioural and social science research centres can play a key role in designing tracking studies, conducting policy analysis, developing and testing interventions, evaluating outcomes and translating evidence into practical recommendations for policy, industry and community partners. Their independence and methodological expertise can help ensure that interventions are evidence-led, transparently evaluated and responsive to different consumer groups and contexts.

Lead actors, partners and beneficiaries

Lead responsibility: Implementation could involve relevant federal, state and territory transport, energy, climate, infrastructure and consumer policy agencies, working within their respective mandates and in partnership with market, network and community actors. This coordinated approach could support integrated policy delivery rather than treating EV uptake as the responsibility of a single portfolio (Murray-Leach, 2026).

Key delivery partners: Delivery involves electricity networks, energy retailers, charging infrastructure providers, automotive and mobility sectors, local governments, motoring organisations, community intermediaries, consumer organisations, and independent behavioural and social science research partners.

Priority beneficiaries: Households and communities with lower EV readiness, limited direct EV experience, affordability constraints, limited charging access, or exposure to misinformation stand to benefit. The four readiness profiles identified in this study — Informed Enthusiasts, Cautiously Interested, Undecided Mainstream and Excluded or Resistant— can inform how interventions are segmented, targeted and positioned, but they are not the only target groups for the recommendation.

Value benefit

The value benefit of this recommendation is that it provides a practical mechanism for turning EV transition policy into consumer-facing change. For consumers, integrated programs can reduce uncertainty, increase confidence, improve access to trusted information, provide direct experience, and make the benefits of EVs more tangible and credible. For priority groups, segmentation can ensure that support is relevant to their circumstances rather than based on assumptions about a generic average consumer.

For governments and industry, systems-oriented programs can improve the effectiveness of investments in infrastructure, incentives and information by ensuring that these are connected to behavioural outcomes and priority consumer needs. Embedded research and evaluation can also show which policies and interventions are working, for whom, under what conditions, and with what equity effects. This can improve accountability, support better use of limited resources, and strengthen the evidence base for future investment.

For the broader transition, this approach can help accelerate uptake while reducing the risk that EV adoption remains concentrated among higher-income, owner-occupier and energy-engaged households. It also positions behavioural and social science as central to achieving an inclusive EV transition, rather than as an optional add-on to technical, infrastructure and market-led activity.

Recommendation 2:

Promote the multi-dimensional perceived value of EVs

WHY

Perceived value was the strongest data-led driver of EV readiness. Consumers are more likely to consider EVs when they see them as practical, affordable, enjoyable, socially supported, environmentally credible and compatible with everyday life.

PRIORITY ACTIONS

Develop segmented value propositions, expand test-drive and demonstration opportunities, use peer stories and owner experience, provide credible total-cost-of-ownership tools, and communicate functional, economic, emotional, social and ecological benefits.

LEAD ACTORS

State and federal EV policy and communications teams, automotive manufacturers and importers, dealerships, motoring organisations such as state automobile clubs, and EV programme delivery partners.

Aims and rationale

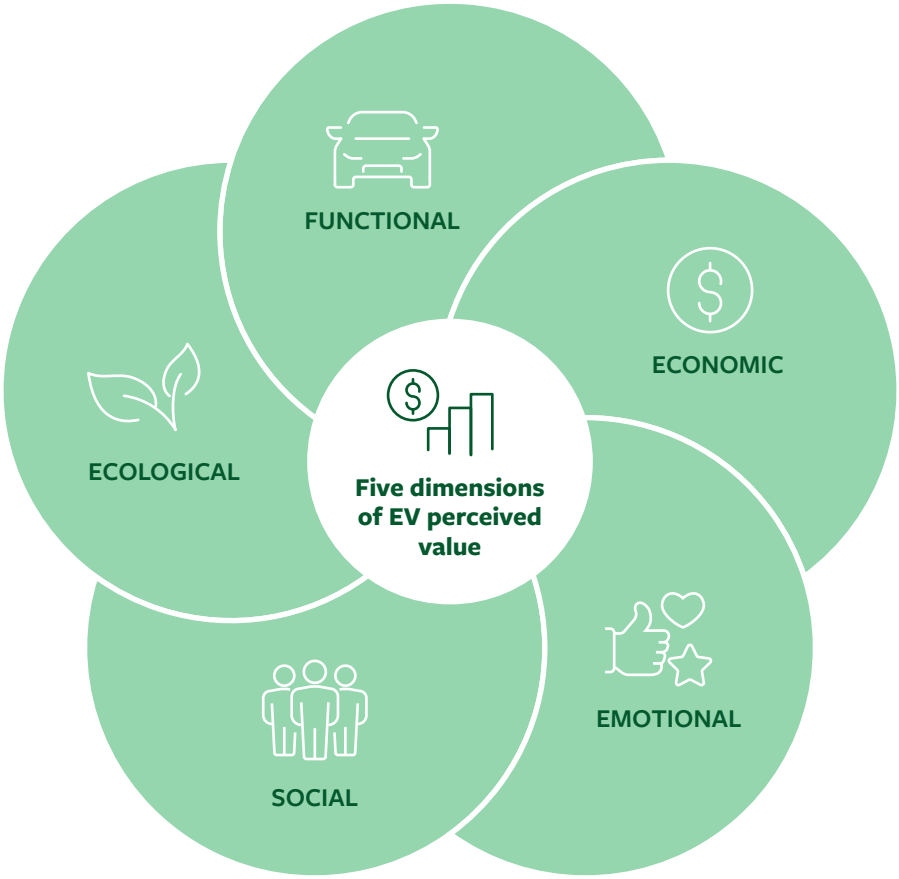
The aim of this recommendation is to promote the full range of value that consumers can perceive, experience and realise through EV uptake and use. Much public and policy discussion of EVs emphasises economic value, such as lower running costs, and ecological value, such as emissions reduction. These are important, but the findings from this study show that EV adoption is also shaped by functional, emotional and social value. Consumers are more likely to consider EVs when they see them as practical, reliable, easy to use, enjoyable, safe, socially acceptable, environmentally beneficial and compatible with everyday life. The report's perceived value analysis found that value perceptions were strongly associated with EV purchase intent and purchase timeline, with EV owners generally rating EV value more positively than non-EV owners across multiple value dimensions. This recommendation is strongly supported by the survey findings: perceived value was the strongest predictor domain in the dominance analysis, while perceived emotional, functional and economic value were among the strongest individual predictors of EV purchase intent and purchase timeline.

This recommendation responds to the need to shift EV communication and program design beyond narrow appeals to cost savings or environmental responsibility alone. While these messages can be effective for some consumers, they do not fully address the range of motivations, concerns, identities and household circumstances that shape EV readiness. For some consumers, value may be experienced through lower fuel and maintenance costs. For others, it may be the convenience of home or destination charging, the driving experience, reduced noise, improved comfort, the feeling of contributing to a cleaner future, or the social reassurance of seeing peers and community members adopt EVs.

A multi-dimensional value approach also helps avoid treating EV adoption as a purely technical or rational purchase decision. The findings show that emotional and social dimensions matter. EV owners in the qualitative research often described pleasure, pride, confidence, reassurance, quietness, comfort and enjoyment in relation to EV use, while non-EV owners sometimes struggled to imagine these benefits before direct experience. This suggests that EV value propositions can be segmented, experiential and context-specific, rather than generic.

Features and characteristics

EV policies, programmes, campaigns and market supports could promote value across five connected dimensions: functional, economic, emotional, social and ecological. These dimensions should not be treated as separate messages, but as complementary parts of a stronger EV value proposition. The aim is to help different consumers see how EVs can fit their own routines, budgets, identities, households and communities.



Functional value can be promoted by showing how EVs can fit into everyday routines. This includes practical information and demonstrations about driving range, charging routines, public charging, home charging, servicing, safety features, reliability, quietness, ease of use, trip planning and compatibility with different household and travel needs. Functional value could be demonstrated through lived experience, test drives, case examples and practical tools rather than abstract claims.

Economic value can be communicated through clear and credible information about total cost of ownership, fuel savings, maintenance costs, charging costs, finance options, resale considerations, battery warranties, insurance and available incentives. Economic messages could be transparent and tailored to different groups, because not all consumers have access to home charging, solar PV, batteries, novated leases or upfront capital. For lower-income households, renters and second-hand vehicle buyers, economic value will only be credible if affordability barriers and access constraints are also addressed.

Ecological value can continue to be communicated, but in ways that acknowledge consumer questions about batteries, mining, recycling, electricity generation and whole-of-life impacts. Environmental claims could be evidence-based, transparent and specific. Messages should avoid assuming that ecological concern alone will drive adoption, because the report shows that some consumers recognise environmental benefits but still do not intend to purchase an EV due to cost, infrastructure, housing or trust barriers.

Emotional value could be more deliberately articulated. EVs can be positioned not only as efficient or environmentally responsible, but as enjoyable, quiet, comfortable, safe, confidence-building and future oriented. This is particularly important because emotional value may only become apparent once consumers experience EVs directly. Test drives, roadshows, peer stories, owner narratives and local demonstrations can help make emotional value more tangible.

Social value can also be strengthened. EVs can signal participation in a wider transition, care for community wellbeing, technological confidence, environmental responsibility and contribution to cleaner neighbourhoods. However, social value should be handled carefully so that EVs are not framed only as high-status products for affluent early adopters. Social value could instead be connected to shared benefits, local normalisation, community leadership, family wellbeing, cleaner air, quieter streets and practical participation in a collective transition. Social value messages can emphasise peer approval and trusted endorsement, not only the visibility of EVs on roads.

Priority actions for value-based EV engagement

- Develop segmented value propositions for different consumer groups.
- Use test drives, demonstrations and peer stories to make emotional and functional value tangible.
- Review existing total-cost-of-ownership tools and improve their awareness, accessibility and relevance for consumers with different charging, housing and finance circumstances.
- Broaden the ecological value proposition using credible, context-specific lifecycle evidence on emissions, air quality, noise, and health benefits (Requia et al., 2018), while acknowledging impacts across vehicle production, use and end-of-life (Xia and Li, 2022).
- Avoid generic "EVs save money and emissions" messaging that overlooks the interacting influences identified in this research, including the functional, emotional and social dimensions of perceived value, policy support and trust, misinformation, social norms, collective efficacy, direct experience, knowledge and technology confidence, car culture, household circumstances, housing and tenure, charging access, geography and affordability (see Sections 6–8 and in Table 2 and Table 3).

Value propositions can be segmented and tailored. For example, younger households with children may respond to messages about health, safety and future security. Emphasising reduced local air pollution, quieter neighbourhoods, driving safety and comfort, and the role of EVs in safeguarding children's future can reframe adoption as a protective and responsible household choice rather than merely a technological upgrade. For regional and rural consumers, value propositions may need to focus on reliability, range confidence, charging access, independence, operating costs and suitability for longer trips. For renters and apartment dwellers, value may depend on public charging, shared charging, car-share models or community charging rather than home charging. For fleet operators and employers, value may include operating cost savings, emissions reduction, employee benefits, public leadership and futureproofing.

Value-based communication can also respond to cultural meanings attached to cars, including perceptions of power, status, practicality and what counts as a "real car". For some consumers, particularly those influenced by car culture or performance expectations, EV value propositions may need to emphasise capability, reliability, safety, acceleration, towing suitability, model choice and everyday practicality, rather than relying only on environmental or cost-saving messages.

Value communication could also be linked with direct experience. Because many benefits are difficult to appreciate without exposure, programs could include test drives, peer-to-peer learning, EV owner stories, community demonstrations, workplace trials, shared EV access and practical charging

demonstrations. This is especially important for consumers who do not have EV owners in their social networks and therefore have limited opportunities to see, use or ask questions about EVs.

Finally, value propositions can be honest about barriers. Promoting value will not be credible if consumers' concerns about cost, charging, housing, regional travel, battery life or second-hand availability are ignored. The perceived value of EVs increases when barriers are reduced and when consumers can see how benefits apply to their own circumstances. Value promotion should therefore be integrated with the other recommendations on equity, misinformation, community-led interventions, market supports and systems-oriented programs.



