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EV & Hybrid Vehicle Insights Report

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Research Objectives

The objectives for this research can be summarised as to...

“

gain a robust and representative perspective on electric and hybrid vehicles among Australian vehicle drivers

”

The research sought to canvas views and experiences of Australian drivers across some particular areas relating to current behaviours and future vehicle intentions, including...

- The type of vehicle they currently drive (body style, age, fuel type);
- Their willingness to purchase an electric vehicle when replacing any of their current household vehicles;
- Specific perspectives on electric and hybrid vehicles (willingness to consider, drivers/barriers of consideration and price point analysis);
- Attitudes towards EVs and the role of individuals in driving uptake.

The goal of this research was to assist the Australian Automotive Dealer Association (AADA) with understanding the status quo of mindset and mood around EVs. While there is plenty of industry and Government talk around future policy-setting and transitioning to EVs, it's important to gain a reliable and representative view from drivers themselves.

To do this, we collected feedback from a sample of 2,000 Australian drivers (representative by age, gender and household location across Australia).

The results from this stage of research are detailed in this document.

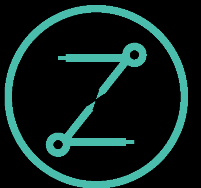


Research Approach



Executive Summary

An overview of our key research findings...



Overview | Feedback On Electric Vehicles



38%

**WOULD CONSIDER AN EV
FOR THEIR NEXT MAIN
VEHICLE**

6%

**AVERAGE PRICE
PREMIUM CONSUMERS
WOULD PAY FOR AN EV**

KEY DRIVERS FOR EVs...

1. 'Better for the environment'
2. 'Represent 'the future' of vehicles'
3. 'Cost less to run and maintain'

BARRIERS TO EVs...

1. 'Are too expensive'
2. 'Not enough charging infrastructure'
3. 'Not enough driving range between charging'

EV PRICING...

- Cost of EVs are a barrier for consumers – 60% agree that 'given the current economic times, I'm less willing to pay more for an EV over other fuel types'.
- However, there is some willingness to pay more for an EV vs. traditional fuel type of the same vehicle (49% would be willing to pay some premium). On average, the level of this premium is up to 6%.



How Does Openness To EVs Vary?

Different audience sub-groups react differently to the idea of considering an EV for their next vehicle...

MORE OPEN TO EVs

- Drivers aged under 50 years
- Those living within 10km of a major city CBD
- Men
- Drivers who would be looking to replace their vehicle with a small SUV, light car or small car
- Drivers who would be in the market for a brand new vehicle
- Those who are looking to replace their main vehicle in 4-5 years' time

LESS OPEN TO EVs

- Drivers aged 50 or older
- Those living in rural communities
- Women
- Drivers who would be looking to replace their vehicle with a medium SUV, large SUV, large car, sports car, ute or van
- Drivers who would be likely to replace their current main vehicle with a used vehicle
- Those who are looking to replace their main vehicle in the next 12 months

From this, we can build a profile of the current EV target market as those living in inner city areas who have a preference for smaller vehicles. Furthermore, EV consideration matches more closely with a mid-term (rather than short-term) purchase decision, suggesting they're still seen as 'for the future' rather than 'for now'.



Current Attitudes To EVs

Current driver attitudes towards EVs highlight the level of concern held around **the personal financial impact of buying one**.

- Drivers are strongly in **support of increased government incentives** to support the transition to EVs (remember – they told us elsewhere in the survey that they believe EVs to be ‘the future’).
- There is concern among three in five (61%) about government policy which would **ban the sale of conventional fuel vehicles** and the impact this would have on vehicle affordability for them.
- The **current economic context** (increasing interest rates, high inflation, increased cost of living) only serves to increase concern – three in five agree that they’re less willing to pay more for an EV over a conventional fuel vehicle given the current times.

TO WHAT EXTENT DO YOU AGREE OR DISAGREE WITH THE FOLLOWING?
[% ‘AGREE’ SHOWN]

71%

“Governments should be incentivising customers more to transition to EV”

61%

“I’m concerned I won’t be able to afford a vehicle if govts ban the sale of conventional fuel vehicles”

60%

“Given the current economic times, I’m less willing to pay more for an EV over other fuel types”

56%

“EVs don’t have enough driving range for me to consider buying one”

55%

“The rising cost of petrol/diesel makes EVs more attractive to me”



Key Research Headlines

Here are the key findings from our survey among 2,000 Australian drivers...

An intention trend towards medium-large SUVs...

Our data indicates a trend away from small cars to medium SUVs (and to a lesser extent) large SUVs in future.

Those who are considering these larger vehicles are less open to considering an EV – what does this mean for the transition to EV?

Cost of EVs is undoubtedly a key consideration and inhibitor right now.

Despite these benefits (which are mainly social benefits), the cost of EVs is a major barrier for some.

People will always weigh up the benefits and costs for their own household, and right now the cost of EVs is acting as a major barrier.

EVs are more engaging for some drivers than for others.

Overall, 38% are open to considering an EV for their next main vehicle driven. However, this is stronger for some cohorts (men, inner-suburban, aged under 50) than others (women, rural, aged over 50).

The question of ‘function’...

In addition to concerns about cost, other barriers include a sense that there isn't enough EV charging infrastructure and that driving range is too low between charges.

This is reflected in the fact that people who are looking for their next main vehicle to be a medium-large SUV or ute/van are less likely to consider an EV.

The benefits of EVs are clear, and they do represent ‘the future’.

Drivers have a clear view that EVs are indeed better for the environment and firmly believe that they represent the future of Australian motoring.

In addition, there's a sense that they would be cheaper to run and maintain.

Where does this leave us?

On balance, our study suggests that EVs are considered inevitable by Australian drivers.

However, a combination of perceived lack of functionality (via charging times/driving range/lack of infrastructure) and – more importantly – higher cost of purchase makes EVs feel like something for the ‘mid-term’ rather than for ‘right now’.



Current Vehicles

A quick profile of our respondents' current vehicle ownership status...

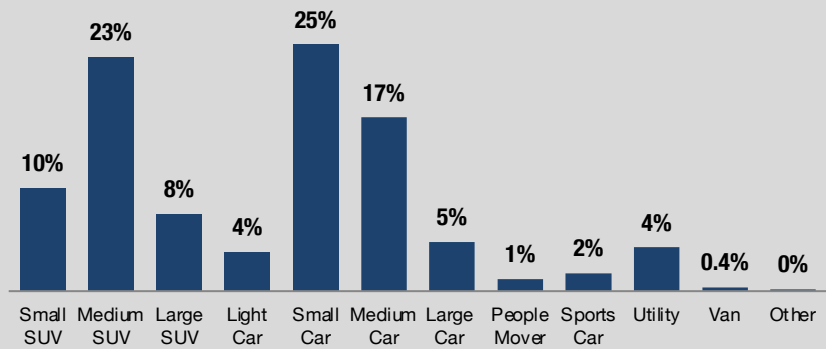


Current Vehicle Profile...

