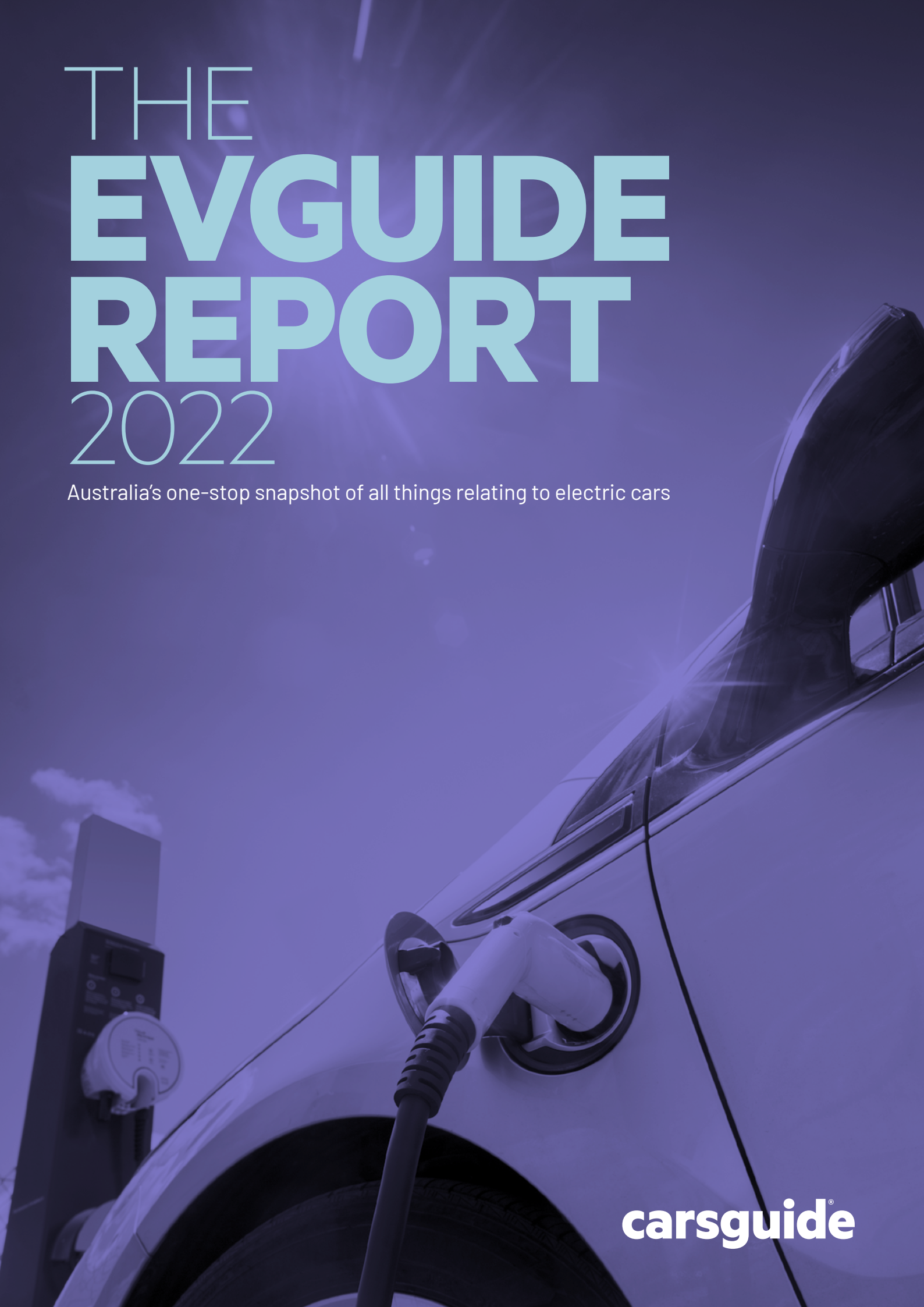
THE EVGUIDE REPORT 2022

Australia's one-stop snapshot of all things relating to electric cars



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Overview

Tom White
CarsGuide new energy vehicle specialist

You might not see too many electric cars on the road just yet, but Australia is really starting to think seriously about them.