Timing

This recommendation can be treated as an immediate and ongoing priority. Multi-dimensional value propositions could be embedded into EV communication, policy design, community engagement, market supports and behaviour change programs from the outset.

Short-term actions should include developing segmented value propositions, testing messages with priority audiences, producing practical and accessible communication materials, and embedding value messages into roadshows, test drives, community events and trusted information pathways. Medium-term actions could include integrating value propositions into business models, public charging communication, fleet transition programs, second-hand EV supports and community-led interventions. Longer-term actions could include monitoring how value perceptions shift over time and assessing which value dimensions are most influential for different groups as EV markets and infrastructure mature.



Resources required

Resources required include behavioural research, segmentation analysis, message testing, social marketing expertise, communication design, community engagement capability, trusted messengers, and evaluation capacity. Program designers could draw on the report's perceived value findings and conduct further formative research where needed to understand how different consumer groups interpret EV value in their own contexts.

Practical resources would include plain-language communication materials, total cost of ownership tools, myth-response resources, EV owner stories, video case studies, test-drive programs, roadshow materials, community event resources, workplace trial materials, and targeted campaign assets for different consumer groups. Resources could also support accessible, multilingual and culturally appropriate materials where relevant.

Partnerships would be required between governments, energy providers, automotive stakeholders, motoring organisations, charging providers, local councils, employers, community organisations, public health organisations, schools, consumer advocates and research partners. Independent evaluation can assess whether value-based communication improves EV knowledge, confidence, perceived relevance, trust, purchase consideration, trial behaviour and uptake.



Lead actors, partners and beneficiaries

Lead responsibility: Governments, automotive stakeholders, energy providers, motoring organisations and public engagement agencies could lead this recommendation because they shape how EV value is communicated, demonstrated and made credible. Behavioural science and social marketing specialists can support the development, testing and evaluation of segmented value propositions.

Key delivery partners: Delivery partners include local governments, employers, fleet managers, dealerships, charging providers, community organisations, public health stakeholders, schools, consumer advocates, EV owners and media/communication specialists.

Priority beneficiaries: Priority audiences include consumers who do not yet perceive EVs as practical, affordable, enjoyable, socially relevant or compatible with their lives. Tailored value propositions could be developed for families with children, lower-income households, renters, apartment dwellers, regional and rural consumers, older consumers, younger consumers, fleet users, second-hand vehicle buyers and consumers who are interested but uncertain.



Value benefit

The value benefit of this recommendation is that it can make EV adoption more meaningful, relevant and credible for different consumers. For consumers, multi-dimensional value propositions can clarify what EVs may offer in everyday life, including lower operating costs, convenience, comfort, safety, enjoyment, cleaner air, quieter streets, social approval, community contribution and future security. For families and households, value-based communication can reposition EVs as more than a vehicle technology. For example, messages focused on health, safety and future security can help younger households with children see EVs as part of protecting family wellbeing and contributing to cleaner neighbourhoods, rather than only as an expensive or unfamiliar product.

For governments and industry, promoting multi-dimensional value can improve the effectiveness of EV programs by aligning communication and support with the actual drivers of adoption. It can also help move EVs from early adopter markets into mainstream consideration by making benefits concrete, emotionally resonant and socially relevant.

For communities, this approach can help normalise EVs by showing how they contribute to shared outcomes such as cleaner local environments, reduced noise, improved mobility options and participation in a broader clean energy transition. For the broader transition, promoting the full perceived value of EVs can strengthen adoption readiness while ensuring that value propositions are not limited to groups already persuaded by cost savings or environmental benefits.

Recommendation 3:

Address equity and inclusion in the EV transition

Recommendation 3 at a glance

WHY

EV uptake is currently easier for households with higher income, home ownership, off-street parking, home charging and access to household energy technologies. Without targeted support, lower-income households, renters, apartment dwellers, regional and rural communities, people with disability, older people and used-car buyers risk being delayed or excluded from EV transition benefits.

PRIORITY ACTIONS

Review incentives and infrastructure plans through an equity lens; support renters, apartment dwellers and social housing residents; develop targeted finance and second-hand EV supports; expand community and public charging in underserved locations; and embed equity metrics into EV policy evaluation.

LEAD ACTORS

Relevant Commonwealth, state and territory transport, energy, housing, social policy, regional development and consumer protection agencies, working with local governments, market actors, consumer and community organisations, and independent research partners.

Aims and rationale

The aim of this recommendation is to ensure that the transition to electric vehicles is inclusive, equitable and just, rather than primarily benefiting households that already have the financial, housing, technological and energy-system advantages needed to participate. The findings from this study show that EV adoption is currently easier for higher-income, owner-occupier and energy-engaged households, particularly those with access to off-street parking, home charging, solar PV, batteries, financial capability and the ability to absorb high upfront purchase costs. In contrast, lower-income households, renters, apartment dwellers, people in regional and rural areas, consumers with limited access to trusted information and those reliant on the second-hand vehicle market face greater barriers to participation. This recommendation is grounded in the project findings showing that affordability, housing tenure, charging access, income, reliance on the second-hand vehicle market and access to household energy technologies shape who can realistically participate in the EV transition.

Addressing equity requires more than generalised affordability measures or the assumption that market maturation will eventually solve access issues. As EV markets mature, some broad-based purchase incentives may become less appropriate or less efficient. However, from a behaviour change and equity perspective, this does not mean support should necessarily disappear. Instead, support may need to become more targeted towards consumers and places facing the greatest barriers, including lower-income households, renters, apartment dwellers, regional and rural communities, and those reliant on the second-hand vehicle market.

The findings show that opportunities to participate in and benefit from the EV transition are unevenly shaped by income, housing and tenure, charging access, geography, mobility needs, household energy technologies and other intersecting circumstances. This provides an empirical basis for considering equity not only in terms of affordability, but also in terms of how access, participation, benefits, costs and decision-making power are distributed across households, communities and places. This framing builds on energy-justice research showing that energy inequity is experienced through material, spatial, social and embodied conditions, including housing, capabilities and everyday practices (Waitt and Harada, 2019; Gordon et al., 2022).

In this recommendation, equity concerns the fair distribution of opportunities, resources, costs and benefits, while inclusion requires that diverse consumer groups are recognised and can participate meaningfully in shaping the transition. These aims can be considered through four connected dimensions of justice: recognition, procedural, distributive and restorative justice (Jenkins et al., 2016; Heffron, 2022). Recognition justice concerns whether diverse needs, circumstances and lived experiences are acknowledged. Procedural justice concerns meaningful participation in the design, governance and evaluation of EV transition policies and programmes. Distributive justice concerns how transition costs, benefits, risks, infrastructure and opportunities are shared across groups and places. Restorative justice directs attention towards historically underserved communities and the remediation of existing and cumulative disadvantage.

The National Energy Equity Framework (Department of Climate Change, Energy, the Environment and Water, 2025) provides an important reference point for this recommendation. The Framework supports more equitable energy policy and programme design and is intended for use by Commonwealth, state and territory policymakers when developing and reviewing relevant policies, programmes and strategic documents. It was informed by prior independent research to which members of this project team contributed, including research on energy inequity and the distributional effects of energy policies. This recommendation builds on that foundation by applying an equity and justice lens to the intersection of household energy, transport and everyday mobility examined in this project. EV transition participation is shaped simultaneously by vehicle affordability, housing and tenure, charging access, geography, mobility needs, household energy technologies and access to alternative transport options.

The recommendation does not assume that private EV ownership is the preferred or most appropriate mobility outcome for every household or place. Depending on local needs and conditions, equitable transition pathways may include private EVs, shared or community vehicles, public transport, active transport and other low-emissions mobility options. Specific investments and delivery models would require context-specific feasibility, distributional and cost-benefit assessment.

Features and characteristics

Equity can be embedded in EV transition policies, programs and infrastructure planning from the outset, rather than added later as a corrective measure. This could involve explicit equity objectives, targeted supports, inclusive design processes and evaluation of who benefits and who remains excluded. EV policies could be assessed not only in terms of aggregate uptake, emissions reduction or infrastructure delivery, but also in terms of whether they improve access for households and communities facing the highest barriers.

A key feature could be targeted economic support. Options for assessment could include means-tested purchase incentives, low-interest loans, concessional finance, scrappage or trade-in support, second-hand EV purchase assistance, registration discounts, charging credits, targeted support for home or shared charging access, and tailored schemes for renters, lower-income households, regional and rural consumers, culturally and racially marginalised communities, Aboriginal and Torres Strait Islander communities, people with disability, older people and others facing intersecting barriers. The aim would not necessarily be to subsidise all EV purchases equally, but to direct support where it is most needed to overcome structural barriers. The suitability and design of particular measures would depend on feasibility, distributional effects, costs and expected benefits.

Equity-oriented policy could also support the development of an affordable and trustworthy second-hand EV market. Many lower-income households do not buy new vehicles and are therefore unlikely to benefit directly from incentives that primarily support new EV purchase. Measures could include support for battery health certification, consumer protections, warranties, transparent information about battery life and replacement costs, incentives for fleets to release affordable used EVs into the market, and financing models that make second-hand EV purchase less risky.

Charging access could be treated as an equity issue where households have limited control over parking, electrical upgrades or charger installation. Renters, apartment dwellers, social housing residents and households without off-street parking face particular barriers to home charging. Programmes could therefore support charging upgrades in rental properties, social housing, strata-managed buildings, apartment complexes, workplaces and community locations. This may involve assessment of relevant regulatory settings, landlord and strata incentives, public charging investment in underserved areas, kerbside charging, community charging hubs and clearer responsibilities for installation, maintenance and cost-sharing.

Recognition and procedural justice could be incorporated into programme design. Communities most affected by affordability, housing, mobility and infrastructure barriers could be involved in shaping policies and programs, not merely targeted by them after decisions are made. This includes engagement with renters, apartment dwellers, regional and rural communities, low-income households, culturally diverse communities, Aboriginal and Torres Strait Islander communities, disability advocates, older people, young people, social housing providers and community organisations. Engagement could be designed to be culturally safe, accessible, practical and adequately resourced.

Restorative justice can guide investment in places and groups that have historically been underserved by transport and energy infrastructure. Regional, rural and outer-suburban communities that are highly car-dependent may require deliberate policy and infrastructure attention where commercial charging investment is slower, less certain or insufficient to meet community need. Similarly, low-income renters and social housing residents should not be excluded from EV and clean energy benefits because they lack property ownership or control over dwelling upgrades.

Finally, equity evaluation can be embedded into all EV transition programs. Evaluation could track who receives incentives, who uses charging infrastructure, who benefits from cost savings, who is shifting toward EV adoption, and who remains excluded. This could include monitoring distributional outcomes across income, housing tenure, geography, disability, age, cultural background and other relevant factors, while avoiding deficit framing or stigmatising language.

Priority actions for equitable EV uptake

- Review existing EV incentives and infrastructure programmes to identify who benefits and who remains excluded.
- Develop targeted finance, rebates, charging credits or low-interest loans for lower-income households and used-car buyers.
- Support charging upgrades in rental housing, social housing, strata buildings, apartment complexes, workplaces and community locations.
- Build consumer protections for the second-hand EV market, including battery health information, warranties and transparent resale guidance.
- Assess and pilot community charging, shared EVs, public and active transport connections, and other mobility alternatives in places where private EV ownership is less feasible.
- Track equity outcomes across income, housing tenure, geography, disability, age, cultural background and access to charging.

Timing

This recommendation could commence early and continue throughout the EV transition. Equity considerations could be built into the design of EV transition policies, infrastructure programs and behaviour change interventions from the outset, rather than addressed only once inequitable outcomes become visible. Quick wins could include equity screening of existing programmes, clearer eligibility information, targeted charging pilots in rental or apartment settings and second-hand EV consumer guidance.

Initial activity could identify groups and locations most at risk of exclusion, reviewing existing incentives and infrastructure programs through an equity lens and designing targeted pilot programs. Piloting and evaluation could then examine targeted supports, strengthening the second-hand EV market, improving charging access for renters and apartment dwellers, and embedding equity metrics into program evaluation. Effective and equitable approaches could subsequently be scaled and incorporated into ongoing policy, infrastructure and programme evaluation as EVs become more integrated with household and community energy systems.

