ELECTRIC VEHICLE COUNCIL

THE UNIVERSITY OF SYDNEY

ITLS

EV Ownership Survey

2024

Executive Summary

This report presents the findings from the 2024 EV Ownership Survey, a collaborative effort by the Institute of Transport and Logistics Studies (ITLS) at the University of Sydney and the Electric Vehicle Council (EVC). Drawing on responses from over 1,500 EV owners across Australia, the survey offers insights into purchase considerations, charging behaviours, and travel patterns, aimed at fostering consumer awareness, driving industry growth, and informing policies for the future of sustainable transport in Australia.

Key Findings

Motivations for EV Adoption

Environmental impact and cost savings remain the primary drivers for EV adoption.

Charging Accessibility and Patterns

While most EV owners rely on home charging, public and workplace charging options are essential for flexibility, especially for those without home access.

Travel Trends

EVs are predominantly used for short, daily trips, though there is a clear demand for reliable charging infrastructure to support longer journeys.

As Australia remains in the early stages of the EV transition, these findings help illustrate the importance of continued investment in infrastructure, supportive policy settings, and ongoing consumer education to enable a transition to mainstream EV adoption.

Background/Methodology

The EVC and ITLS have partnered to conduct a survey with the goal of understanding and tracking evolving trends in EV ownership in Australia. The aim was to gather comprehensive, up-to-date insights on EV ownership in Australia, covering topics such as purchase considerations, charging behaviours, and travel patterns. This survey forms part of an ongoing project to monitor and understand the evolving landscape of EV ownership, supporting data-driven policy and industry decisions to accelerate the shift to sustainable transport.

- A total of 1,506 EV owners participated in the survey, providing a broad view of EV experiences across the country. Respondents included both Battery Electric Vehicle (BEV) and Plug-in Hybrid Electric Vehicle (PHEV) owners. The survey sample was distributed across Australia's states and territories, and aimed to capture both urban and regional/rural perspectives.
- In addition to the primary group of EV owners, the survey included targeted questions for non-EV owners. While these responses (approximately 250 responses) are not captured in this report, they will be considered in future reports to provide a comparative perspective on EV ownership and broader consumer attitudes toward electric vehicles.
- The survey was administered through the Qualtrics platform between March and April 2024. The questionnaire was designed to capture key metrics across various themes, including vehicle characteristics, ownership duration, travel and charging patterns, financial considerations, and demographic information. Tailored branching logic ensured that respondents answered only the questions relevant to their specific experiences.
- This structured approach allowed for the collection of both quantitative and qualitative data, enabling a comprehensive analysis of current EV ownership patterns in Australia.
- The insights from this survey serve as a foundational dataset to support ongoing analysis of the EV market's evolution in Australia. Follow-up surveys are planned to track changes over time, providing insight into technological advancements, infrastructure development, policy changes, and evolving consumer preferences.

Ev Ownership Profiles

Demographics

Household Composition

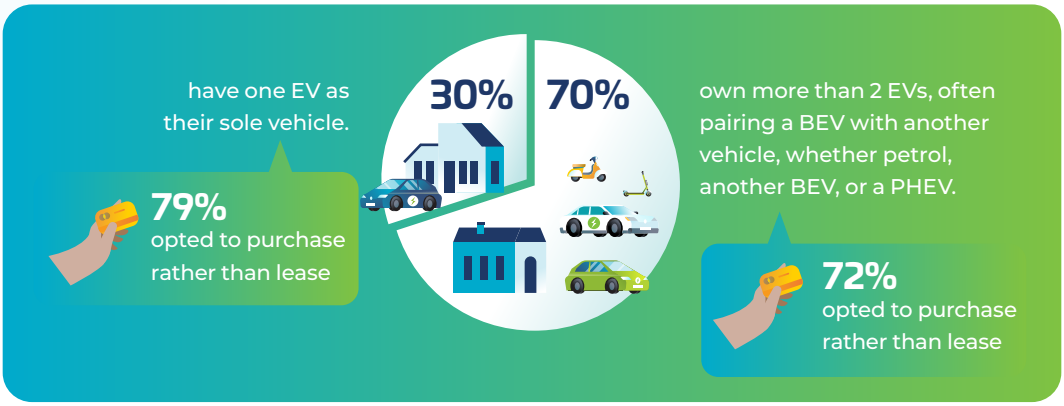
30% of surveyed households have one EV as their only vehicle, while 70% own multiple vehicles, typically pairing an EV with another powertrain, such as a petrol or hybrid model.