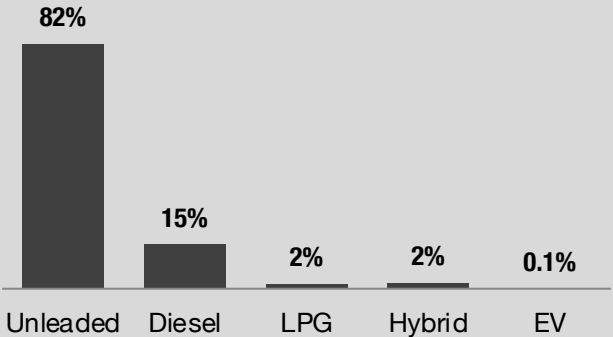
Within our sample, the most commonly driven vehicle types include **small cars** (25%), **medium SUVs** (23%) and **medium-sized cars** (17%). Overall, **SUVs make up 41% of current main vehicles driven**, with **cars making up 51%**.

When it comes to current main vehicle fuel types, unleaded petrol vehicles are significantly the most prominent at present (82%), with hybrid and EV cars combined contributing just 2.1% of current main vehicle fuel types.

What sort of vehicle is the one you mainly drive right now?



What fuel type does the vehicle you mainly drive currently use?

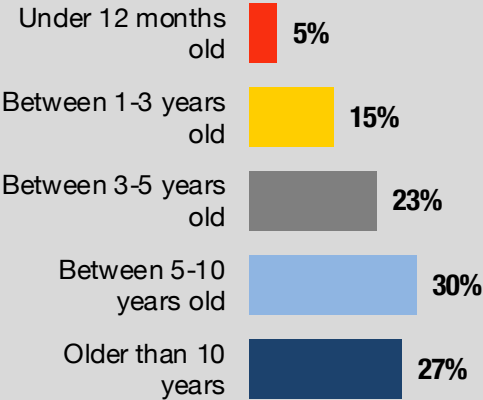


Q10. & Q11. Base: total respondents (n=2,000)

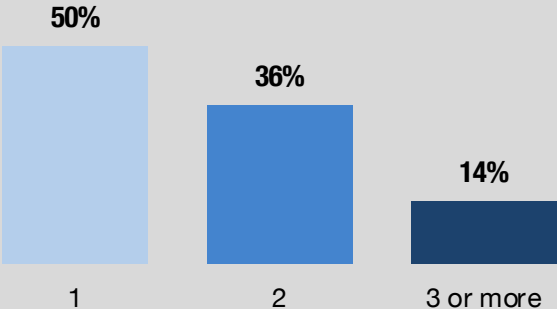


Vehicle Age & Other Household Vehicles

How old is the vehicle you mainly drive?



In total, how many vehicles are there in your household?



Just over half of our sample suggest the vehicle they mainly drive is older than 5 years old (57%), with 27% of this mainly driving a vehicle that is more than 10 years old.

Exactly half of our sample have more than one vehicle in their household at present (50%), with 36% having 2 vehicles and 14% having 3 or more vehicles across their household.

Q9. & Q12. Base: total respondents (n=2,000)

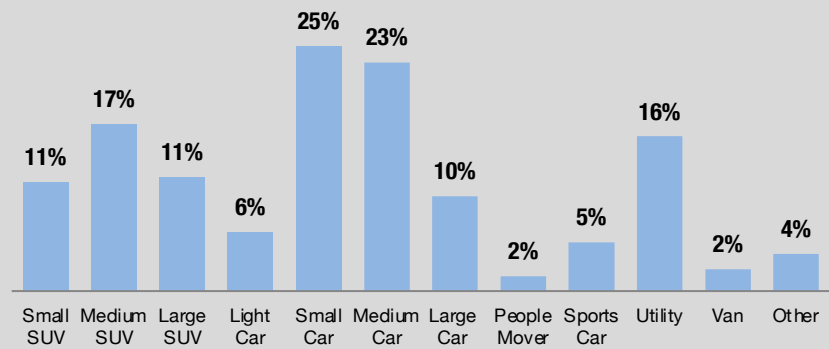


Other Household Vehicle Profile...

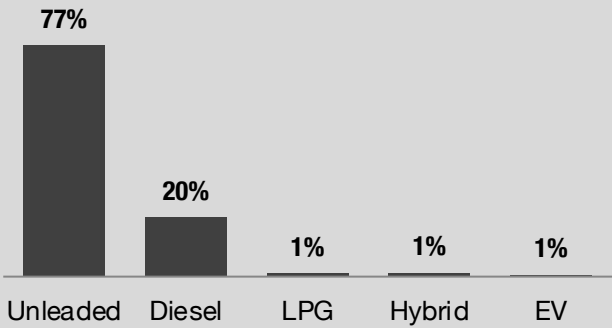
Among the 50% of respondents who had more than one vehicle in their household, the mix of other vehicles owned generally reflects the same types of vehicles as the main vehicle driven (small-medium cars and medium SUVs). Unleaded is the most common fuel type of these other vehicles.

However, the presence of a **utility** as a ‘second or third’ vehicle is more prominent (16%), as is the presence of a **diesel** fuel vehicle (20%).

Beside the one you mainly drive, what other vehicle types are currently in your household?



What fuel type do these other vehicles in your household currently use?



Q17. & Q18. Base: total respondents (n=2,000)



Provocations | Current Vehicles...

**CURRENT MAIN
VEHICLES ARE MOST
LIKELY TO BE SMALL
CARS + MEDIUM
CARS/SUVS**



These same types of passenger vehicle currently offer the greatest level of choice for EV variants, yet current uptake is very low.

**UNLEADED FUEL CARS
ARE MOST PROMINENT**



Notionally, EVs would be competing with drivers replacing their vehicle with another ULP vehicle – it's what people are used to.

**HALF OF ALL
HOUSEHOLDS HAVE
MORE THAN ONE
VEHICLE**



It suggests that many households may face significant total overall ownership costs (let alone future replacement costs) for vehicles.

**OTHER VEHICLES IN THE
HOUSEHOLD ARE ALSO
LIKELY TO BE
CARS/SUVS, ALTHOUGH
THERE'S ALSO UTILITIES
AND DIESEL VEHICLES IN
THIS MIX**



Households can be very diverse in the mix of vehicles they own and might need to replace in future – how feasible is it for all households to be 'full EV' given this?