Resources required

Resources do not need to be limited to new funding programmes. Some actions could begin through equity reviews of existing incentives, infrastructure programmes, housing policies, social housing upgrades, charging investments and consumer protection settings. Relevant resources could include dedicated equity-focused funding, policy and regulatory support, program design expertise, social and behavioural science capability, community engagement resources, and evaluation infrastructure. Governments could consider allocating funding specifically for equity-oriented EV transition measures rather than relying solely on general market incentives or infrastructure investment.

Policy resources would be needed to review relevant settings, and where justified, develop reforms affecting rental properties, strata buildings, social housing, public charging access, vehicle incentives, second-hand EV market protections and shared mobility models. Financial resources could support targeted subsidies, concessional finance, charging support, community transport models, and support for lower-income and underserved households.

Partnerships could involve federal, state and local governments, energy agencies, transport agencies, housing departments, social housing providers, strata bodies, rental sector organisations, consumer advocates, disability organisations, culturally diverse community organisations, Aboriginal and Torres Strait Islander organisations, motoring organisations, automotive stakeholders, energy providers and researchers.

Research and evaluation resources would also be important to assess whether equity-oriented supports are reaching intended groups and producing meaningful outcomes. This includes data systems that can track distributional impacts while protecting privacy and ensuring that equity data is used constructively.

Lead actors, partners and beneficiaries

Lead responsibility: Implementation could involve relevant Commonwealth, state and territory transport, energy, housing, social policy, regional development and consumer protection agencies, working within their respective mandates and with local, market, community and research partners. Market-led provision alone may not address distributional barriers that involve targeted funding, enabling policy, consumer protection and public accountability.

Key delivery partners: Key partners include local governments, social housing providers, rental and strata bodies, electricity networks, charging providers, automotive and finance sector actors, consumer advocates, disability organisations, culturally diverse community organisations, Aboriginal and Torres Strait Islander organisations, and independent equity and evaluation researchers.

Priority beneficiaries: This recommendation is particularly relevant to lower-income households, renters, apartment dwellers, social housing residents, regional and rural communities, people without off-street parking, people relying on the second-hand vehicle market, people with disability, older people, young people, and communities historically underserved by transport and energy infrastructure.

Value benefit

The value benefit of this recommendation is that it can help ensure the EV transition does not reproduce or deepen existing social, economic, housing, transport and energy inequalities. For consumers, equity-oriented support can reduce upfront costs, improve access to charging, increase confidence, expand mobility options and make EV-related benefits more achievable for households that would otherwise be excluded.

For governments and industry, addressing equity can improve the legitimacy, effectiveness and public acceptability of the EV transition. Policies that are perceived as primarily benefiting early adopters or already advantaged households risk undermining trust and slowing broader adoption. By contrast, targeted supports could help broaden participation, improve uptake among mainstream and underserved consumers, and ensure that public investment delivers wider social value.

For communities, equity-oriented EV transition programs could improve access to lower-emissions and potentially more affordable mobility options appropriate to local needs, while supporting broader energy transition goals. This includes reducing the risk that lower-income households remain locked into older, higher-cost internal combustion engine vehicles while higher-income households benefit from lower EV running costs, home charging, solar integration and emerging energy technologies.

For the broader transition, applying recognition, procedural, distributive and restorative justice to EV policy and programme design could support a transition that is not only faster, but fairer. This positions equity and inclusion as central dimensions of transition success rather than secondary considerations.

Recommendation 4:

Develop business models and market supports that reduce friction across the EV journey

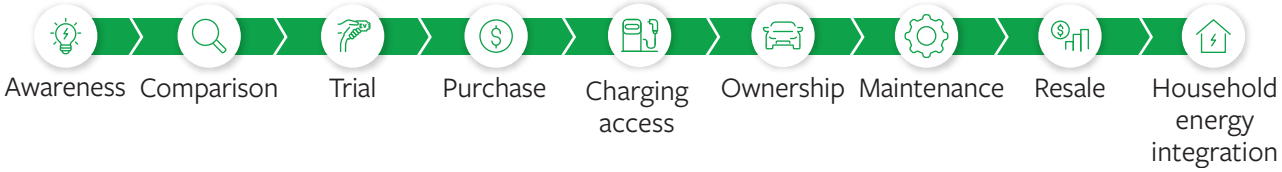
Recommendation 4 at a glance

WHY
EV uptake is constrained by fragmented information, limited model choice, charging complexity, second-hand EV uncertainty, finance constraints and unclear links between EVs and household energy systems.

PRIORITY ACTIONS
Investigate policy and market levers supporting model diversity; improve charging accessibility, signage and payment interoperability; strengthen second-hand EV confidence; test alternative access models; and improve the transparency and consumer value of EV-energy, HEMS, smart-charging and network-aware charging offers.

LEAD ACTORS
Automotive manufacturers and importers, dealerships, fleet and mobility providers, charge-point operators, charging infrastructure providers, energy retailers, electricity networks, finance and insurance providers, technology providers, consumer-protection bodies and relevant government agencies.

THE EV JOURNEY



Aims and rationale

The aim of this recommendation is to develop business models, market supports and service systems that make EV uptake easier, more affordable, more visible and less complex for Australian consumers. The findings show that EV adoption is constrained not only by purchase price and charging infrastructure, but also by fragmented information, limited model choice, inconsistent consumer experiences, unfamiliar charging systems, concerns about second-hand EVs, and uncertainty about whether EVs fit everyday household routines and Australian driving practices. Consumers are more likely to consider EVs when they see them as practical, reliable, affordable, easy to use and compatible with everyday life. This whole-of-journey perspective is consistent with marketing research showing that consumer experience develops across multiple touchpoints involving firms, partners and wider social environments (Lemon and Verhoef, 2016).

This recommendation responds to findings that consumers face friction across the EV journey, including purchase price, model availability, charging visibility, payment complexity, public charging confidence, second-hand market uncertainty, battery replacement concerns, household energy integration and trust in market actors. The recommendation therefore identifies opportunities for relevant market actors to reduce avoidable consumer friction across awareness, comparison, trial, purchase and finance, charging, ownership and use, maintenance, resale and household-energy integration. Not all consumer effort necessarily needs to be eliminated. The focus is on removing friction that creates frustration, confusion or unjustified barriers, while retaining opportunities for informed deliberation and value creation (Padigar et al., 2025).

Suitable business models and service arrangements could therefore contribute to a more accessible and consumer-centred transition. They could also include shared EV access, community vehicles, car sharing, fleet-to-household pathways, affordable leasing, second-hand EV supports, bundled energy and mobility offers, consumer-centred HEMS and smart charging services, improved charging systems, nationally recognisable charging signage and branding, and simpler digital platforms for locating, accessing and paying for charging. The emphasis on coordinated action across market actors, services, policy settings and consumer environments is also consistent with systems-thinking approaches to complex behavioural, social and environmental change (Domegan et al., 2016; French and Gordon, 2020).

Features and characteristics

Market actors can review where products, services and customer journeys create practical, financial or psychological barriers, and where changes could improve consumer value, confidence and access. These supports can be grouped into six practical areas: model choice and suitability, affordable access, second-hand EV market confidence, charging simplicity, EV-home energy integration, and network-aware charging. Together, these areas cover the full consumer journey from awareness and comparison through to trial, purchase, charging, ownership, maintenance, resale and household energy integration.

Priority actions to reduce consumer friction

- Governments could investigate policy and market levers to encourage manufacturers and importers to supply a wider range of EV models across different price points, accessibility needs, household circumstances and travel patterns.
- Automotive, finance and consumer-protection actors could improve confidence in second-hand EVs through battery-health information and certification, warranties, transparent resale guidance and appropriate finance options.
- Charge-point operators, roaming providers and relevant regulators could simplify public charging through clearer signage, open and interoperable payment systems, transparent pricing and real-time charger information.
- Mobility providers, fleet operators, employers and community organisations could develop and test affordable access models beyond private new-EV purchase, including car sharing, community EVs, subscriptions, workplace access and fleet-to-household pathways, with governments considering targeted support where market provision does not meet identified community needs.
- Energy retailers, technology providers and consumer-protection bodies could improve the transparency and consumer value of EV-home energy bundles involving solar, batteries, HEMS, smart charging, tariffs and V2G readiness.
- Energy retailers, aggregators and electricity networks could review and refine existing network-aware charging offers around household value, consumer control, transparency and fair rewards, alongside grid needs.
- Consumer-protection agencies, independent consumer organisations and relevant ombudsman services could review and strengthen existing advice, comparison tools and complaint pathways covering EV finance, charging, warranties, insurance, tariffs, HEMS and smart-charging offers.

A first priority is model choice and suitability. Consumers need access to EVs that suit different household budgets, family sizes, accessibility needs, regional travel patterns, towing needs and everyday mobility practices. Wider model choice could include smaller affordable vehicles, family vehicles, accessible vehicles, commercial vehicles, utility vehicles and second-hand options. Market

availability will depend on commercial supply decisions and consumer demand, while purchase decisions will also reflect emotional and social value, identity, design, performance, familiarity and optional features, alongside practical considerations. Manufacturers, importers, dealers and independent consumer-information providers could support decision-making through clear information about running costs, battery warranties, servicing, insurance and suitability for different uses.

A second area for market development is affordable access beyond private new-EV purchase. Depending on local demand, consumer needs and commercial viability, mobility providers, fleet operators, employers, housing providers and community organisations could test car sharing, subscription models, community EVs, shared vehicles in apartment buildings, workplace access, social-housing fleet models and targeted leasing or finance arrangements. Public support could be considered where options appraisal identifies a clear market or equity gap not addressed through existing commercial provision. These options could provide direct EV experience, reduce upfront cost barriers and create pathways for consumers who are not yet ready or able to purchase.

A third priority is second-hand EV market confidence. Potential contributions from manufacturers, fleets, used-vehicle businesses, finance and insurance providers, independent inspection services and consumer-protection agencies could include battery health certification, standardised battery condition reporting, warranties, consumer protections, transparent resale information, fleet release strategies and financing options for used EVs. These measures could help reduce perceived risk and make EV uptake more feasible for budget-constrained households.

A fourth priority is visible and simple public charging. The charging environment can be difficult for consumers to recognise and navigate, especially for those who are new to EVs or uncertain about charging. Relevant transport agencies, road authorities, charge-point operators and standards bodies could investigate a more consistent and recognisable EV-charging symbol and signage system that is visible, intuitive and easy to recognise from the road, car parks, shopping centres, workplaces, petrol stations, public destinations and regional travel routes. Charge-point operators, roaming providers and relevant regulatory bodies could review opportunities to improve payment interoperability, price transparency and reliable information about charger availability, speed and cost.

A fifth priority is EV-home energy integration. EVs increasingly sit at the intersection of transport and household energy systems. Business models could bundle EVs with home charging, solar PV, batteries, smart charging, tariffs, HEMS, public charging credits or V2G readiness. The consumer value and equity implications of bundled offers could be assessed in relation to transparency, affordability, accessibility, data use and consumer control, particularly because renters, apartment dwellers and lower-income households may not have access to the same benefits as higher-income owner-occupiers. The findings show that solar, batteries and HEMS are associated with greater EV readiness and interest, but also that renters, apartment dwellers and lower-income households may be excluded from these advantages.

A sixth priority is consumer-centred HEMS, smart charging and network-aware charging. Business models and the marketing of these technologies could make the links between EVs, household energy use, solar PV, batteries, tariffs and grid management easier for consumers to understand and act on. The study found that awareness of HEMS was low, even among some consumers with relatively high financial and energy literacy, and that many participants were uncertain about how these systems worked or what benefits they would provide. Market testing could examine how HEMS, smart-charging and network-aware offers communicate and deliver tangible household value, including reducing electricity costs, monitoring energy use, automating charging where appropriate, improving energy resilience and enabling fair participation in future energy services.