At CarsGuide, we've seen consumer interest in electric vehicles more than double in the past two years, and this boom shows no sign of slowing. In terms of actual vehicle sales, we've seen our best indicator of Australian EV sales volume in the first quarter of 2022, and the growth of this sector outstripped most independent estimates.[2]

CarsGuide has developed **The EVGuide Report** as a resource for all things EVs and a pulse check of what's happening in the sector. The focus is on pure-electric vehicles, plus insights relating to hybrid, plug-in hybrid and hydrogen fuel-cell vehicles that represent the spectrum of electrified vehicles.

One of the biggest issues facing the fledgling EV industry right now is the breadth of information available and the multiple variables across states and manufacturers, which can be difficult to filter. The EVGuide Report highlights all the key points in one place, and we've also created the theoretical 'CarsGuide EV' to help you compare the cost of buying an EV in each state.

You'll find key consumer insights, EV models available for sale, proliferation of charging infrastructure, plus analysis of the real cost of buying an EV in each Australian state and territory, as well as an analysis of how Australia compares to other markets.

The EVGuide Report also highlights major developments expected in the coming year, plus factors that might influence government policy as well as a look at the environmental and sustainability impact of new energy vehicles.

Why now?

Recent research undertaken by the Electric Vehicle Council suggests more than 50 per cent of Australians would consider an EV for their next vehicle. The same research indicates EV sales have increased about 150 per cent year-on-year until the close of 2021.[3]

Many Australians have already taken the dive on an electric car, with Tesla reaching 12,094 buyers last year.[4] To put that in perspective, that's more cars than Lexus (9,290), Skoda (9,185), or Volvo (9,028) over the same period.

Total EVs sold last year was a relatively impressive 17,243[2] units and this is despite there being no significant emissions-based incentives or investment in the sector, at both federal and state levels, until recently.

The course of 2021 finally saw some progress on this front, with both NSW and Victorian state governments putting some form of subsidy in place for buyers, while the federal government is supporting the spread of charging infrastructure and other electric vehicle trial projects through the Australian Renewable Energy Agency (ARENA). According to the federal government, 612 projects have been funded by this body, with a total of $1.81 billion worth of funds invested.[5]

"Australia is really starting to think seriously about EVs."

[1]Electric Vehicle Council. 'EV sales boom presents chance to capture serious electric benefits, if government acts now' 31 January 2022
[2]Electric Vehicle Council. 'Consumer attitudes survey 2021' 7 October 2021
[3]Electric Vehicle Council. 'EV sales boom presents chance to capture serious electric benefits, if government acts now' 31 January 2022
[4]About ARENA

Consumer interest far outweighs actual sales

While progress has been positive for the EV market in the last 12 months, and consumer interest is booming, there's still a big gap between consideration and outright sales.

You might also be surprised that range anxiety does not rank as the top concern among buyers. In fact, the top reason is cost, with a recent EV Council report suggesting 87 per cent of people consider purchase price the biggest disincentive when looking at an EV.[5] Cost was closely followed by access to infrastructure, and the number of models to choose from, while driving range was fourth.

CarsGuide site traffic suggests us that people aren't just searching for the cheapest EV, or the EV with the longest range, but they are actually looking more specifically at body styles like SUVs, utes, and 4x4s of which there is currently limited choice in Australia.

Many intenders seem to be waiting for the right model to become available locally. For example, the affordable BYD Atto 3 or Volkswagen ID.3, or the Tesla Model Y SUV which are all set to arrive in Australia in the near future. Notably, the ID.3 and Model Y are both selling[6] at comparable volume to combustion equivalents in their native markets of Europe and the USA respectively.

Types of new-energy cars available in Australia

Pure EV

Electric motor and battery, no combustion engine.

Hybrid

Limited electric motor and combustion engine combined.

Plug-in hybrid electric vehicle (PHEV)

Electric motor supported by a combustion engine. Battery can be charged externally to facilitate pure-EV driving.

Hydrogen fuel-cell electric vehicle (FCEV)

Hydrogen-fuelled cell creates electricity to drive an electric motor supported by a battery.

[5]Electric Vehicle Council. 'Consumer attitudes survey 2021' 7 October 2021
[6]Volkswagen 'Volkswagen gains some 70,000 new customers with best-selling ID.3 in the first year' 10 June 2021

Costs and incentives

Incentives to help you purchase your new-energy vehicle

One thing that became apparent in the past 12 months is Australia's state-by-state politics means subsidies and the rules for accessing them can quickly change. This also means that depending on where in Australia you live, the price could be quite different thanks to various state government initiatives.