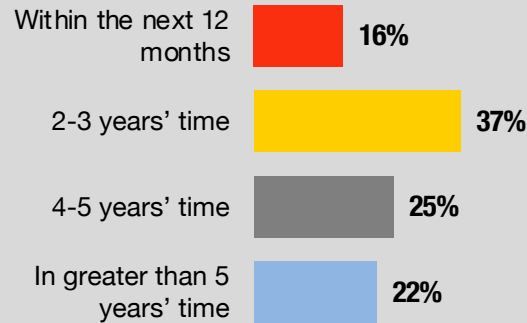
Replacing Vehicles In Future

Reviewing plans for replacing their household vehicle/s, and to what extent EVs might play a role in this...



Replacing Current Vehicle/s...

When do you plan on replacing the vehicle you mainly drive?



When replacing the vehicle/s in your household, is your intention to buy...?

	Brand New	Used
VEHICLE MAINLY DRIVEN	67%	33%
OTHER VEHICLES IN HOUSEHOLD	52%	48%

Just under one in five (16%) say that they're likely to replace the main vehicle they drive in the coming year, with 37% intending on replacing their vehicle in 2-3 years' time.

This does vary by the age of the driver's current main vehicle. Those with vehicles more than 5 years old are more likely to update their vehicle in the next 1-3 years (54%) than those whose vehicles are less than 3 years old (47%)

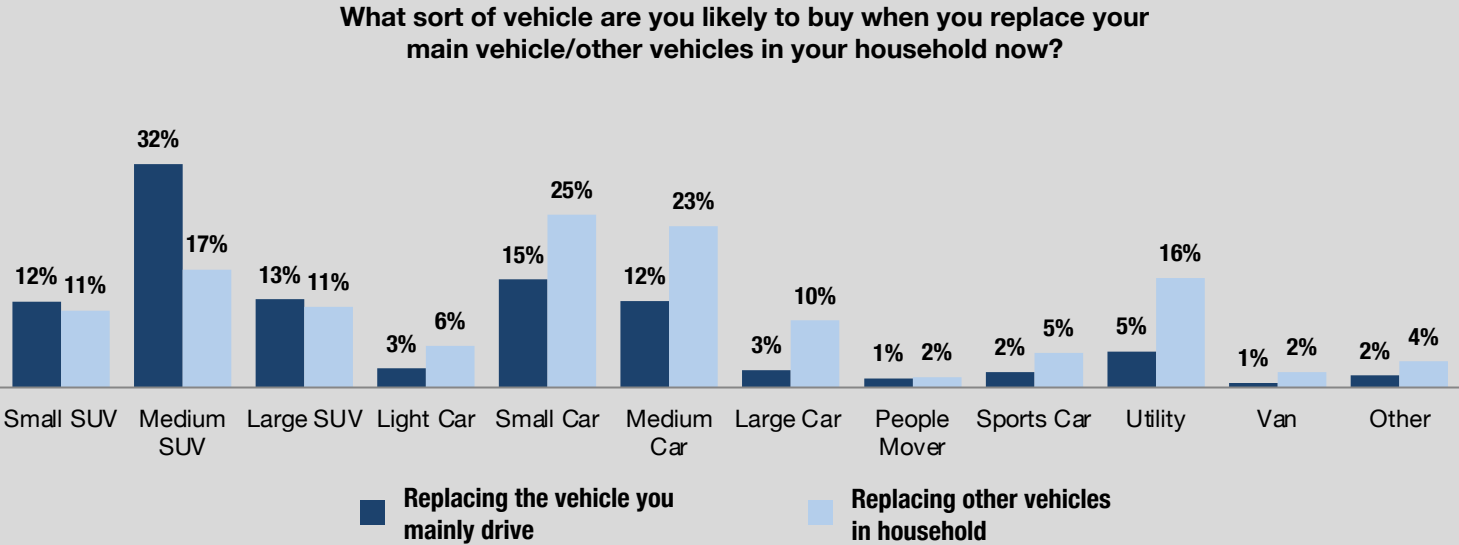
Most commonly, main vehicles are likely to be replaced with a brand new (rather than used) vehicle (67% new / 33% used), with this declining to 52% new / 48% used when it comes to non-main/other vehicles in the household...



Type Of Vehicle Intended Next...

When viewing the vehicle type that drivers are most likely to purchase next (either to replace their main vehicle or another vehicle in the household), it's clear that similar vehicle types to now are being planned.

There are some areas of shifting needs between current and next vehicle (particularly for the main vehicle driven), which have been shown in more detail over the page...



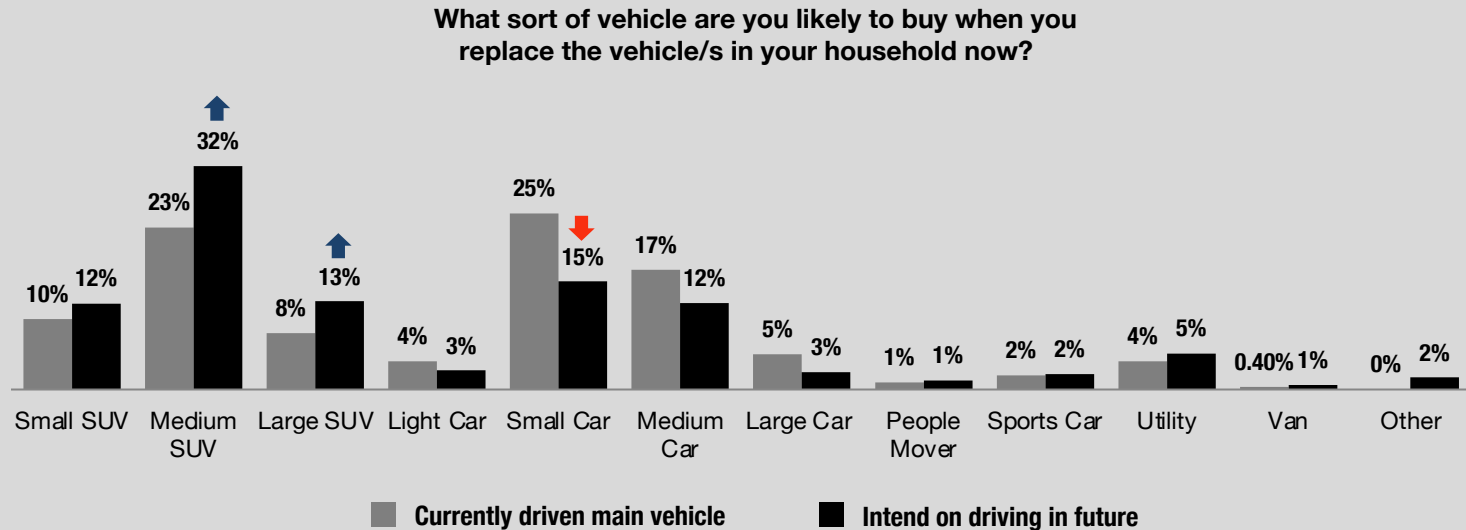
Q15. & Q17 Base: total respondents (n=2,000)



Main Vehicle | Current vs. Future...