Network-aware charging models could be designed around consumer value, not only network needs. As EV uptake increases, charging patterns will become increasingly important for electricity demand, local network management and infrastructure planning. Market supports could include consumer-

friendly smart charging offers, time-of-use or dynamic tariff trials, managed charging programmes, workplace and destination charging models, and incentives for charging in ways that reduce pressure on the grid. Consumer-facing offers could clearly communicate costs, benefits, data arrangements, control settings and opt-out provisions. The project findings indicate that complexity, perceived loss of control, surveillance concerns and insufficient household value may discourage participation.

Fleet, referral and public demonstration pathways can also support market development. Fleet electrification could help normalise EV technologies, create more direct exposure to EVs and support future second-hand supply pathways, alongside its emissions-reduction role. Referral and advocacy programmes supported by original equipment manufacturers, dealerships, motoring organisations and fleet providers could draw on existing EV owners' lived experience and peer influence. Evaluation of these schemes could examine their transparency, reach and distributional effects, including whether benefits extend beyond already advantaged early adopters.

A further priority is stronger independent consumer guidance and protection across the EV journey. As EVs become linked to finance, charging subscriptions, batteries, warranties, insurance, tariffs, solar, HEMS and smart charging, consumers may increasingly require accessible, clear and easy to use comparison tools, trusted advice, complaint pathways and safeguards against poor-value, misleading or unfair offers.

Overall, this recommendation focuses on how market actors could reduce consumer friction across EV purchase, use, charging and household energy integration. It recognises that decisions about products, services and business models primarily sit with manufacturers, importers, retailers, energy providers, networks and mobility providers. Government and regulatory actors could support market development where appropriate through enabling policy, standards, interoperability, consumer protection, targeted incentives and responses to identified market or equity gaps.

Timing

Elements of this recommendation could commence alongside ongoing infrastructure, market and policy development. Existing initiatives involving charging, payment systems, consumer information, battery-health reporting and network-aware charging could first be reviewed to identify gaps in coverage, awareness, interoperability, consumer confidence and equity. Initial activity could address visible friction in charging signage, payment, pricing, information and second-hand EV confidence.

Piloting and evaluation could subsequently examine alternative access models, fleet-to-consumer pathways, battery-health reporting, HEMS, smart charging and network-aware offers. Approaches demonstrating consumer value, commercial or operational viability and equitable outcomes could then be refined, scaled and integrated across vehicle, charging, finance, energy and resale markets.

Resources required

Potential resources could include industry investment, policy and regulatory capability, consumer protection capability, charging interoperability standards, digital platform development, technical integration expertise, behavioural and consumer research, and independent evaluation capacity. The required mix of resources and responsibility would vary by intervention, market and actor. Resources could focus on reducing friction across the EV journey, including model choice, second-hand EV confidence, charging visibility, payment simplicity, affordable access models, EV-home energy integration, HEMS, smart charging and network-aware charging.

Practical resources could include market pilots, shared EV trials, signage improvements, open payment systems, second-hand EV certification tools, consumer information resources, HEMS and smart charging pilots, tariff trials, and evaluation of consumer trust, household value, equity impacts and network outcomes. Delivery could involve collaboration among automotive, charging, energy, finance, insurance, technology, government, network and consumer advocacy stakeholders.

Independent evaluation could be built into these pilots to assess whether new business models and market supports improve consumer confidence, reduce complexity, support equitable access and make EV uptake more practical for mainstream and underserved households.

Lead actors, partners and beneficiaries

Lead responsibility: Primary responsibility for commercial products, services and business models sits with automotive, charging, energy, finance, technology and mobility market actors. Government and regulatory involvement could focus on enabling policy, standards, interoperability, consumer protection, data governance, targeted incentives and identified market or equity gaps.

Key delivery partners: Key partners include vehicle manufacturers, dealerships, fleet operators, leasing providers, second-hand vehicle market actors, insurers, financiers, charging infrastructure providers, electricity retailers, electricity distribution networks, HEMS and smart charging providers, motoring organisations, public transport agencies, local governments and consumer research partners.

Priority beneficiaries: This recommendation is particularly relevant to consumers deterred by cost, limited model choice, charging complexity, uncertainty about second-hand EVs, lack of direct experience, or uncertainty about how EVs connect with household energy systems. It could also support renters, apartment dwellers, regional and rural consumers, public charging users, second-hand vehicle buyers, and consumers who may benefit from HEMS, smart charging, shared mobility or community-level energy solutions.

Value benefit

The value benefit of this recommendation is that it can make the EV transition more practical, accessible and consumer friendly. For consumers, better business models and market supports could reduce complexity, improve affordability, increase confidence, simplify charging, expand access to direct EV experience, and make EVs feel like a realistic option rather than a difficult or risky purchase.

For industry, these supports could grow the EV market by addressing barriers that currently limit demand. Improved choice of vehicle models, trusted second-hand markets, simpler charging experiences, shared access models, HEMS-enabled offers and consumer-centred smart charging services could broaden the customer base beyond early adopters and higher-income households.

For energy and technology stakeholders, HEMS and smart charging business models provide a pathway to connect EV uptake with broader household and grid energy management. Consumer participation is likely to depend on a practical and household-centred value proposition involving understandable costs and benefits, convenient charging, meaningful control and fair rewards. If designed well, HEMS-enabled EV models could help translate EV adoption from a vehicle purchase decision into part of a more integrated household energy transition. If designed poorly, however, they risk reinforcing concerns about complexity, cost, control and trust.

For electricity networks, consumer-centred charging arrangements could support better demand forecasting, more efficient infrastructure planning and reduced peak load pressures while maintaining consumer trust and convenience. For consumers, network-aware charging offers could create value through lower charging costs, simpler charging management, improved energy resilience and fair rewards for flexibility. For the broader transition, aligning EV uptake with network planning could reduce the risk that charging demand becomes a constraint on adoption.

For governments, enabling market supports could increase the effectiveness of public investment in EV policy and infrastructure. Where consumers cannot easily find chargers, understand costs, access suitable models, trust second-hand vehicles, navigate charging platforms, or see the household energy benefits of EVs, then infrastructure and incentive programs will not achieve their full potential.

Where justified by identified market, consumer-protection or equity gaps, enabling and market-shaping measures could support stronger uptake, public value and more equitable outcomes. Their effects would need to be assessed through piloting and evaluation. For the broader transition, this recommendation can help normalise EVs, reduce consumer friction, support more inclusive access and create clearer pathways from early adoption to mainstream uptake. It also recognises that successful EV transition requires not only more vehicles and chargers, but better systems of access, service, information, finance, consumer support and energy integration.

Recommendation 5:

Develop community-led EV transition interventions

Recommendation 5 at a glance

WHY

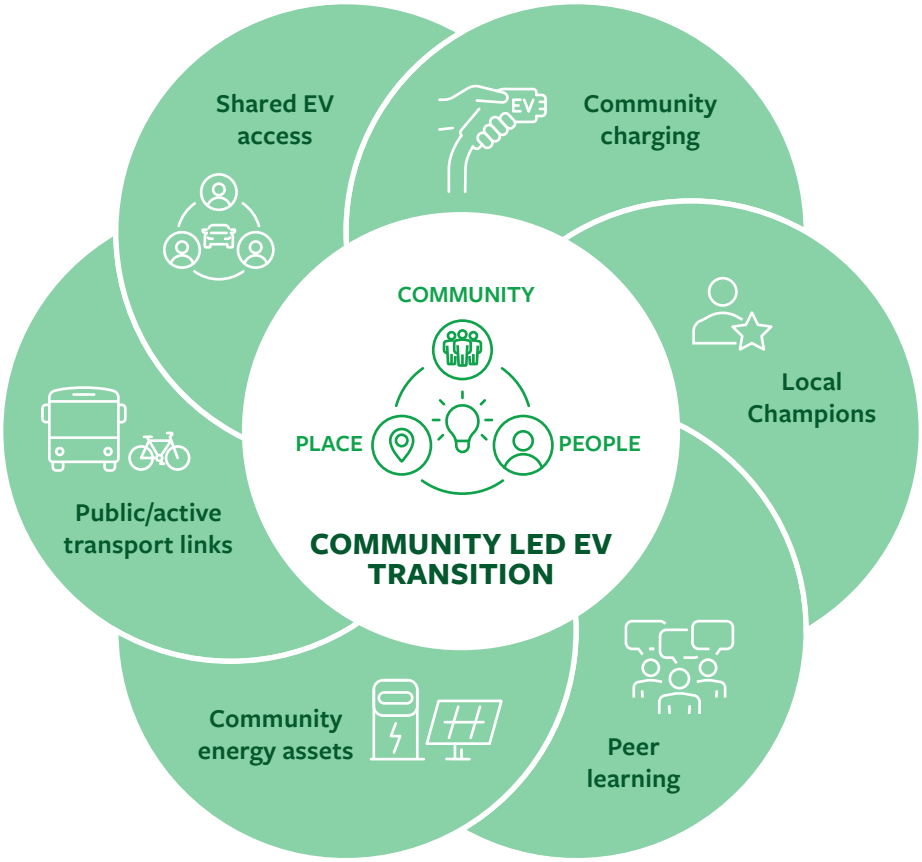
Direct experience, social norms, local trust and place-based infrastructure influence whether EVs feel practical, normal and relevant. Community-led interventions can help reach consumers who are not well served by generic information campaigns, market-led adoption or home-charging assumptions.

PRIORITY ACTIONS

Assess and pilot shared or community EV models where consultation identifies affordability, charging, accessibility or mobility gaps not adequately met by existing services. Options could include electrifying existing community or shared fleets, or developing new models where required, with charging access, vehicle availability, range requirements, booking, maintenance and operating responsibility addressed in the pilot design.

LEAD ACTORS

Local governments, state transport and energy agencies, social housing providers, regional development bodies and community infrastructure programme funders.



Aims and rationale

The aim of this recommendation is to support community-led and place-based EV transition interventions that are designed with, and delivered through, local communities. The findings show that EV uptake is shaped by social norms, collective efficacy, direct EV experience, trust, local infrastructure, household circumstances and place-based constraints. Consumers often learn about EVs through family, friends, colleagues, local networks and lived experience, and direct exposure to EVs can help shift perceptions of practicality, comfort, cost, charging and suitability.

This recommendation responds to the finding that many barriers to EV uptake are not only individual. Renters, apartment dwellers, lower-income households, regional and rural communities, people without off-street parking and consumers with limited access to trusted information may not be well served by policies or market offers that assume private home ownership, private charging, high upfront purchasing capacity or individual initiative. Community-led approaches can create shared and locally relevant pathways into the transition through trusted relationships, shared assets, peer learning, local demonstrations and place-based charging or mobility solutions.

Community-led interventions need not be understood only as programmes to encourage private EV ownership. They can also support shared EV access, community charging, community solar and batteries, local mobility hubs, public and active transport links, and partnerships with councils, housing providers, community organisations and local intermediaries. The purpose is to create more inclusive mobility and energy transition pathways that reflect local needs, assets and constraints.

Features and characteristics

Community-led EV transition interventions could be place-based and designed around the specific needs, constraints and opportunities of different communities. EV uptake will look different in dense urban areas, outer-suburban communities, regional towns, rural areas, apartment complexes, social housing communities, culturally diverse communities and places with limited public transport. Programmes could begin with local engagement to understand mobility patterns, charging needs, household constraints, trust relationships and existing community assets.

Priority actions for community-led EV transition

- Assess and pilot shared or community EV models where consultation identifies affordability, charging, accessibility or mobility gaps not adequately met by existing services, including the potential electrification of existing community and shared fleets.
- Develop community charging hubs, kerbside charging, social housing charging, workplace charging and destination charging in underserved locations.
- Use local champions, EV owners, community organisations, councils, mechanics, electricians and energy groups as trusted intermediaries.
- Run ride-and-drive events, charger demonstrations, second-hand EV workshops and practical information sessions.
- Link EV transition activity with community energy assets, public transport, active transport and shared mobility options.
- Co-design local interventions with residents and evaluate outcomes beyond vehicle uptake, including trust, mobility access, charging confidence and perceived value.
- These interventions could build not only EV visibility, but also social approval, using trusted local messengers, peer endorsement and lived experience to make EV adoption feel credible, supported and normal.