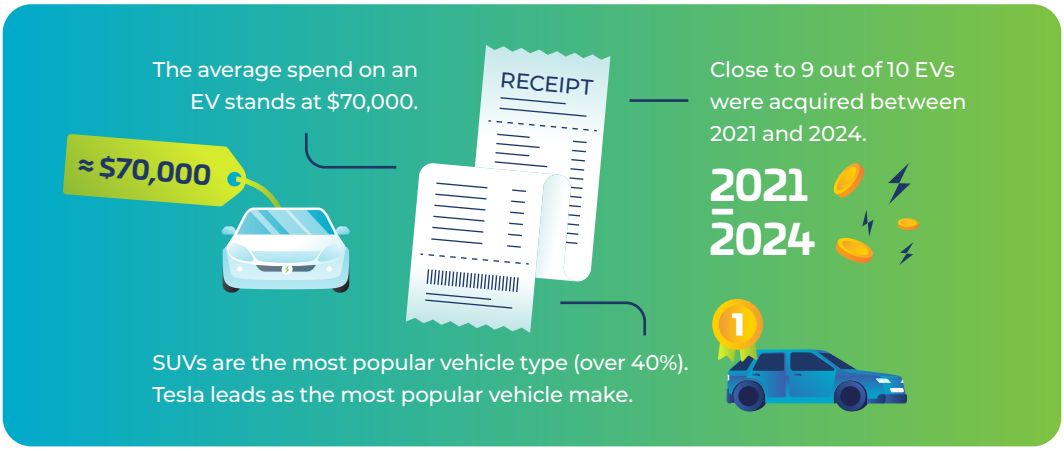
Ownership Patterns

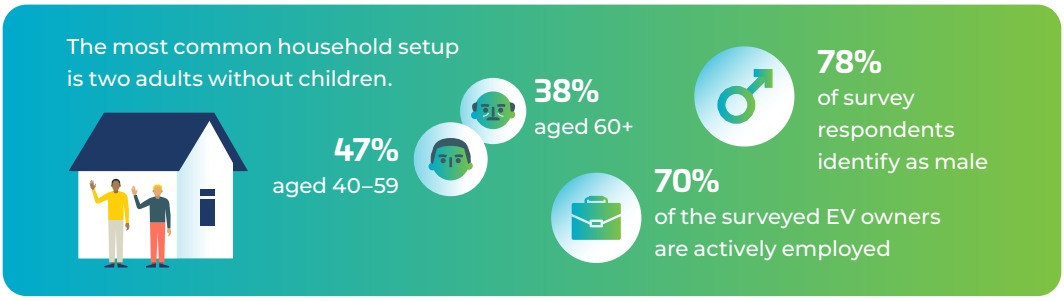
The majority of EVs (close to 90%) were acquired between 2021 and 2024, with most households choosing to purchase their EV rather than lease. The average spend on an EV was approximately $70,000.

Age & Gender

78% of respondents are male, with 47% aged 40–59 and 38% aged 60 or older.







Travel Patterns and Usage

Distance Travelled

Urban EV owners reported an average annual mileage of 15,205 km, while those in rural areas travel more extensively, averaging 19,126 km per year.

What this indicates is that EVs are being used as a primary vehicle rather than a back-up vehicle – with owners finding EVs more than meet their driving needs.

Average annual mileage by State/Territory (Urban and regional):