We can view the intended future vehicle types for **our drivers' main vehicles** and compare to what they're driving now, to identify any potential emerging trends in vehicle type needs.

Compared to what's driven now, there's a likely stronger appetite for medium-sized SUVs (32% intended vs. 23% driven now) and large SUVs (13% vs. 8%), and a corresponding decline in intention to buy a small car (15% vs. 25%).



Q15. & Q17 Base: total respondents (n=2,000)



denotes vehicle types which are significantly more/less likely to be driven in future compared to driven now, at the 95% statistical confidence level

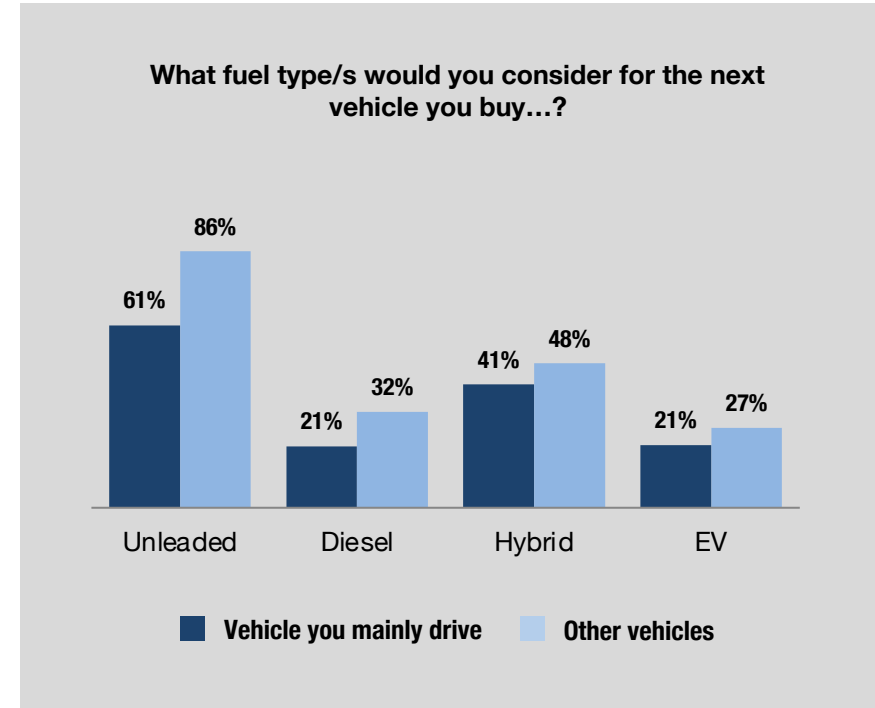


Overall Willingness To Buy An EV Next...

Most often, our respondents are open to an unleaded fuel vehicle when it comes to replacing their next main or 'other' household vehicles. Given the most currently-driven fuel type now is ULP, this insight is unsurprising – people plan to stick with what they know/currently use.

Around two in five are open to hybrid vehicles for their next main vehicle (41%), while **just on one in five (21%) are open to considering an electric vehicle.**

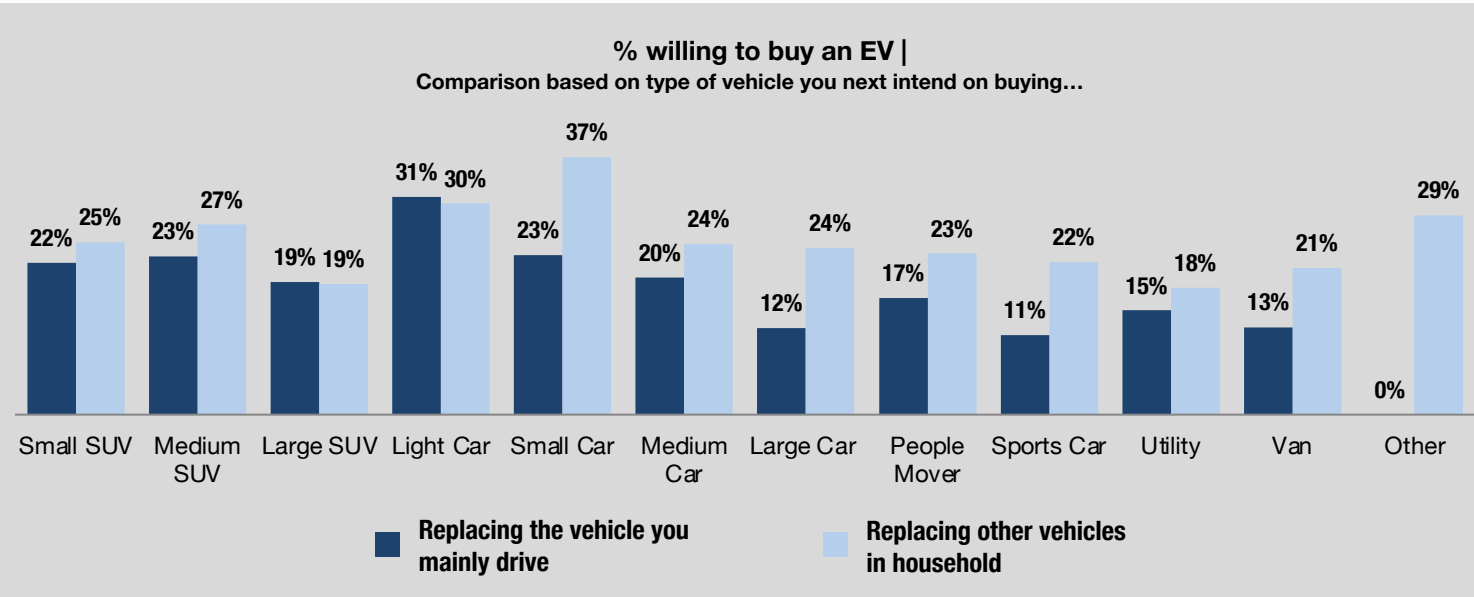
It does suggest some substantial scope for growth in EVs (especially in context of just 1% of our sample currently claiming to have an EV in their household right now). At the same time, it implies that a significant portion of consumers envisage relying on conventional fuels into the future.