A first priority is shared and community EV access. Community EV models could include shared ownership or subscription models, sponsorship by local businesses or government, and subsidies to help offset costs such as insurance and registration. Depending on community needs and existing service provision, these models could be owned or operated by commercial car-share providers, fleet or leasing providers, councils, housing providers, community organisations or partnerships between these actors. Vehicles could be located at community centres, libraries, council facilities, apartment buildings, social housing sites, workplaces, schools, health services or regional mobility hubs. Pilot design would need to allocate responsibility for insurance, registration, charging, booking, maintenance, liability and vehicle replacement. Where suitable shared services already exist, partnerships or electrification of those services may be preferable to creating duplicate provision. These models could provide direct EV experience, reduce the need for private ownership, support people who cannot afford a vehicle and help communities test whether EVs meet local travel needs.

A second priority is community charging infrastructure. Community charging hubs, kerbside charging, shared chargers in apartment buildings, workplace chargers, social housing chargers and charging at local destinations can help address the limitations of home charging. These assets could be visible, easy to access, safe, reliable and supported by clear information about cost, charging speed and availability.

A third priority is peer learning and trusted local messengers. Community-led interventions could draw on trusted local people and organisations, including EV owners, councils, community organisations, local businesses, mechanics, electricians, schools and community energy groups. These actors can translate EV information into practical local knowledge about charging, running costs, trip patterns, vehicle suitability and what consumers wish they had known before adopting.

A fourth priority is demonstration and trial opportunities. Test-drive days, EV open days, ride-and-drive events, charger demonstrations, second-hand EV workshops, community battery demonstrations and sessions on EV costs, charging, solar, HEMS and smart charging can help reduce uncertainty. These activities could prioritise communities with low EV exposure and limited access to trusted information, including regional, rural, outer-suburban, lower-income and rental communities.

A fifth priority is co-design, governance and evaluation. Local residents, community organisations, councils, service providers and relevant market actors could be involved from the outset in identifying needs, assessing existing provision, designing solutions, determining where assets are located, establishing access rules and allocating operational responsibilities. Co-design could also identify and test the financial and non-financial incentives needed to support participation, such as seed funding, reduced user costs, charging access, staff or volunteer coordination, organisational sponsorship and demonstrated mobility or community benefits. Evaluation could assess not only EV uptake, but also mobility access, reduced transport costs, charging confidence, trust, direct EV experience, misinformation exposure, community energy participation and perceived value, together with service utilisation, accessibility, operational viability and the distribution of benefits.

Timing

This recommendation can be treated as a high priority, particularly in communities at risk of being left behind by market-led EV adoption. Short-term action could focus on identifying suitable pilot communities, mapping existing community assets, engaging local stakeholders and co-designing practical interventions.

Initial demonstration activities could build direct experience through ride-and-drive events, charger demonstrations and trusted local information. Separate community mobility or charging pilots could address identified service gaps, subject to feasibility assessment and clear ownership, funding, maintenance and risk arrangements for vehicle and infrastructure assets.

Medium-term action could focus on the provision of community assets through shared EV schemes, community charging hubs, local demonstration programmes, community energy integration and public or active transport connections. This may include allowing distributors to also provide kerbside charging infrastructure under the existing regulated framework which could see faster deployment, lower costs, universal and competitive access, and an increase in customer confidence to purchase an EV.

This may improve equity and access as EV chargers would be rolled out across a network, rather than just focusing on areas that are most profitable – ensuring that no community is left behind. Longer-term action can focus on scaling successful models, embedding them into local transport and energy planning, and ensuring that community assets are maintained, funded and governed sustainably.

Resources required

Resources would include local engagement capability, community co-design expertise, vehicles, charging infrastructure, community energy infrastructure where relevant, technical support, operations and maintenance funding, insurance, booking systems, user support and evaluation capacity. These resources do not need to begin as large-scale programmes. Initial activity could start through pilots in priority locations, using existing council facilities, community centres, libraries, social housing sites, workplaces or regional mobility hubs.

Delivery would require collaboration between local governments, state and federal governments, community organisations, energy providers, electricity networks, charging providers, community energy groups, social housing providers, strata bodies, public and community transport providers, car-share operators, schools, libraries, local businesses, insurers, automotive stakeholders and research partners.

Independent research and evaluation support would be valuable in designing pilots, documenting implementation lessons, assessing community outcomes and identifying which models are most effective, scalable and equitable.

Lead actors, partners and beneficiaries

Lead responsibility: Local governments, regional authorities and community organisations could lead this recommendation because community-led interventions require place-based knowledge, local trust, local assets and ongoing community governance. State and federal governments could support these actors through funding, enabling policy and infrastructure programs.

Key delivery partners: Delivery partners include electricity networks, energy retailers, community energy groups, charging providers, social housing providers, strata bodies, public and community transport providers, car-share operators, schools, libraries, local businesses, automotive stakeholders, insurers and community development researchers.

Priority beneficiaries: Priority communities include renters, apartment dwellers, lower-income households, regional and rural communities, outer-suburban communities, people without off-street parking, people with limited access to public transport, social housing residents, and communities with limited direct EV exposure or low trust in market-led transition pathways.

Value benefit

The value benefit of this recommendation is that it can create more inclusive and locally relevant pathways into the EV transition. For consumers, community-led interventions can reduce the need for individual ownership, provide direct experience with EVs, improve access to charging, reduce uncertainty, and build trust through local relationships and shared assets.

For communities, shared EVs, community charging, community solar, batteries and local mobility options can create collective benefits rather than concentrating EV transition advantages among households that already have high incomes, home ownership, solar PV, batteries and private parking. Community-led models can also support local resilience, reduce transport disadvantage, and strengthen participation in the clean energy transition.

For governments and industry, community-led interventions could test whether targeted funding, commercial partnerships, use of existing community assets and locally designed delivery models address mobility and charging gaps not met by generic information, vehicle sales or home-charging provision. Pilots could specify how costs, ownership, insurance, maintenance and operational responsibilities are shared, while generating evidence to inform subsequent policy, investment and service design (French and Gordon, 2020).

For the broader EV transition, this approach can help normalise EVs through visible, local and practical experience. It also ensures that the transition is not limited to private vehicle purchase, but includes shared mobility, public and active transport, community energy assets and collective forms of participation. This can make the EV transition more equitable, trusted and socially embedded.

Recommendation 6:

Counter EV misinformation and build trusted information pathways

Recommendation 6 at a glance

WHY

EV misinformation is an active barrier to informed consumer decision-making and can undermine trust, confidence and perceived value. It is not only an information deficit. EV misinformation can become socially meaningful through shared narratives, networked validation, reassurance, distrust of institutions, car culture, identity and fear of change. Effective responses therefore need to go beyond fact sheets and include trusted messengers, direct experience, pre-bunking, peer learning, practical demonstrations, socio-cultural engagement and ongoing evaluation.

PRIORITY ACTIONS

Map misinformation narratives and the social networks through which they circulate; distinguish genuine concerns from misinformation and disinformation; identify trusted messengers; audit existing EV information resources and improve their awareness, reach, accessibility and perceived trustworthiness; pilot pre-bunking and peer-learning interventions; pair information with direct EV experience; and evaluate effects on misinformation endorsement, objective knowledge, source trust, confidence, perceived value and purchase consideration.

LEAD ACTORS

Federal and state transport, energy and consumer information agencies, driver licensing authorities, motoring organisations, consumer protection agencies and independent consumer information providers.

Aims and rationale

The aim of this recommendation is to actively counter EV misinformation while building trusted pathways that help consumers make informed decisions about EV uptake and use. The findings show that misinformation is a real barrier in the EV transition, shaping perceptions of EV safety, reliability, cost, battery life, environmental impacts, charging, range and suitability for Australian conditions.

However, misinformation is not simply a knowledge deficit that can be corrected by publishing more facts. It can interact with distrust, uncertainty, car culture, social identity, limited direct EV experience and the perceived credibility of informal sources such as family, friends, colleagues, media and online communities. Recent Australian research on EV misinformation communities also shows that misinformation can become socially meaningful through shared narratives, networked validation and reassurance, meaning that responses need to address socio-cultural dynamics as well as factual accuracy (McEwen et al., 2026).

This recommendation therefore calls for a multi-component response that combines misinformation mapping, trusted messengers, pre-bunking or inoculation, peer learning, direct EV experience, practical demonstrations, myth-response resources and evaluation. International evidence suggests that misinformation can be reduced through carefully designed interventions, but these effects need to be tested, monitored and connected to broader efforts to build trust, perceived value, familiarity and social norms (Bretter et al., 2025).

Features and characteristics

Counter-misinformation efforts could begin by recognising that EV misinformation is not only a set of inaccurate claims. It can also operate socially, by offering reassurance, shared narratives, peer validation and explanations for uncertainty or resistance to change. Programmes could therefore address both the content of misinformation and the social contexts in which misinformation becomes credible, useful or identity relevant.

Priority actions for actively countering EV misinformation

- Map common EV misinformation narratives and the online and offline networks through which they circulate.
- Distinguish between genuine concerns, uncertainty, misinformation and deliberate disinformation.
- Identify how misinformation provides shared reassurance, validation, identity, resistance to change or symbolic value.
- Audit existing EV information resources to assess their awareness, reach, accessibility, perceived trustworthiness and effectiveness in responding to misinformation; identify gaps and underserved audiences; and co-design and promote improvements through trusted consumer-facing organisations and intermediaries.
- Use and evaluate trusted messengers, including motoring organisations, consumer groups, local councils, mechanics, electricians, EV owners and community organisations, recognising that perceived trust may vary across audiences and contexts.
- Pair information with direct experience, including test drives, ride-and-drive events, charger demonstrations, peer learning and practical workshops.
- Pilot pre-bunking or inoculation materials that explain how misleading EV claims work before people encounter them.
- Evaluate effects on misinformation endorsement, objective knowledge, source trust, confidence, perceived value and purchase consideration, and compare outcomes across audiences, messengers and delivery channels.
- Review and strengthen existing independent consumer advice, comparison tools and complaint pathways covering EVs, charging and household-energy offers.

Programmes can avoid treating all consumer concerns as misinformation. Some consumers may hold incorrect beliefs about EVs, while others may be uncertain, exposed to contradictory claims, or concerned about real issues such as charging reliability, cost, long-distance travel, battery life or second-hand EV quality. Effective responses could respectfully distinguish between genuine barriers, uncertainty, misinformation and deliberate disinformation.

Trusted information pathways can therefore be practical and connected to consumer decision-making. They could cover issues such as total cost of ownership, charging options, public charging reliability, battery life, fire risk, servicing, insurance, environmental impacts, second-hand EV purchase, long-distance travel, towing, accessibility, and links with solar, batteries and home energy management systems. Trusted information pathways could also support consumer advocacy, not only myth correction. Consumers need independent guidance on EV costs, finance, charging subscriptions, warranties, battery health, insurance, tariffs, HEMS, smart charging and where to seek help if offers are confusing, misleading or unfair.

Behaviourally informed counter-misinformation strategies could include pre-bunking, myth-response resources, short videos, peer-led explanation, interactive decision tools, public demonstrations and practical EV experience opportunities. These approaches would not simply tell people that claims

are wrong. They could help consumers recognise misleading techniques, assess evidence, test claims against lived experience, and identify trusted sources.

Trusted messengers are central. The report indicates that people often rely on friends, family, colleagues, EV owners and informal networks for EV information. Peer-to-peer communication, lived experience, local champions, community demonstrations and independent intermediaries may therefore be more credible than top-down government or industry messaging alone.

Programmes can be evaluated. Evaluation could test whether interventions reduce misinformation belief, improve objective knowledge, increase trust in reliable information sources, improve confidence in charging and safety, strengthen perceived value, and increase willingness to consider EVs. Evaluation could also assess whether interventions work differently across consumer groups, including those with high uncertainty, high misinformation exposure, low EV knowledge, low trust, high anxiety or limited direct EV experience.