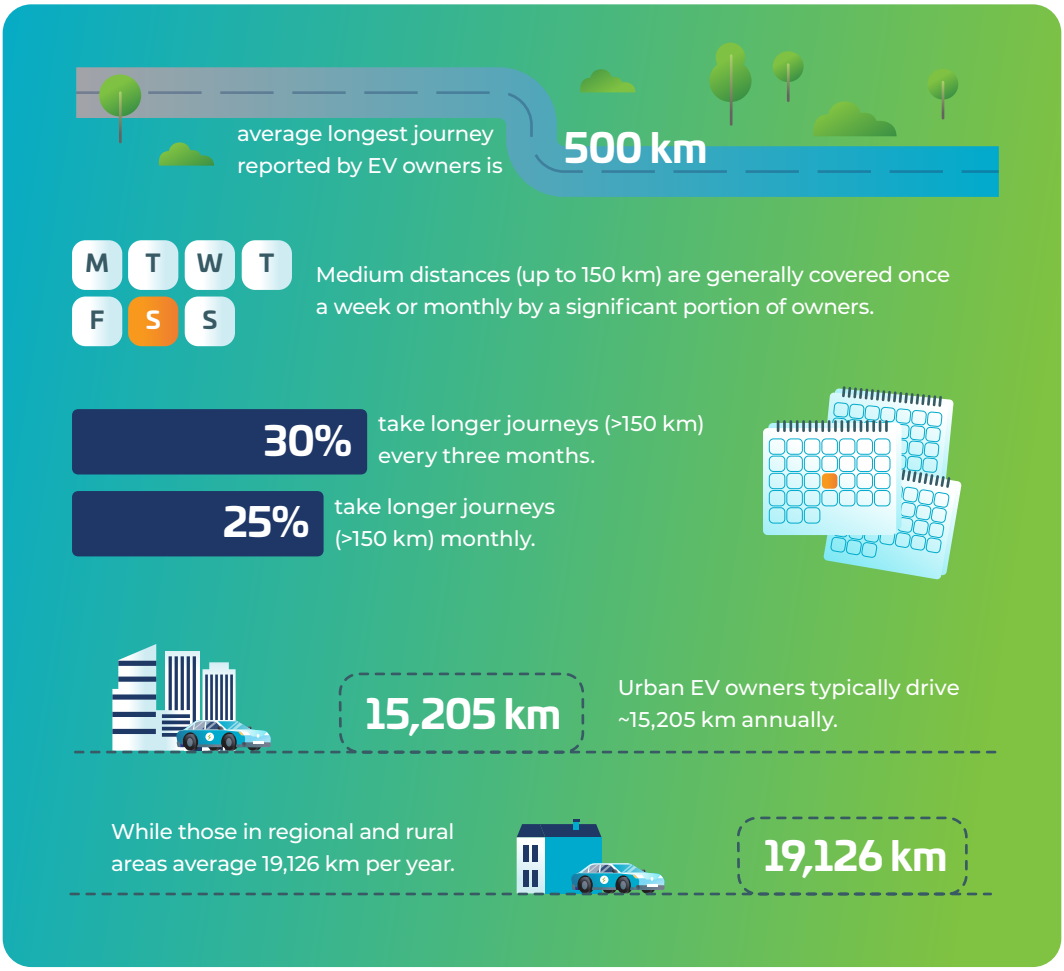
Journey Types

As with most passenger vehicles, most EV driving occurs close to home – EVs are mainly used for short, daily trips.

Medium distances (up to 150km) are generally taken once a week or monthly by a significant portion of owners.

Longer trips over 150km are less frequent, with 30% of owners making trips over 150 km once every three months, and 25% doing so monthly.

The insights gathered help indicate that for existing EV owners, range anxiety is not a barrier to taking a road trip - the average longest journey for respondents was 500 km.



Purchase Considerations and Drivers for Adoption

Cost and Environmental Factors

Financial Savings

Over 75% of respondents reported fuel savings exceeding 60% compared to their previous petrol or diesel vehicles. EV owners with solar panels benefit further from operating cost savings.

Out of a subset of EV owners asked about their home charging during a given week prior to filling out the survey, households with access to solar panels spend, on average, 33 % less on home charging.

Environmental Impact

Environmental benefits were a significant factor, particularly for single-vehicle households, where sustainability considerations played a notable role in the decision to adopt an EV.

Government Incentives

Incentive Uptake

4 in 10 respondents received government incentives, though interestingly, 50% of these stated they would have chosen to adopt EVs regardless.

Top reasons for going electric

Independent research (over family/colleagues)

Environmental impact*

Technology/ performance

Cost savings

Incentives

*In single-vehicle households, environmental considerations were a more significant consideration.

Upfront costs

4/10
households received an incentive.

5/10
say they would have gone electric even without the incentives.