Willingness To Buy EV | By Vehicle Type Intended

Willingness to consider an EV is consistently higher for the non-main vehicle driven, regardless of what type this vehicle is likely to be in future.

Most commonly, intention to consider EV is **higher when replacing a vehicle with a light car, light SUV or small car**, and tends to be **less prevalent when it comes to large SUVs, large cars, sports cars, utes and vans...**

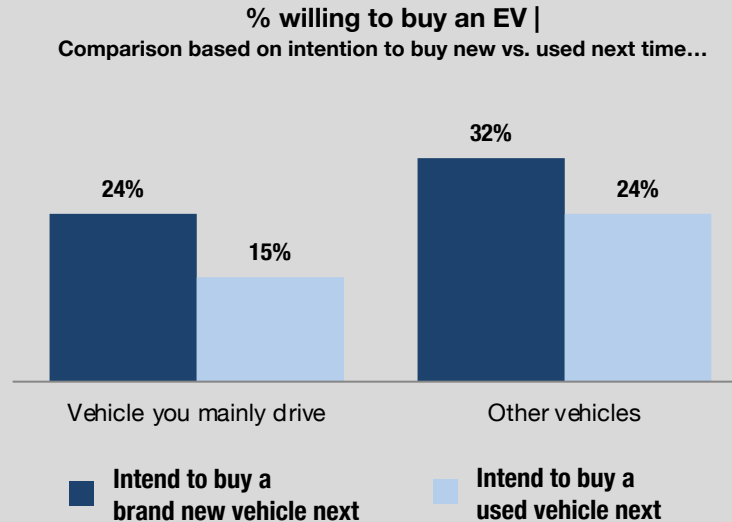


Q16. & Q20 Base: total respondents (n=2,000)



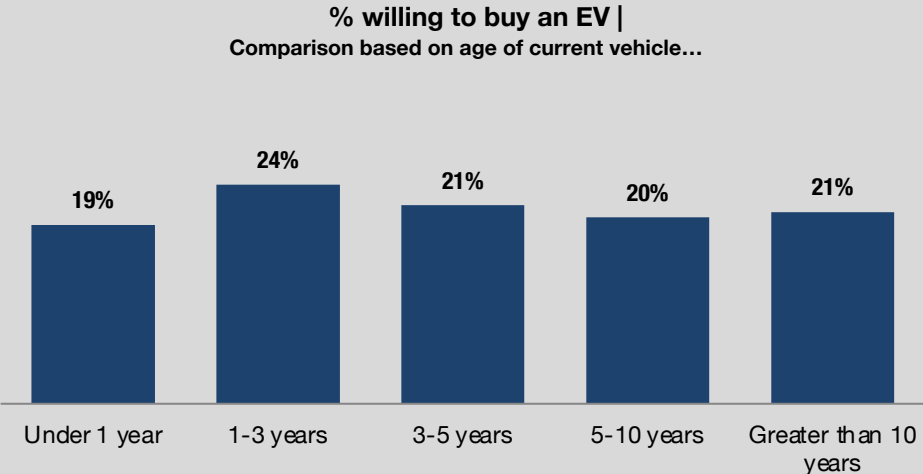
Willingness To Buy EV | By Intention For New vs. Used

Willingness to consider an Electric Vehicle also varies based on whether the driver's next vehicle is intended to be brand new vs. used. In short, **those who are likely to replace either their main vehicle or another household vehicle with a brand new vehicle are more likely to be considering an EV...**



Willingness To Buy EV | By Age Of Current Vehicle

There are few meaningful differences in willingness to purchase an Electric Vehicle when replacing a main vehicle driven based on the age of their current vehicle. Those with a vehicle aged less than 12 months old are slightly less likely to be considering an EV upon their next main vehicle purchase...



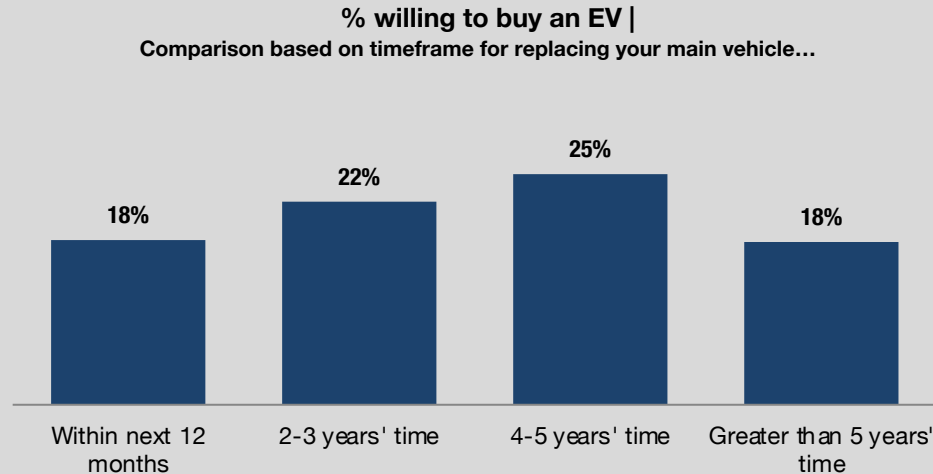
Q16. & Q20 Base: total respondents (n=2,000)



Willingness To Buy EV | By Timeline For Replacement

There is a slight increased likelihood to consider an Electric Vehicle for the drivers' next main vehicle when the timeframe for replacement is longer.

Those intending to replace their main vehicle in 4-5 years' time (25%) are more likely to consider an EV compared to those looking to replace within the coming 12 months (18%). It implies that **some consumers consider EVs as something 'for the mid-term' rather than 'for now'.**



Provocations | Replacing Vehicles...

**IN MOST CASES, THE
NEXT VEHICLE DRIVERS
ARE PLANNING ON
BUYING WILL BE BRAND
NEW RATHER THAN USED**



As new EV models come online, our data suggests that people may come across them in their search for a brand new car...

**INCREASED
CONSIDERATION OF
MEDIUM AND LARGE
SUVs, DECLINE IN
CONSIDERATION OF
SMALL CARS**



Our data indicates a trend towards people looking for larger vehicles than they're driving now. Is this trend 'real', and if so, what impact might this have on consideration of EVs?

**AROUND ONE IN FIVE
ARE CONSIDERING AN EV
FOR THEIR NEXT MAIN
VEHICLE**



In the mix of fuel types considered in future, ULP still dominates consideration overall. When or how might this balance of consideration shift?

**THOSE CONSIDERING
SMALLER VEHICLES
NEXT ARE MORE OPEN
TO EVs THAN THOSE
CONSIDERING LARGER
VEHICLES**



What does this say about the perceived lack of connection between EVs and larger vehicle types? Is shifting this perception a case of consumer education or advancing EV technology?