To simplify these variables, we've created the theoretical **'CarsGuide EV'** as a neutral standard for comparing the real cost of buying an EV in each Australian state and territory.

The *CarsGuide EV* is a small SUV with a pure-electric drivetrain, wearing a list price or Manufacturer's Suggested Retail Price (MSRP) - before on-road costs like dealer delivery, stamp duty and registration of $50,000, similar to vehicles at the more affordable end of the electric vehicle price scale. And, importantly, one which easily slips under the luxury car tax threshold and therefore has relevance to mainstream Australian buyers. Our purpose here is to apply each state's current subsidy program[8] to our theoretical car in order to discover the best region in Australia to buy a new EV.

Based on each state government's electric vehicle strategy documents for the first quarter of March 18 2022.

The CarsGuide EV cost estimates[7]

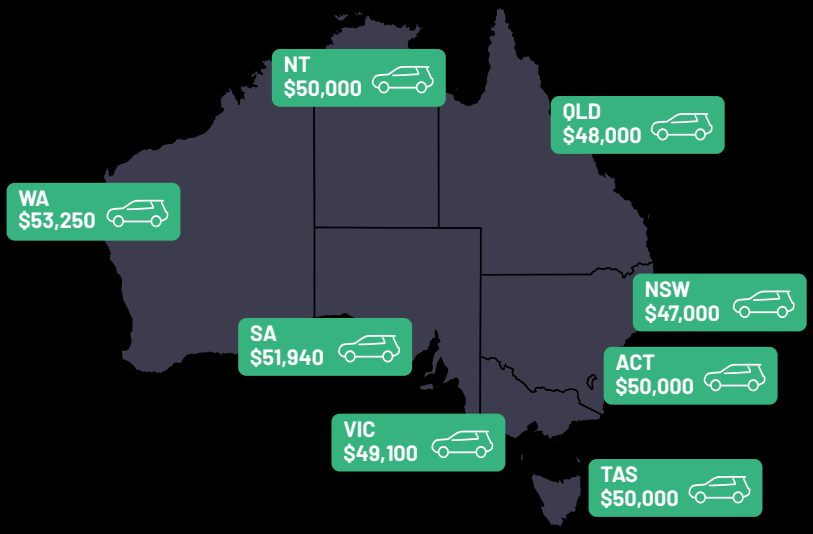
THE CARSGUIDE EV ■ Small SUV ■ Pure EV ■ **$50,000 MSRP**

WA
- No specific private sales targets, 25 per cent government fleet target by 2025
- $50,000 + $3,250 stamp duty
- No discount

NT
- Electric vehicle strategy document, but no specific private sales targets
- $50,000 + $1,500 stamp duty
- Minus $1,500 stamp duty exemption (From mid-2022)

QLD
- Every new car to be electric by 2036
- $50,000 + $1,000 stamp duty
- Minus $3000 subsidy from July

NSW
- Target: 50 per cent EV sales by 2030
- $50,000 + $1,600 stamp duty
- Minus $3,000 rebate and $1600 stamp duty exemption



SA
- No specific sales target defined, 'Action Plan' only, net zero emissions by 2050
- $50,000 + $1,940 stamp duty
- No discount

VIC
- Target: 50 per cent of all light vehicle sales to be zero emissions by 2030
- $50,000 + $2,100 stamp duty
- Minus $3,000 subsidy

TAS
- Electric vehicle future program, no specific private sale targets
- $50,000 + $2,000 stamp duty
- Minus $2,000 stamp duty exemption

ACT
- Electric vehicle strategy, with 2030 targets to be adopted this year
- $50,000 + $0 stamp duty (low-emissions vehicles do not attract stamp duty in the ACT)
- No discounts

[7]Before delivery
[8]All incentives taken from the respective state websites and was correct as at the 18th of March 2022. Check references for more information.

Based on the *CarsGuide EV*, it seems the cheapest place to buy a pure-EV upfront is currently New South Wales, by a fairly comfortable margin. It is disappointing to see Victoria offer a subsidy, but then essentially take it away by continuing to include stamp duty, and by including a road-user charge which is calculated by kilometres driven. This can really add up for prospective buyers.