Operating costs

>75%
are saving more than 60% on fuel, compared to their old ICE vehicles.

solar panel home-charging costs are **33%** lower on average.

Charging Behaviour

This section explores charging behaviours across different settings, including home, workplace, and public charging facilities.

Home Charging

The vast majority (92%) of EV owners can charge at home, with 80% of these households using solar panels. Approximately half of home-charging households have dedicated EV chargers, while others rely on slower trickle charging.

The ability to charge at home is deemed **very or extremely important** by the majority of EV owners.

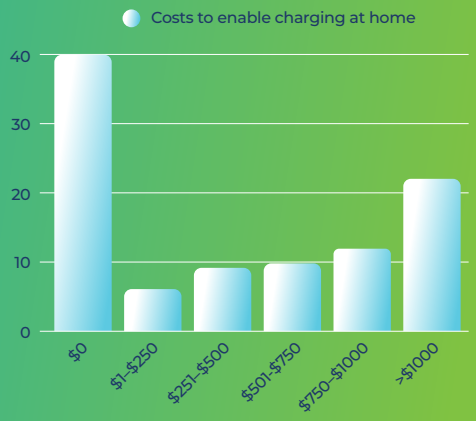
92%

of current EV owners have the capability to charge at home

80% have installed solar panels

66% have an attached garage

50% have access to a dedicated EV charger



When asked about costs incurred to enable charging at home (including a smart meter or dedicated home charger, but excluding electrical system upgrades), spending varies significantly.

EV owners able to charge at home were asked to complete a series of questions about their charging behaviour in the week prior to completion of the survey.

Powering up at home

Daytime charging

55% of all charging occurs during the daylight hours (8am–4pm)

Sunday most popular day for charging

Overnight charging

30% of all charging takes place between midnight and 8am

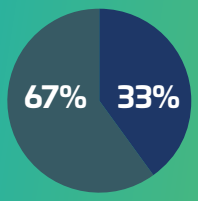
Monday most popular day for charging

Evening charging

15% of all charging happens in the evening, between 4 pm and midnight

Electrical system upgrades

did not spend anything on electrical system upgrades to support their EV charging



did invest in upgrades

of these,

spent less than $2,000 on these enhancements

Electricity costs

70% report not having different rates for peak and off-peak electricity usage

7/10 do not have a special rate specifically for EV charging

$0.20/kWh is the average reported cost to charge an EV at home

Charging behaviour

On average, an EV owner charges their vehicle at home five times per week, with the most common scenario being during the day on weekends.

65% of charging sessions last less than five hours

The EVC has published a guide to help EV owners find the best electricity plans for home charging in each state. This resource is particularly useful for those whose household electricity bills include a breakdown of EV charging costs. Check it out here.

Workplace Charging

For frequent commuters, workplace charging is valuable, particularly for those without the option to charge at home.

Access and Usage

Around 29% of employed respondents have access to workplace charging, with 36% of these individuals commuting four or more times per week.

Charging Duration and Setup

Workplace charging sessions average around 4.7 hours, with 56% of EV owners using dedicated AC chargers provided by their employers.

Out of 1,097 employed EV owners, 318 individuals (29%) have the ability to charge their vehicles at their workplace.

36%
commute with their EV more than four times/week

56%
use a dedicated AC charger provided by their employer

4.7 hours
is the length of a typical charging session at work

80%
of EV owners who can charge at work report that they do not pay anything for workplace charging.

>50%
of these owners indicated that free charging is not important or only slightly important to them, regardless of whether they can charge at home.

Importance of charging at work increases with the frequency of commuting to work

Not at all important · Slightly important · Moderately important · Very important · Extremely important

Remote workers/ those that do not commute regularly

Charging at work is generally not at all important, or only slightly important.

Hybrid workers (1-3 days a week commuting by EV)

Charging at work is considered slightly important.

Full time office commuters (4-5 days per week commuting by EV)

Charging at work is regarded as very important.

EV owners that are able to charge at work were asked to respond to a series of questions about their charging in the week prior to the survey.

Workplace charging behaviour

129
of EV owners reported charging at work within the past week.

90%
of these charging sessions ocurred during the day.

~60%
of charging sessions at work are under four hours in duration.