**CONSIDERATION OF EVs
IS STRONGER AMONG
THOSE LOOKING TO
REPLACE IN 3-5 YEARS
TIME COMPARED TO
THOSE LOOKING TO
REPLACE SOONER**



Does this suggest the consumer view is that EVs are still a mid to longer-term proposition rather than for 'right now'?



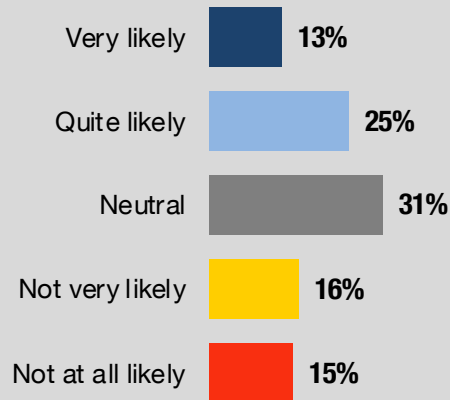
Focus On EVs

Specific feedback on drivers/barriers to EVs and the status quo of beliefs around EVs...

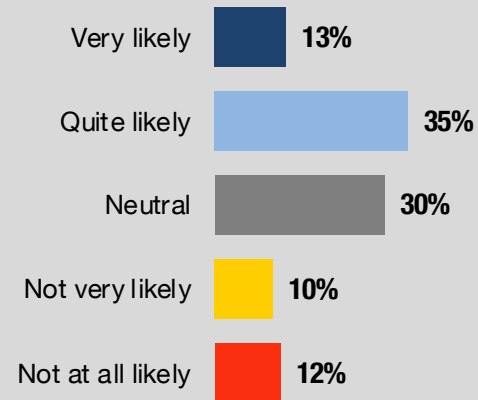


Consideration Of Hybrid & Electric

Specifically, how likely are you to consider an EV for the next vehicle you mainly drive?



How likely are you to consider buying a hybrid vehicle in future?



When asked directly about their consideration of an EV for the next vehicle they'll mainly drive, 38% say they're very or quite likely to consider it. This is higher than the proportion who are unlikely to do so (31%). At the same time, consideration of a hybrid vehicle is at 48%.

In both cases, around one in three remain uncertain and may require more information/reassurance. Regardless, it does indicate a level of openness to EVs among the broader market.

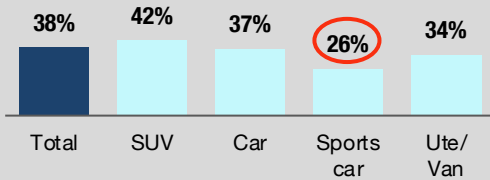
Q21. & Q24. Base: total respondents (n=2,000)



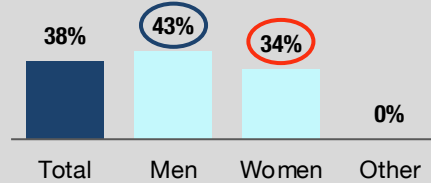
Profiling | Consideration Of Electric Vehicles

% ARE VERY/QUITE LIKELY TO CONSIDER AN EV IN FUTURE

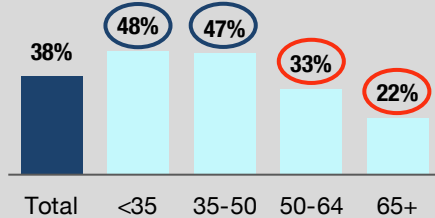
CURRENT MAIN VEHICLE



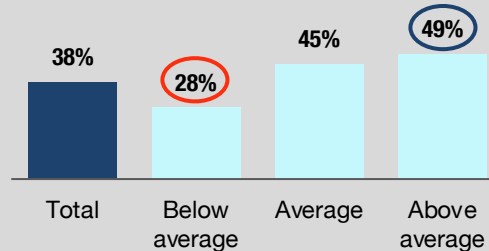
DRIVER GENDER



DRIVER AGE



HOUSEHOLD INCOME



There are some significant demographic skews when it comes to considering electric vehicles.

Men are significantly more likely than women (43% vs. 34%) to be open to EVs, while they are less appealing to those who are **current main drivers of a sports car** (26%)

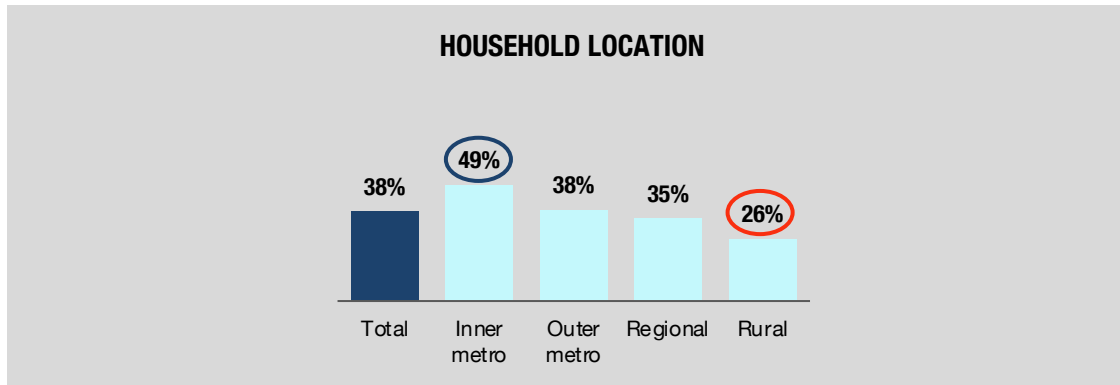
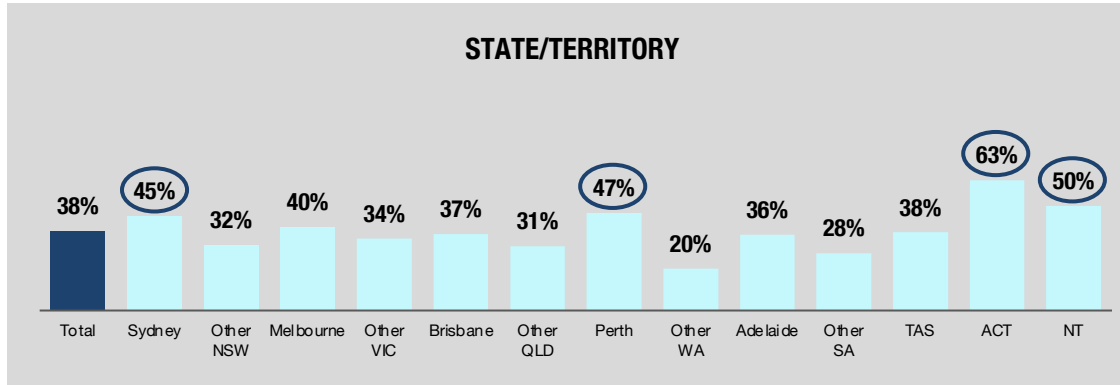
There's also a skew based on age – **younger drivers** are much more likely to be open to buying an electric vehicle.