Timing

This recommendation can be treated as an immediate priority because consumers are already encountering misinformation and conflicting claims about EVs. However, it could be implemented as part of a broader trust, familiarity and value-building strategy, rather than as a standalone information campaign.

Quick wins could include mapping the most common misinformation narratives, identifying trusted messengers, developing plain-language myth-response materials, piloting pre-bunking resources, and embedding EV information into local roadshows, test-drive events and community information sessions.

Short-term actions could include misinformation mapping, trusted information partnerships, and small-scale intervention pilots. Medium-term actions could include scaling effective pre-bunking, peer learning, trusted messenger and direct experience interventions, and testing integration with driver education or public information systems. Longer-term actions could include ongoing misinformation monitoring and evaluation as EV technologies, policies and public debates evolve.

Resources required

Resources required include dedicated research funding, behavioural science and misinformation expertise, communication and social marketing expertise, digital monitoring capability, partnerships with trusted intermediaries, and evaluation capacity. Funding is needed not only for communication materials, but also for formative research, intervention design, pilot testing, ongoing updating and independent evaluation.

Delivery would require partnerships between federal, state and territory governments, transport agencies, energy agencies, motoring organisations, consumer advocacy groups, EV owner groups, charging infrastructure providers, automotive stakeholders, schools, driver education providers, local governments, community organisations, media organisations, universities and behavioural science research centres.

Practical resources would include plain-language and accessible information materials, multilingual and culturally appropriate resources where needed, digital and social media content, interactive tools, training materials for trusted messengers, driver education modules, community workshop materials, and data systems to monitor misinformation exposure and intervention outcomes.

Independent research capability is particularly important because counter-misinformation programs need to be evidence-led and carefully evaluated. Universities and specialist behavioural and social science research centres can contribute by mapping misinformation narratives, identifying

susceptible audiences, designing interventions, testing message approaches, evaluating behavioural outcomes, and providing independent analysis of what works.

Lead actors, partners and beneficiaries

Lead responsibility: Federal and state governments could lead the establishment of trusted EV information systems, but independent research organisations and consumer-facing intermediaries could lead evidence generation, message testing and program evaluation. Driver education and licensing bodies could lead any integration of EV misinformation inoculation into driver education or knowledge testing.

Key delivery partners: Delivery partners could include motoring organisations, consumer advocacy organisations, local governments, schools, TAFEs, libraries, community organisations, EV owner groups, dealerships, charging providers, energy retailers, media organisations, digital communication specialists and behavioural science researchers.

Priority beneficiaries: These include consumers with low objective EV knowledge, lower levels of positive attitudes towards EVs, uncertainty about EV costs or charging, exposure to misinformation through social or media networks, and low trust in government or industry sources. Cautiously Interested, the Undecided Mainstream and Excluded or Resistant are particularly important consumer audiences for tailored counter-misinformation approaches.

Value benefit

The value benefit of this recommendation is that it can improve the quality of consumer decision-making and reduce the influence of misleading claims on EV adoption. For consumers, trusted information pathways can reduce confusion, anxiety and uncertainty, while helping people assess EVs in relation to their own needs, budgets, housing circumstances and travel patterns.

For governments and industry, countering misinformation can improve the effectiveness of EV policies, infrastructure investments and consumer programs. Public investment in incentives, charging infrastructure and EV information may be less effective if misinformation continues to undermine trust, exaggerate risks or distort perceptions of cost, safety, reliability and environmental value. For communities, trusted information and peer-based approaches can help normalise EVs through credible, practical and locally relevant communication. This is particularly important where consumers have limited direct EV experience or where misinformation circulates through informal networks.

For the broader EV transition, counter-misinformation work can help prevent false or misleading claims from becoming entrenched barriers to adoption. It can also strengthen public trust, support more informed debate, and ensure that concerns about EVs are addressed constructively rather than dismissed, polarised or amplified.

11.7 Potential contributions of key stakeholder groups

The six recommendations presented in this report identify system-wide priorities for accelerating a more effective, equitable and consumer-centred EV transition. However, different stakeholders have different levers for action. Table 4 translates the recommendations into potential contributions for key stakeholder groups, focusing on the organisations and sectors with direct policy, funding, regulatory, market, infrastructure or delivery roles.

Table 4: Potential contributions of key stakeholder groups

Stakeholder group	Potential contributions
Australian Government	Coordinate relevant national transport, energy, infrastructure and consumer-policy settings; investigate policy and market levers supporting EV model availability and affordability; use public-sector fleets to create market pull and support future second-hand supply; and support nationally consistent standards, interoperability, consumer protection and evaluation.
State and territory governments	Coordinate transport, energy, infrastructure, housing, planning and consumer-policy functions; improve the visibility and accessibility of EV supports; address charging gaps, including for renters and apartment residents; consider targeted finance and second-hand EV measures; use public-sector fleets and facilities to demonstrate EV use; and monitor behavioural and equity outcomes.
Local governments	Assess local mobility and charging needs; facilitate community, kerbside and destination charging where service gaps are identified; support EV demonstrations and direct-experience activities; examine shared and community mobility models; connect EV initiatives with public and active transport; and provide trusted local engagement.
Automotive manufacturers, importers and dealerships	Respond to consumer demand through appropriate model choice and accessible product information; explain vehicle suitability, running costs, warranties and servicing; provide opportunities for direct EV experience; and support pathways from fleet and new-vehicle markets into future second-hand supply.
Fleet, leasing, mobility and used-vehicle sectors	Test leasing, subscription, car-share, workplace and fleet-to-household models; increase opportunities for direct EV experience; support the managed release of fleet EVs into the second-hand market; and improve battery-condition information, resale confidence and access to appropriate finance.
Charge-point operators and roaming providers	Improve charging visibility, reliability, payment interoperability, pricing transparency and real-time charger information; reduce dependence on multiple apps and accounts; and contribute to consistent signage and consumer-information arrangements.
Energy retailers and aggregators	Develop and test consumer-centred tariffs, smart-charging and network-aware charging offers; communicate household costs, benefits, data use, control and opt-out arrangements clearly; provide fair rewards for flexibility; and improve the transparency of bundled EV and household-energy offers.
DNSPs and electricity networks	Plan for charging demand across household types and places; identify network constraints and infrastructure requirements; support trials of smart charging, demand flexibility, V2G and community-energy models; and work with retailers and aggregators to balance network requirements with consumer value, control and equitable participation.
Technology providers	Improve the usability, interoperability and transparency of HEMS, smart-charging, V2G and EV-solar-battery technologies; address privacy, security, data and control concerns; work with retailers and networks to test integrated offers; and support accessible demonstrations and consumer evaluation.
Standards, regulatory and market bodies	Review standards, interoperability, data governance, payment arrangements and relevant consumer protections across vehicles, chargers, energy services and digital platforms; identify regulatory or market-design barriers; and support greater consistency across jurisdictions and providers.
Finance, insurance and consumer-protection actors	Review finance, insurance, warranty and second-hand EV arrangements; strengthen battery-health disclosure and independent inspection pathways; monitor emerging consumer risks; and provide accessible advice, comparison tools and complaint mechanisms.
Community and consumer organisations	Support trusted engagement, peer learning, co-design and outreach to communities facing identified barriers; contribute to the design and evaluation of local interventions; and assess whether programmes respond to community needs without creating stigma or duplicating existing provision.
Research and evaluation partners	Conduct longitudinal tracking, intervention testing and independent evaluation; assess consumer value, trust, uptake, equity and unintended effects; and support evidence translation across government, market and community partners.

These stakeholder actions are intended to support implementation rather than replace the detailed recommendations. They show how different actors can contribute to a coordinated transition while recognising that no single organisation can deliver the consumer, infrastructure, market, energy and equity changes required on its own.

12 Conclusion

This report shows that Australia's EV transition is not only a question of vehicle supply, charging infrastructure or consumer awareness. EV readiness is shaped by the interaction of affordability, housing, charging access, policy trust, perceived value, social norms, misinformation, direct experience and household energy systems. Consumers are not all at the same stage of readiness, and the four EV readiness profiles show why generic policies, information campaigns or infrastructure investments will not be sufficient on their own.

The findings highlight perceived value as a central driver of EV readiness, while also showing that the conditions that enable EV uptake are unevenly distributed. Higher-income, owner-occupier and energy-engaged households are currently better positioned to participate, while lower-income households, renters, apartment dwellers, regional and rural communities, used-car buyers and consumers with limited charging access face greater barriers.

A successful EV transition will therefore need to be systems-oriented, segmented and equity-aware. It will require coordinated action across policy, infrastructure, markets, technology, energy systems and behaviour change. The recommendations in this report provide a practical agenda for making EV uptake more feasible, valuable, trusted and inclusive for Australian consumers.



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Appendix 1 - Detailed interview participant sample

Table 5. Participants' characteristics

Pseudonym	Vehicle (ICEV incl. hybrid) NL=novated lease	Considering EV	Solar panels	Solar battery	Age group	Gender	State	Area of Residence	Cultural background (language other than English spoken)	Education	Employment	Income	Tenure	Household composition
Abby	ICEV	Y	N	N	30-39	F	VIC	Outer Suburban	Middle Eastern	HSC	FT finance	Medium	Owner house	Married 4 children
Abdul	EV		Y	Y	70 +	M	NSW	Outer Suburban	Anglo Australian	PhD	Retired academic	High	Owner house	Married
Abigail	EV		N	N	70+	F	WA	Regional	New Zealand	Tafe	Retired business owner	Medium	Owner unit	Single
Adam	ICEV	Y	N	N	60-69	M	WA	Outer Suburban	Scottish	HSC	Retired government	Medium	Owner unit	Widower
Agatha	ICEV	Y	N	N	30-39	F	NSW	Inner city	Australian	Tertiary	FT strata manager	Medium	Owner unit	Single
Aldo	EV + ICEV		N	N	60-69	M	VIC	Outer suburban	Anglo-Australian	HSC	Own business	Medium	Rental house	Married 2 children
Alfonzo	EV + ICEV		Y	N	18-29	M	WA	Suburban	Malay	Bachelor	FT engineering	Medium	Owner house	Single Lives with parents
Alvaro	ICEV		Y	N	50-59	M	WA	Suburban	Scottish	Bachelor	FT engineering	High	Owner unit	Married 3 children
Angelique	ICEV		N	N	30-39	F	VIC	Outer Suburban	Anglo Australian	Bachelor	PT health care advocacy	Low	Owner house	Single
Arturo	EV		N	N	70+	M	VIC	Inner city	Anglo Australian	Diploma	Retired aviation air controller	Medium	Owner apartment	Married
Beatriz	EV		N	N	30-39	F	NSW	Inner city	New Zealander	Bachelor	FT taxation	Medium	Rent apartment	Single
Becky	ICEV	Y	N	N	18-29	F	NSW	Inner city	Indian	Masters	PT retail	Low	Rental unit	Single
Bobbie	EV (NL)		N	N	30-39	M	VIC	Inner city	Malaysian Australian	Bachelor	FT engineer electrical	High	Owner apartment	Married 2 children
Bonnie	ICEV		N	N	40-49	F	WA	Inner city	Anglo Australian	Masters	PT or casual	High	Owner house	Married 2 children
Brandi	EV		N	N	60-69	F	WA	Regional	Anglo Australian	Masters	PT or casual	High	Owner house	Married
Brock	EV + ICEV		Y	N	30-39	M	VIC	Outer Suburban	UK	Masters	University admissions	High	Owner house	Married 2 children
Buck	ICEV	Y	N	N	70+	M	WA	Regional	Anglo Australian	HSC	PT or casual driver	Low	Rent apartment	Divorced
Carolyn	ICEV	Y	N	N	30-39	F	NSW	Inner city	Belorussian-Australian	Masters	FT civil servant	Medium	Owner unit	Single
Catherine	ICEV	Y	N	N	50-59	F	NSW	Outer Suburban	Mandarin	Masters	PT or casual translation	Low	Rent unit	Married 1 child
Chad	ICEV (SUV)		N	N	18-29	M	NSW	Inner city	Chinese Australian	Tertiary	Student	Medium	Owner unit	Single lives with parents
Cheryl	ICEV		N	N	40-49	F	NSW	Inner city	Malaysian	Bachelor	FT retail	Medium	Owner house	Single, lives with family
Claudine	EV		Y	N	60-69	F	NSW	Inner city	Australian	Masters	Retired corporate trainer	High	Owner house	Single
Cliff	EV		Y	Y	30-39	M	VIC	Outer Suburban	Indian	Bachelor	FT nursing	High	Owner house	Married
Columbus	EV + ICEV		Y	N	30-39	M	VIC	Inner city	European Australian	Bachelor	FT banking	High	Owner townhouse	Married 1 child