Notably, other states are thinking beyond purchase price, and into subsidising long-term infrastructure plays. Western Australia for example seems to be following the UK model of mandating charging infrastructure in new buildings in order to set the state up for future success.

Are pure EVs really cheaper to run?

It's fair to say the cost of electricity to charge an EV is cheaper than the equivalent in petrol or diesel, regardless of where you charge your car. It can even be free if you charge from your home or public solar array.

Some models are also cheaper to service, or have longer service intervals which means you don't have to visit the dealer as often, but this isn't universal. There is a common misconception that electric cars are cheaper to service and be more reliable because of fewer moving parts, but be mindful they all still have tyres and brake components that will require regular replacement, and often have complex battery and motor cooling systems that will require attention in time.

So there are certain scenarios where EVs can be cheaper to run than a combustion car, but certainly not across the board. Beyond the cost of ownership, there's also the undeniable benefits of never having to get your hands dirty using a petrol pump again, or wake your kids leaving for work early in the morning because of a noisy exhaust.

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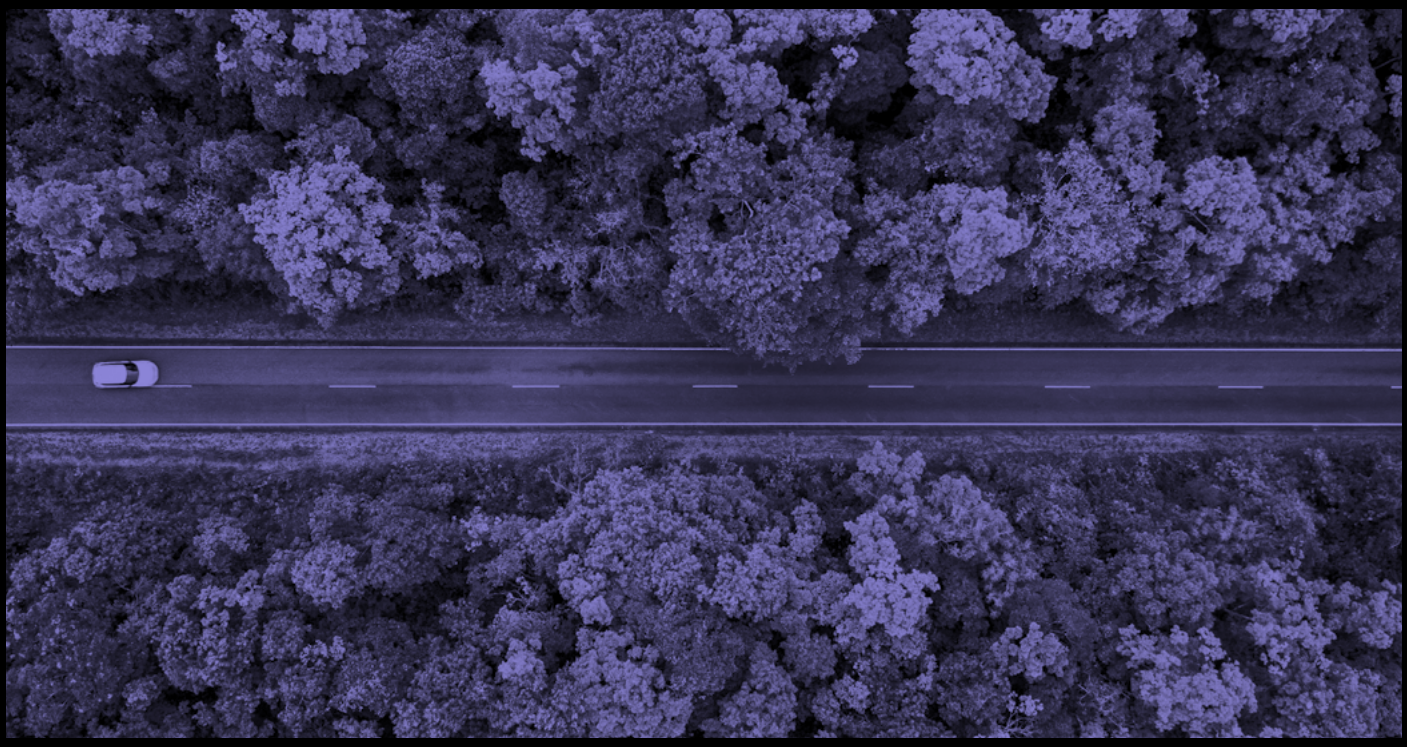


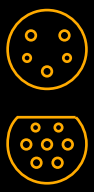
Charging metrics and infrastructure

Let's talk about charging

Based on the questions CarsGuide readers are asking, there's a lot of confusion around charging electric vehicles. It could indeed make a significant difference when it comes to choosing an EV.