Finally, household income has a significant bearing on openness to EVs. **Above average income households (49%) are far more likely to consider an EV** than those in below average income households (28%).



Profiling | Consideration Of Electric Vehicles

% ARE VERY/QUITE LIKELY TO CONSIDER AN EV IN FUTURE



Drivers in **Perth, Sydney**, the **ACT** and **NT** are much more open to considering an EV for their next main vehicle.

Even more significantly, **consideration of EVs is stronger among drivers who live within 10km of a metropolitan CBD** (49%), particularly when compared to those living in rural areas (26%).



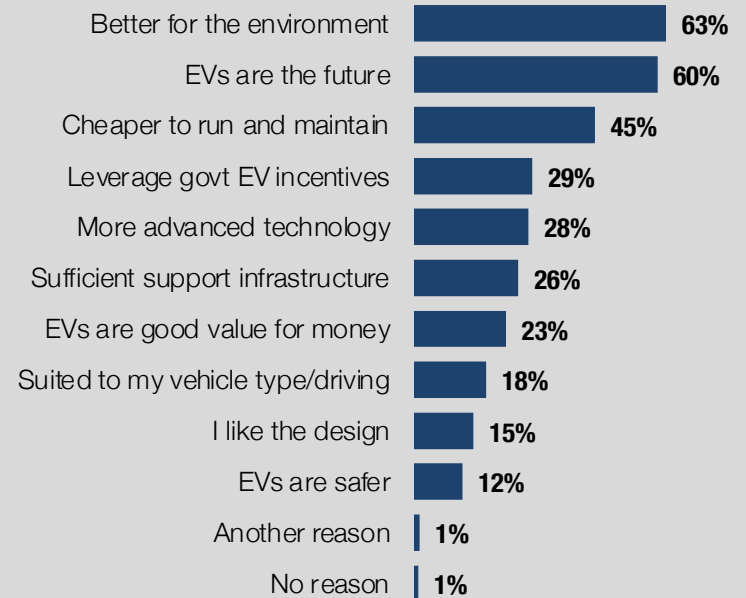
Drivers Of Considering An EV...

The most common reason for being open to considering an electric vehicle is a view that they're fundamentally **better for the environment** (63%) and represent an inevitable **step into the future** (60%).

Just under half (45%) note that EVs are **cheaper to run and maintain**.

This frames the dynamic of EV consideration in the future – those open to EVs feel they're better for the environment and have the benefit of being cheaper to maintain/run. However, these benefits would be weighed up against cost-side factors (like functional capacity and actual purchase cost)...

Why is it that you're likely to consider buying an electric vehicle in future?



Q23. Base: those who are likely to buy an EV in future (n=775)



Barriers To Considering An EV...

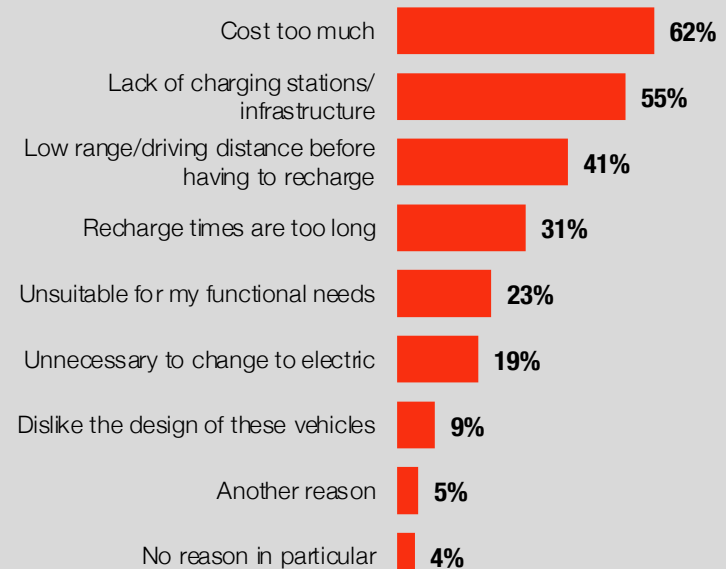
The most common reason for being unlikely to consider an electric vehicle is a concern around them **costing too much** (62%).

Other barriers are related a perceived lack of functionality for EVs – 55% are concerned about a **lack of charging infrastructure** and 41% about a **lack of driving range/distance**.

Interestingly, just one in four (23%) discount considering EVs based on a perception of not meeting their functional vehicle needs (e.g. ability to tow, function as a commercial vehicle etc.).

As hypothesised one page earlier, the benefits EVs are weighed up against the financial cost primarily. In addition, there's work to be done to educate and/or improve ease of charging/vehicle range to help drive even greater consideration.

Why is it that you're unlikely to consider buying an electric vehicle in future?



Q22. Base: those who are unlikely to buy/unsure about buying an EV in future (n=1,225)

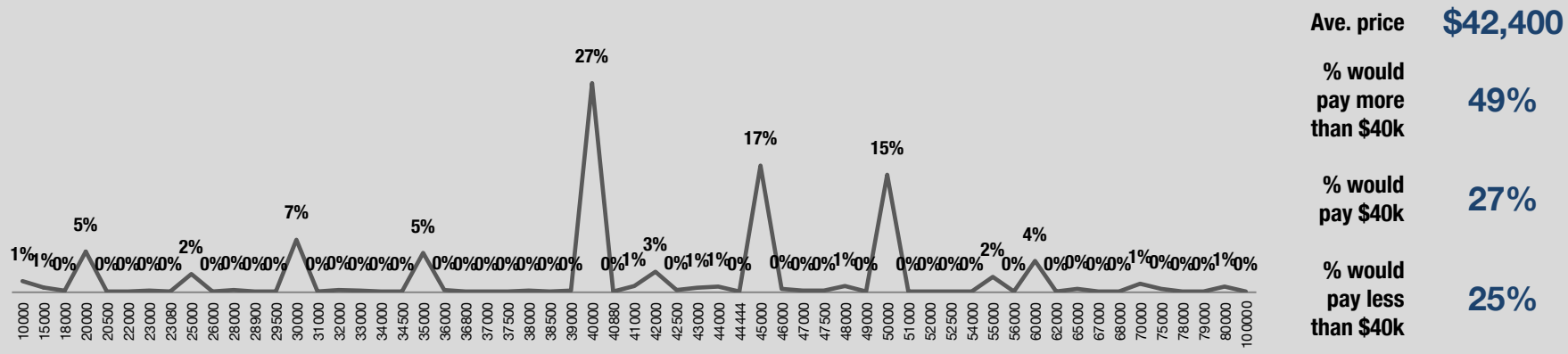


EV Price Point...