Pseudonym	Vehicle (ICEV incl. hybrid) NL=novated lease	Considering EV	Solar panels	Solar battery	Age group	Gender	State	Area of Residence	Cultural background (language other than English spoken)	Education	Employment	Income	Tenure	Household composition
Connie	EV + ICEV		Y	N	50-59	F	NSW	Outer Suburban	Sinhala	Bachelor	FT medical	High	Owner house	Married
Corine	EV + ICEV		N	N	50-59	F	NSW	Inner city	Italian Australian	HSC	FT administration	High	Owner house	Married 1 child
Darrin	ICEV		N	N	60-69	M	NSW	Inner city	Anglo-Australian	Bachelor x 2	Semi-retired medical tech	Low	Rent apartment	Single 1 child
David	ICEV	Y	N	N	30-40	M	NSW	Outer Suburban	Indian	Bachelor	FT WFH	Medium	Rent house	Married
Deanne	ICEV x 2		Y	Y	40-49	F	VIC	Suburban	Indian	Bachelor	FT	High	Owner house	Married
Dick	ICEV	Y	N	N	40-49	M	NSW	Inner city	Chinese	Bachelor	FT self-Employed	Low	Rental house	Single, share house
Donna	ICEV	Y	Y	N	50-59	F		Regional	Anglo Australian	Tafe	FT social services	Medium	Owner house	Divorced
Dustin	EV + ICEV		Y	N	50-59	M	WA	Suburban	Italian Australian	Tafe	PT or casual	High	Owner house	Married 1 child
Earlene	EV		Y	Y	60-69	F	VIC	Outer Suburban	Welsh Australian	Bachelor	Retired teacher	Medium	Owner house	Married 2 children
Elroy	EV		Y	Y	60-69	M	NSW	Suburban	Anglo Australian	Bachelor	PT or Casual	High	Owner house	Married 2 children
Emery	ICEV	Y	N	N	40-49	M	NSW	Outer suburban	Anglo-Australian	Masters	Business owner	High	Rent house	Married 1 child
Eric	EV x 2		Y	N	40-49	M	VIC	Outer Suburban	Maltese Australian	Bachelor	FT WFH	High	Owner house	Married
Ezra	EV		N	N	40-49	M		Suburban	Vietnamese	Bachelor	FT	High	Owner unit	Married 2 children
Frances	ICEV		N	N	30-39	F	WA	Suburban	Italian Australian	Tafe	PT or casual	Low	Rent house	Married 2 children
Gail	ICEV		N	N	40-49	F	NSW	Outer Suburban	Anglo Australian	Tafe	PT or casual administration	Medium	Owner house	Married 2 children
Garfield	ICEV	Y	N	N	40-49	M	VIC	Inner city	Anglo Australian	Tafe	FT restaurant manager	Medium	Owner house	Married
Genevieve	EV (NL)		N	N	40-49	F	NSW	Suburban	Anglo-Australian	HSC	PT marketing	High	Own unit	Married 2 children
Georgina	ICEV	Y	N	N	40-49	F	WA	Outer Suburban	Anglo Australian	Bachelor	FT engineer	High	Rent unit	Married 2 children
Geraldine	ICEV	Y	N	N	30-39	F		Outer Suburban	Anglo Australian	Bachelor	FT nursing	Low	Rent house	Married
Granville	ICEV	Y	N	N	30-39	M	WA	Suburban	Malaysian	PhD	FT lecturer	High	Rent unit	Married
Hamal	ICEV	Y	N	N	40-49	M	VIC	Outer Suburban	Indian	Masters	FT engineering some WFH	Medium	Rental house	Married 2 children
Heriberto	ICEV	Y	N	N	18-29	M	VIC	Suburban	Anglo Australian	Student	PT retail	Low	Owner house	Single lives with parents
Herminia	ICEV	Y	N	N	18-29	F	WA	Suburban	Urdu	Bachelor	PT or casual	Medium	Rent unit	Married 1 child
Hong	ICEV	Y	Y	N	40-49	M	WA	Outer Suburban	Anglo Australian	Tafe	PT or casual	Low	Owner house	Married 2 children
Irwin	EV + ICEV		N	N	18-29	M	NSW	Inner city	Malaysian	Student	Student	Medium	Rent unit	Single
Isaiah	EV		Y	N	50-59	M	NSW	Outer Suburban	Anglo-Australian	Tafe	FT IT	Medium	Owner house	Married 3 children
Ismael	EV + ICEV		Y	N	40-49	M	VIC	Outer Suburban	Anglo Australian	HSC	Disability pension	Low	Rent unit	Single
Ivanka	ICEV		N	N	50-59	F	WA	Suburban	New Zealand	Year 10	Not working	Low	Rent unit	Single 1 child
Jacinto	EV		Y	N	40-49	M		Regional	Romanian	Masters	FT engineering	High	Owner house	Married 1 child

Pseudonym	Vehicle (ICEV incl. hybrid) NL=novated lease	Considering EV	Solar panels	Solar battery	Age group	Gender	State	Area of Residence	Cultural background (language other than English spoken)	Education	Employment	Income	Tenure	Household composition
Jacob	EV + ICEV		Y	Y	70+	M	VIC	Suburban	Anglo Australian	Bachelor	Retired	High	Owner house	Married 2 children
Jamel	EV		N	N	30-39	M	VIC	Suburban	Malaysian	Masters	FT WFH Finance	High	Owner house	Married 1 child
Jasmine	EV		N	N	60-69	F	WA	Suburban	Anglo-Australian	Masters	PT or casual Psychiatry	High	Owner apartment	Single
Jemina	EV		Y	N	70+	F	VIC	Suburban	Anglo Australian	Bachelor	Retired teacher	Medium	Owner house	Married 3 children
Jeremy	EV + ICEV		Y	N	60-69	M	VIC	Suburban	Anglo Australian	PhD	Retired government	High	Owner house	Married 2 children
Jerrold	EV + ICE		N	N	40-49	M	VIC	Suburban	Anglo-Australian	PhD	FT business analyst	High	Owner house	Married
Joan	EV + ICEV		N	N	40-49	F		Suburban	Anglo-Australian	Bachelor	FT IT	High	Owner house	Married 2 children
Josh	EV		Y	Y	70+	M	WA	Regional	Anglo Australian	Masters	Retired engineer	High	Owner house	Married 3 children
Julia	ICEV	Y	N	N	40-49	F	VIC	Outer Suburban	Anglo Australian	Year 12	Casual retail	Low	Rental unit	Single 1 child
Kamila	EV		Y	Y	60-69	F	VIC	Outer Suburban	Anglo Australian	Bachelor	Retired librarian	High	Owner house	Married 1 child
Keri	EV		Y	N	30-39	F	NSW	Inner city	United Arab Emirates	Bachelor	FT GP	High	Rent unit	Married 1 child
Kimberly	EV		N	N	40-49	F	WA	Suburban	Dutch Australian	Bachelor	Not working	High	Owner apartment	Married 1 child
Kirby	EV + ICEV		N	N	50-59	M	WA	Regional	Anglo-Australian	HSC	FT business owner	High	Owner house	Married 2 children
Kitty	ICEV	Y	Y	N	40-49	F	VIC	Outer Suburban	Egyptian	Bachelor	FT Kindergarten teacher	Medium	Owner house	Married 4 children
Leila	EV		N	N	50-59	F	VIC	Inner city	Chinese	Bachelor	FT banking	High	Owner house	Married 2 children
Lenny	ICEV		N	N	50-59	M	NSW	Suburban	Anglo Australian	Tafe	FT banking	High	Owner house	Married 3 children
Leona	ICEV		N	N	40-49	F	VIC	Suburban	Italian Australian	Tafe	Online business	High	Owner house	Married
Leopold	EV		N	N	18-29	M	NSW	Outer Suburban	Anglo Australian	bachelor	FT teaching	Medium	Owner unit	Single
Lola	ICEV		N	N	60-69	F	NSW	Inner city	Australian	Diploma	PT & casual driver	Medium	Owner unit	Single 3 children
Lynda	EV		Y	N	50-59	F	VIC	Outer Suburban	Anglo Australian	HSC	FT customer service	Medium	Owner house	Divorced 3 children
Lynne	ICEV	Y	Y	N	40-49	F	VIC	Outer Suburban	Anglo Australian	Bachelor x 2	PT education	Medium	Owner unit	Single
Maribel	ICEV		N	Y	30-39	F	WA	Suburban	Anglo Australian	Bachelor	Not working	High	Owner house	Married 2 children
Marissa	ICEV	Y	N	N	50-59	F	WA	Regional	South American	Bachelor	FT government	High	Owner house	Married
Mark	EV + ICEV		Y	Y	50-59	M	VIC	Outer Suburban	Anglo Australian	HSC	FT truck driver	Medium	Owner house	Married 2 children
Marlene	ICEV		Y	N	40-49	F	WA	Suburban	UK	Tafe	FT human services	High	Owner house	Single
Mauricio	ICEV	Y	Y	N	40-49	M	VIC	Suburban	Asian	Bachelor	FT finance	High	Owner house	Married 2 children
Mckinley	EV		Y	N	70+	M		Suburban	Anglo Australian	Bachelor	Retired teacher	Medium	Owner house	Married 2 children
Melissa	ICEV	Y	N	N	18-29	F	VIC	Outer Regional	Anglo Australian	Bachelor	FT finance	Medium	Owner unit	Single
Michelle	EV		Y	Y	40-49	F		Inner city	Filipino Australian	Bachelor	FT lawyer	High	Owner house	Married 2 children
Mickey	ICEV caravan		N	N	70+	M	VIC	Outer Suburban	Anglo Australian	HSC	Retired mechanic	Medium	Owner townhouse	Married 4 children
Minnie	EV		Y	N	50-59	F	WA	Suburban	Anglo-Australian	Bachelor	FT manager	Medium	Owner house	Married 3 children