EV owners report charging at work three times per week, with the most common days being Monday and Tuesday.

Workplace charging in a given week

7% of all charging happens in the evening, between 4 pm and midnight

Tuesday most popular time for evening charging

6% of charging occurs between midnight and 8am

Monday most popular time for overnight charging

87% of workplace charging occurs during the daylight hours (8am–4pm)

Monday & Tuesday most popular days for charging

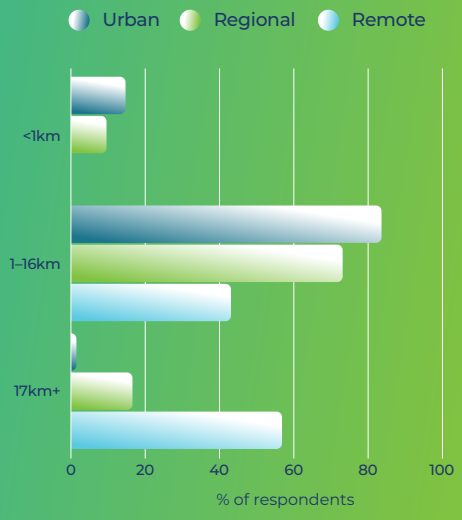
Public Charging

The convenience and cost-effectiveness of public charging options remain significant for EV owners, especially for those without home or workplace charging access.

95% of respondents in urban settings live within 0–16km of a public charger.

>80% of respondents in regional settings report living within 0–16km of a public charger.

55% of those in remote/rural areas specify a public charger is at least 17km from home.



Proximity to public chargers depends on where you live.

Utilisation of Public Charging

>85%
of respondents make regular use of public charging infrastructure, reflecting its key role in supporting EV ownership.

Charging utilisation does vary:

15% report relying solely on AC chargers.

32% use a combination of AC and DC fast chargers.

53% prefer using dedicated DC fast chargers.

50 minutes
is the average duration of public charging session, regardless of the technology used.

Importance of availability of public chargers depends on whether or not you can charge at home.

Not at all important · Slightly important · Moderately important · Very important · Extremely important

EV owners that can charge at home (most respondents)

For those that charge at home, availability of public charging still remains **moderately/very important**

EV owners that cannot charge at home

For those that cannot charge at home, 70% noted the importance of public charging was **moderately or extremely important** to their decision to get an EV.

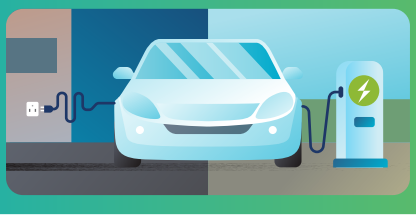
Charging session duration and cost

AC Charging

On average, AC charging sessions last 80 minutes and cost $8.

Combination Charging

For those that report a combination of AC and DC charging, the average session lasts ~56 minutes, costing around $15.



DC Fast Charging

DC fast charging sessions are shorter, averaging 37 minutes, but come at a higher cost of approximately $18.

EV owners were surveyed about their use of public charging stations during the week prior to completing the survey. The data highlights common charging times and usage patterns, which vary by location type:

Destination Chargers

Primarily used during the day and evening, with Friday being the most popular day for charging sessions lasting between 1–2 hours.

Supermarket Chargers

Typically used during daytime hours on weekdays, with most sessions lasting less than an hour.

Other Public Charging Stations

Often used during the daytime on weekends, with charging sessions generally lasting under an hour.

	Time of day	Day of week	Duration
Destination chargers	Day time/ evening	Friday	1–2 hours
Supermarkets	Day time	Weekdays	<1 hour
Other public charging stations	Day time	Weekends	<1 hour

Conclusion

This collaboration between the EVC and ITLS seeks to provide a reliable data source on owner profiles, usage patterns, and charging behaviours, providing industry and government stakeholders with actionable insights to improve infrastructure, shape policies, and support consumer needs as the EV transition progresses.

In future surveys and reports, we aim to explore seasonal and situational changes, particularly:

- **Summer Road Trips:** Evaluating public charging accessibility and user experiences during peak travel times.
- **Infrastructure Needs:** Assessing how charging demands fluctuate across journey types and distances, highlighting potential gaps in charging availability.

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