We set up a hypothetical situation where the respondent is in the market for a petrol vehicle priced at \$40k, and we asked them how much they'd be prepared to pay for an EV variant of the same vehicle. 4.5% said they'd pay 'nothing' – for the purposes of our analysis we have removed this cohort (who would be hard to convert to an EV irrespective of price).

Overall, 49% are willing to pay more for an EV than a petrol variant – 17% would be willing to pay \$5k more and 15% would pay \$10k more. On balance, the overall average price drivers are willing to pay is \$42,400 (which represents a 6% price premium).

Imagine you were in the market for a petrol vehicle that is available for \$40,000. What price would you be prepared to pay for an electric version of this same vehicle?

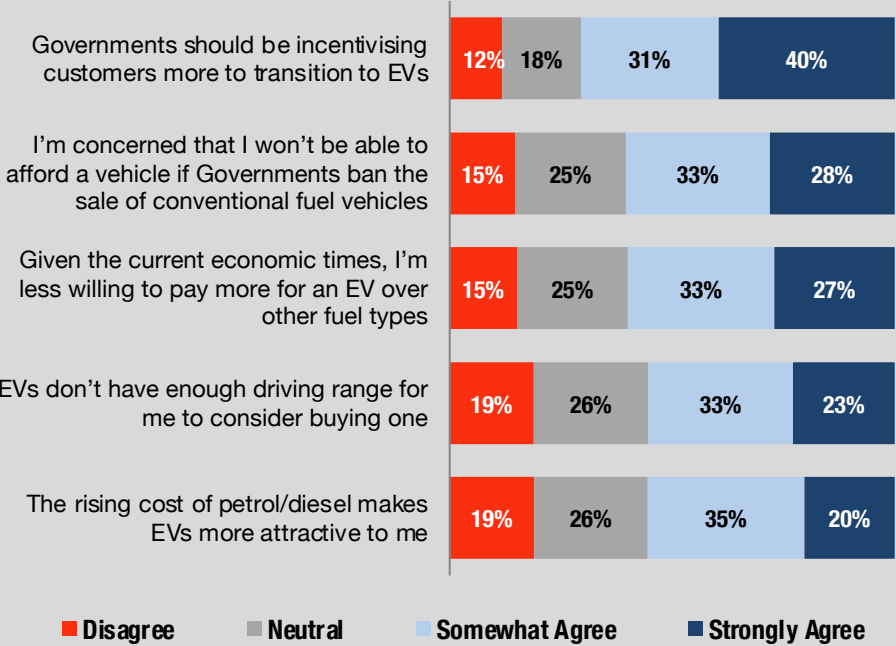


Q25. Base: total respondents (n=2,000)



Attitudes To EVs

How strongly do you agree or disagree with the following statements?



Australian drivers are strong in their support for the idea of **Government incentivisation** for customers transitioning to EVs (71% agree with this notion).

Three in five (61%) are concerned **about being unable to afford a vehicle if governments ban the sale of conventional fuel vehicles**, while a similar proportion (60%) agree that **the current economic times make them less willing to pay more for an EV**.

Overall, the mindset of consumers is focused on the personal financial impacts of considering an EV (and of government policy). This indicates just how much decisions about EVs would be impacted by what households feel they can afford.

Q26. Base: total respondents (n=2,000)



Provocations | EV Focus...

**38% SAY THEY'RE
LIKELY TO CONSIDER AN
EV FOR THEIR NEXT
MAIN VEHICLE**



When pressed specifically about considering an EV, there is greater openness to the idea.

At the same time, 31% are unlikely to consider one.

**EV CONSIDERATION IS
HIGHER AMONG SOME
COHORTS THAN OTHERS**



Consideration is higher among higher income households, younger drivers and those living within 10km of a major CBD. It suggests that it's still somewhat niche.

**DRIVER OF EVs? THE
ENVIRONMENT.
BARRIER TO EVs? THE
COST AND LACK OF
FUNCTION...**



It would appear that consideration of EVs becomes a balance between what's best for the environment/ the future, and what I can afford and fits with my functional driving needs.

**EVS DO COMMAND SOME
LEVEL OF PRICE
PREMIUM OVER A
COMPARABLE PETROL
VARIANT**



On average, 49% are willing to pay something more for an EV over a petrol variant of the same vehicle.

The average price premium willing to be paid is around 6% on a purchase price of \$40k.

**CONSUMER MINDSET IS
FIXATED ON THE
PERSONAL FINANCIAL
IMPACTS OF BUYING AN
EV**



They're keen for govt. incentives to alleviate the cost burden of transition, and hold concerns overall about the lack of affordability. Overall, EV cost is definitely an inhibitor for some drivers right now.



Appendix: Sample Profile

Demographic profile of sample



Demographic Profile Of Sample

AGE	n=	%
17-29	411	21%
30-39	360	18%
40-49	347	17%
50-59	323	16%
60+	559	28%

GENDER	n=	%
Male	1,021	51%
Female	978	49%
Other	1	0.2%

LIFE STAGE	n=	%
Single	519	26%
Couples, no kids	282	14%
Young Families	188	9%
Middle Families	289	15%
Mature Families	333	17%
Empty Nesters	389	20%

HOUSEHOLD LOCATION	n=	%
Within 10km of CBD	521	26%
Metro >10km from CBD	820	41%
Regional	351	18%
Rural	308	15%



Demographic Profile Of Sample

HOUSEHOLD LOCATION	n=	%
Sydney	419	21%
Other NSW	225	11%
Melbourne	374	19%
Other VIC	119	6%
Brisbane	198	10%
Other QLD	203	10%
Perth	162	8%
Other WA	40	2%
Adelaide	124	6%
Other SA	40	2%
TAS	40	2%
ACT	40	2%
NT	16	0.8%

HOUSEHOLD INCOME	n=	%
Less than \$20 000	52	3%
\$20 000 - \$39 999	237	12%
\$40 000 - \$59 999	242	12%
\$60 000 - \$79 999	246	12%
\$80 000 - \$99 999	205	10%
\$100 000 - \$124,999	267	13%
\$125,000 - \$149,999	199	10%
\$150,000 - \$199,999	233	12%
\$200,000+	177	9%
Don't know	31	2%
Prefer not to say	111	6%