Pseudonym	Vehicle (ICEV incl. hybrid) NL=novated lease	Considering EV	Solar panels	Solar battery	Age group	Gender	State	Area of Residence	Cultural background (language other than English spoken)	Education	Employment	Income	Tenure	Household composition
Mitchell	ICEV		Y	N	30-39	M	VIC	Suburban	Anglo Australian	HSC	FT welder	Low	Rental unit	Married 2 children
Morris	ICEV	Y	N	N	40-49	M	VIC	Suburban	Indian	Masters	FT human resources	High	Owner house	Married
Murray	EV + ICEV		N	N	30-39	M	NSW	Outer Suburban	Vietnamese Australian	Masters	FT	High	Owner house	Married
Nicki	ICEV		N	N	60-69	F	VIC	Suburban	Anglo Australian	Year 11	PT admin	Medium	Owner house	Married 1 child
Noelle	EV		Y	N	60-69	F	NSW	Suburban	Anglo Australian	Masters	Retired teacher	High	Owner house	Married 2 children
Peggy	EV		Y	Y	18-29	F	NSW	Outer Suburban	Tamil	Student	PT or casual	Low	Owner house	Single lives with parents
Peter	EV		Y	N	30-39	M	VIC	Outer Suburban	Anglo Australian	Masters	FT nursing	High	Owner house	Married 1 child
Priya	EV x 2		Y	N	30-39	F	NSW	Outer Suburban	Japanese	Bachelor	PT or casual	High	Owner house	Married 2 children
Quintin	EV (NL)		N	Y	50-59	M	VIC	Suburban	Anglo-Australian	HSC	WFH	High	Rent house	Married 3 children
Raphael	ICEV	Y	Y	N	40-49	M	VIC	Suburban	Indian	Masters	FT IT consultant	Medium	Owner house	Married 3 children
Renaldo	EV + ICEV		Y	N	50-59	M	WA	Suburban	Cantonese	Bachelor	FT engineering	High	Owner house	Married 2 children
Ricardo	ICEV		Y	N	50-59	M	WA	Regional	Anglo Australian	Year 10	FT geology	High	Owner townhouse	Married
Richard	EV (NL) + ICEV		N	N	30-39	M	VIC	Suburban	Anglo Australian	Cert 4	FT sheriff	High	Owner house	Married 1 child
Ricky	ICEV	Y	N	N	40-49	M	VIC	Suburban	Anglo-Australian	Masters	PT marketing	Medium	Rent unit	Married 1 child
Rita	ICEV		N	N	60-69	F	NSW	Inner city	Chinese Australian	Tafe	Retired	Medium	Rent apartment	Married 3 children
Rob	ICEV		N	N	50-59	M	NSW	Inner city	Anglo-Australian	Bachelor	Retired government	Medium	Owner house	Married 2 children
Robby	EV		Y	Y	70+	M		Regional	Anglo Australian	Bachelor	Not working	High	Owner house	Single
Rocco	ICEV		Y	N	18-29	M	WA	Suburban	Punjabi and Hindi	Student	PT or casual	Low	Owner house	Single lives with parents
Ronald	ICEV	Y	Y	N	18-29	M	NSW	Outer Suburban	Chinese	Masters	FT engineering	Medium	Owner house	Married
Rose	EV		Y	N	30-39	F	NSW	Suburban	Cantonese	Bachelor	FT	High	Owner house	Married 1 child
Rosemarie	ICEV	Y	N	N	60-69	F	WA	Outer Suburban	Anglo-Australian	Year 12	Retired librarian	Low	Owner house	Married 5 children
Sal	EV + ICEV		N	N	30-39	M	WA	Outer Suburban	Malay	Bachelor (hons)	FT government	High	Rent unit	Married
Samual	ICEV		N	N	50-59	M	NSW	Inner city	Indian	Tertiary	FT IT consultant	Medium	Rent apartment	Married 1 child
Shawn	ICEV		Y	N	30-39	M	WA	Regional	Anglo Australian	Bachelor	PT or casual	Medium	Owner house	Married 1 child
Susana	ICEV		N	N	50-59	F	WA	Regional	Anglo-Australian	Bachelor	Disability pension	Low	Rental unit	Single 3 children
Sylvie	ICEV		N	N	40-49	F	VIC	Suburban	Anglo Australian	HSC	PT or casual	Low	Rent unit	Single
Terry	EV		Y	N	30-39	M	NSW	Outer Suburban	Anglo Australian	Year 12	FT insurance	High	Owner house	Married 1 child
Thelma	EV + ICEV		Y	N	50-59	F	NSW	Regional	Anglo-Australian	Tafe	FT paramedic	High	Owner house	Married 3 children
Thomas	EV + ICEV		Y	Y	60-69	M	VIC	Suburban	Anglo Australian	HSC	Retired printer	High	Owner house	Married 2 children
Tuan	EV (NL)		N	N	40-49	M	VIC	Inner city	Singaporean	Bachelor	F/T nurse aged care	High	Rental unit	Married

Pseudonym	Vehicle (ICEV incl. hybrid) NL=novated lease	Considering EV	Solar panels	Solar battery	Age group	Gender	State	Area of Residence	Cultural background (language other than English spoken)	Education	Employment	Income	Tenure	Household composition
Valerie	ICEV		N	N	50-59	F	WA	Outer Suburban	Anglo Australian	Bachelor	Not working	Low	Social housing	Single
Vance	ICEV		N	N	60-69	M	WA	Regional	Anglo Australian	Year 10	Unemployed	Low	Mobile home	Divorced 2 children
Vincent	ICEV	Y	N	N	30-39	M	WA	Suburban	Indian	Bachelor	FT	Medium	Rent unit	Married
Walker	ICEV	Y	N	N	40-49	M	NSW	Outer Suburban	Cantonese	Masters	FT engineering	High	Owner house	Married 2 children
Wenjian	EV		N	N	40-49	M	NSW	Outer Suburban	Chinese Australian	Bachelor	Not working	High	Rent apartment	Married 2 children
Wiley	ICEV		N	N	50-59	M	NSW	Inner city	Greek Australian	Tafe	PT or casual retail	Low	Owner house	Single lives with parents
Yolanda	ICEV	Y	N	N	50-59	F	WA	Suburban	Anglo Australian	Bachelor x 2	PT or casual	Medium	Owner house	Divorced 4 children
Zihao	ICEV	Y	N	N	18-29	M	VIC	Suburban	Singaporean	Bachelor	FT insurance	Medium	Rent house	Married

Appendix 2 -
Full technical report – survey instrument development

1. Purpose and scope of the survey

The RACE for 2030 National Electric Vehicle (EV) Survey was designed to provide a comprehensive, nationally representative evidence base on the factors influencing electric vehicle awareness, attitudes, ownership, use, and future adoption in Australia. The survey forms part of a broader research program investigating how micro-level individual factors, meso-level social and contextual factors, and macro-level structural and policy factors interact to shape EV-related decisions.

The primary objectives of the survey were to:

- Measure Australians' knowledge and understanding of EVs, including charging, costs, and environmental impacts.
- Identify individual, social, economic, and infrastructural barriers and enablers to EV adoption.
- Capture detailed information on current EV ownership, charging behaviours, and travel patterns.
- Assess public attitudes toward EV-related policies, energy management, and emerging technologies such as smart charging, HEMS, and virtual power plants (VPPs).
- Generate a high-quality dataset suitable for policy-relevant analysis and future academic research.

This report documents how the survey instrument was developed, how data were collected, and the analytical approach. It is intended to provide transparency and methodological clarity for funding partners and other stakeholders.

2. Survey development process

2.1 Conceptual Framework

Survey development was guided by a multi-level behavioural framework distinguishing:

- **Micro-level factors**, including knowledge, beliefs, attitudes, personality traits, financial capability, and individual values.
- **Meso-level factors**, such as social norms, perceived social and collective efficacy, household context, and community infrastructure.
- **Macro-level factors**, including policy support, trust in government and institutions, energy system governance, and market conditions.

This framework builds on contemporary behavioural science approaches to provide a broader, more complete approach to sustainable technology adoption and aligns with RACE for 2030's focus on systems-level transitions.

2.2 Selection of Measurement Scales

An initial pool of survey items was compiled by the UTS research team through a review of the academic literature and existing large-scale EV and sustainability surveys. Priority was given to validated and widely used scales to ensure construct validity, reliability, and comparability with prior research.

Key principles guiding scale selection were:

- Strong psychometric properties demonstrated in prior studies.
- Relevance to EV decision-making in the Australian context.
- Coverage of individual, social, economic, and policy-related constructs.

The final instrument includes, among others:

- EV knowledge and misinformation items (objective and subjective measures).
- Financial skills and confidence measures adapted from established consumer finance scales.
- General self-efficacy, perceived value, social support, collective efficacy, and technology readiness scales.
- Environmental values, social norms, and trust in government and EV policy.
- Detailed EV attitudes, motivations, and perceived barriers.

Where necessary, validated scales were adapted to improve contextual relevance (e.g., referencing EVs specifically rather than general technologies) while retaining their original conceptual meaning.

2.3 Stakeholder Consultation and Iterative Refinement

Survey development was an iterative, collaborative process involving both the UTS research team and RACE for 2030 funding partners. Across three major iterations:

- Initial drafts prioritised comprehensive theoretical coverage using full validated scales.
- Subsequent revisions involved trimming or shortening selected scales to reduce participant burden, while preserving core constructs.
- Additional modules were incorporated based on funder expertise and policy relevance, including detailed charging behaviours, travel patterns, and energy system interactions.

This co-design process ensured that the final survey balanced academic rigour with applied relevance and practical usability for policy and industry stakeholders.

3. Survey structure and content

The final survey instrument comprised the following major sections:

- **Screening and Branching** – Vehicle ownership status, purchase timelines, and eligibility questions to ensure participants only saw relevant items.
- **EV Knowledge and Awareness** – Knowledge of EV brands, charging infrastructure, and objective true/false knowledge items.
- **Practical, Psychological, and Social Factors** – Financial skills, self-efficacy, perceived value, social support, collective efficacy, technology readiness, and personality traits.
- **Attitudes, Norms, and Environmental Values** – EV attitudes, environmental concern, perceived social norms, and collective action beliefs.
- **Trust and Policy Support** – Trust in government and institutions, and support for EV-related policies and incentives.
- **EV Ownership and Charging Behaviour** (EV owners only) – Driving frequency, charging access, charging locations, satisfaction, and infrastructure needs.
- **Vehicle Use and Purchase Intentions** – Current vehicle use, future purchase intentions, motivations, barriers, and feature preferences.
- **Energy Management and Grid Interaction** – HEMS usage, interest in energy management technologies, smart charging, and VPP-related attitudes.

- **Experimental Component** – A short, embedded experiment delivering targeted informational interventions addressing participants' most salient EV barrier (cost, range, or charging) during hypothetical vehicle choice tasks.
- **Demographics and Living Context** – Standard demographic, household, and housing variables aligned with Australian Bureau of Statistics conventions.

4. Pretesting and quality assurance

Prior to full deployment, the survey was pretested with approximately 100 participants recruited via the same panel provider. The pretest aimed to:

- Verify survey logic, branching, and randomisation.
- Test completion time and participant burden.
- Identify ambiguous wording or technical issues.
- Confirm functionality of the experimental component.

Feedback from the pretest informed minor refinements to wording, response options, and flow. No major structural issues were identified.

5. Sampling and data collection

5.1 Panel Provider and Recruitment

Data collection was conducted through PureProfile, an established online panel provider operating in Australia. PureProfile worked in close consultation with the research team to ensure high data quality and representative national coverage.

5.2 Sample Design

The target was a nationally representative adult sample of Australian residents aged 18 years and over. Quotas were applied on key demographic variables, including age, gender, vehicle ownership type, and state/territory, to approximate population benchmarks.

5.3 Fieldwork Timeline

- **Pretest**: Conducted prior to main fieldwork (100 participants).
- Main survey launch: Early November.
- **Survey close**: Late November.
- **Final achieved sample**: 2,545 responses, with 2,481 retained as usable responses after data cleaning (median completion time: 32 minutes).

All participants provided informed consent prior to participation. Ethical approval was obtained through UTS, and all data were collected anonymously.

6. Data handling and preparation

Raw data were supplied by PureProfile and subsequently cleaned and prepared by the research team. Data preparation steps included:

- Removal of incomplete or low-quality responses.
- Validation of attention and consistency checks where applicable.
- Construction of composite scale scores following established scoring procedures.
- Coding of open-ended responses and recoding of categorical variables.

7. Analytical approach

Initial descriptive analyses were conducted in early December to provide high-level insights for stakeholders. These analyses focused on:

- EV awareness, knowledge, and ownership rates.
- Distribution of key demographic factors (residence type, home ownership status).
- Charging access.
- EV adoption intentions.

Full analytical work undertaken in subsequent phases included:

- Descriptive and comparative analyses across demographic groups.
- Multivariate regression models examining predictors of EV purchase intentions.
- Segmentation analyses based on psychological, social, and contextual profiles.
- Analysis of the experimental component to assess the effectiveness of targeted informational interventions.

All analyses were conducted using established statistical methods suitable for survey data.

8. Limitations

As with all survey research, several limitations should be noted:

- The use of an online panel may under-represent individuals with low technological literacy.
- Self-reported measures are subject to recall error and social desirability bias.
- Experimental choice tasks are hypothetical and may not fully capture real-world behaviour.

These limitations are mitigated by the large sample size, national coverage, and use of validated measures.

9. Future reporting and use of data

The dataset generated by this survey provides a rich foundation for policy analysis, academic publications, and future experimental research. Further publications will follow as analyses are completed.

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