At present, it seems that charging your EV at home, overnight, slowly is generally the most convenient charging option for Australian buyers. But what if you live in a unit without power to the garage? What if you only have on-street parking?

There could still be an ideal EV for you, but you'll need to pay attention to charging speeds, measured in kW, and the plug type, which may affect where you can charge. Essentially there are currently three distinct 'levels' of charging.



Level 1, which includes everything from a wall outlet to a public 'slow charger', will charge a vehicle at a rate of between 2.4 and 7.2kW with an AC connector. Depending on the efficiency of the car, this can add between 10 - 50km of driving range per hour.

Level 2 charging, which you'll find at places like shopping centres and council car parks, is still on AC but requires upgrading to three-phase infrastructure, and can charge between 11kW and 22kW and deliver between 50 and 100km of driving range per hour.

Finally, **DC fast charging** requires more expensive infrastructure and dedicated DC plugs, but will generally start from 50kW up (but can be as low as 25kW) - adding hundreds of kilometres of range per hour. Rare, very fast DC chargers can charge at up to 350kW, adding 100km of range in just a few minutes on compatible models, but require significant investment to install.

More affordable EVs and most plug-in hybrid (PHEV) vehicles will only accept 'Level 1' charging on an AC connection, and lower-end vehicles will only charge at between 50 and 100kW on a DC connection. As the price increases and features like cooling and higher voltage architectures are included, charging speed also increases, with cars like the Hyundai Ioniq 5 and Porsche Taycan ranking amongst the fastest charging on the market.

How long do they take to charge?

Here are the top ten fastest charging pure EVs in Australia from near empty to near full, adhering to their safe operating ranges which is explained below. Each charge time is based on the manufacturer's claim, so this is a guide only.

Charging times can vary depending on various factors, including environmental conditions like ambient and battery temperature. Keep in mind, cars at the lower end of the list charge relatively slowly, but have small batteries and limited ranges, so they don't have the charging times of some models closer to the top of the list with advanced architectures.

Top 10 pure EVs by claimed DC charging speed

Make	Model	Stated battery capacity	Max charge speed per hour	Charge time[10]
Hyundai	Ioniq 5	72.6kWh	350kW	18 minutes
Kia	EV6	77.4kWh	350kW	18 minutes
Porsche	Taycan	93.4kWh	270kW	22.5 minutes
Audi	e-Tron GT	93kWh	270kW	23 minutes
Audi	e-Tron	95kWh	150kW	30 minutes
Tesla	Model 3	82.8kWh	250kW	30 minutes
BMW	i4	84kWh	150kW	31 minutes
BMW	iX3	74kWh	150kW	32 minutes
Mazda	MX-30	35.5kWh	50kW	36 minutes
Mini	Cooper SE	32.6kWh	50kW	36 minutes

Top 10 pure EVs by claimed AC charging speed

Make	Model	Max AC charge speed[10]	Claimed time to full charge[9]
Porsche	Taycan	22kW	4.5 hours
Audi	e-Tron GT	22kW	4.5 hours
Audi	e-Tron	22kW	4.5 hours
Tesla	Model S	16kW	Variant dependent
Tesla	Model X	16kW	Variant dependent
Mini	Cooper SE	11kW	3.5 hours
Mercedes-Benz	EQA	11kW	4.1 hours
Hyundai	Ioniq 5	11kW	6 hours
Kia	EV6	11kW	Variant dependent
Volvo	XC40 Recharge Pure EV	11kW	Variant dependent
Polestar	2	11kW	Variant dependent
Tesla	Model 3	11kW	Variant dependent

[9]Claimed time to full charge is a manufacturer estimate only and not to an industry recognised official standard or protocol.
[10]Actual AC charge speed may vary from the claimed figures depending on environmental factors and the charging station used.

What range is possible with a full battery?

When fully charged, how far can an electric car actually go? Below are the top 15 EVs available in Australia as of the first quarter of 2022, ranked by range. Keep in mind Australian motorists only travel an average of 38km a day[11], so with 15 cars on this list offering more than 450km of range, it's fair to say there are options for those concerned with matching their combustion vehicle's usability and minimising range anxiety.

Top 15 pure EVs by driving range[12]

Make	Model	Maximum claimed range
Tesla	Model S	837km
Tesla	Model 3	657km
BMW	iX	630km
BMW	i4	590km
Tesla	Model X	580km
Polestar	2	540km
Kia	EV6	528km
Audi	e-Tron GT	488km
Hyundai	Kona electric	484km
Jaguar	I-Pace	470km
BMW	iX3	460km
Kia	Niro EV	455km
Porsche	Taycan	452km
Hyundai	Ioniq 5	451km

Which EV is the most energy efficient?

It's likely you'll be used to measuring efficiency in L/100km of fuel for combustion vehicles. For electric cars, the equivalent is simply converted to kWh/100km of charge consumption.

Efficiency for EVs is heavily influenced by similar factors to combustion cars, like weight and aerodynamics. However, EV-specific attributes like regenerative braking also play a role.

Top 15 pure EVs by efficiency

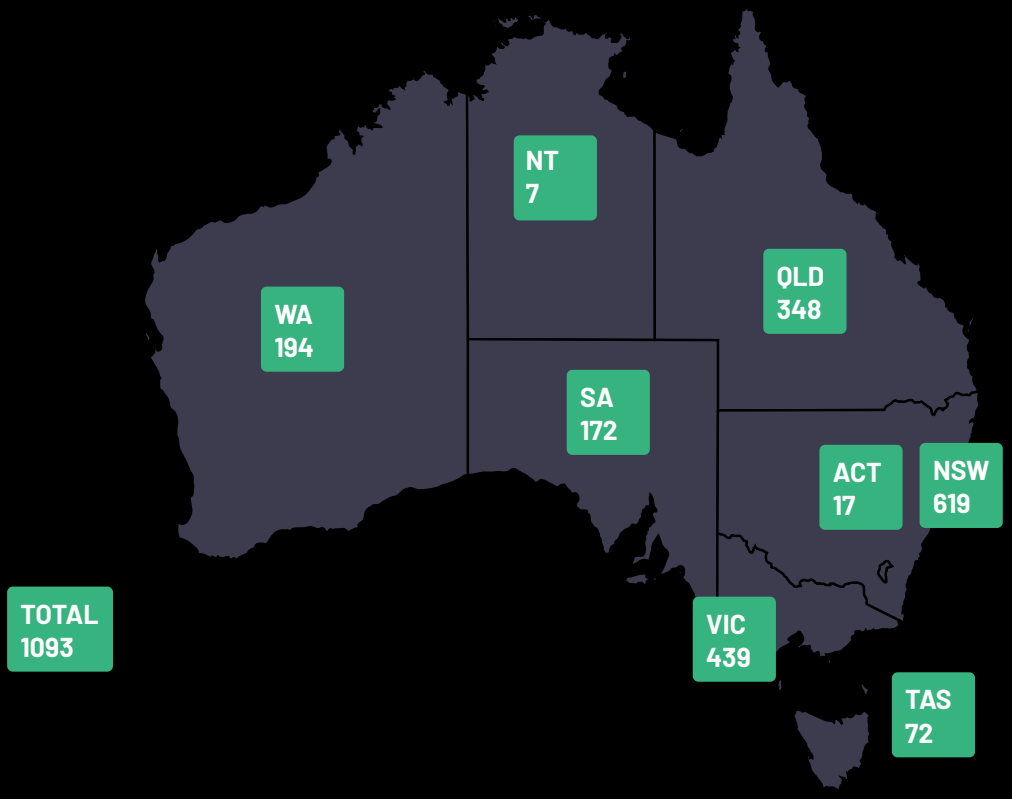
Make	Model	kWh efficiency - WLTP combined[13]	kWh efficiency - as tested by CarsGuide[14]
Tesla	Model 3	13.1kWh/100km	17.1kWh/100km
Hyundai	Kona electric	14.7kWh/100km	11.8kWh/100km
Lexus	UX300e	15.0kWh/100km	17.5kWh/100km
Hyundai	Ioniq electric	15.7kWh/100km	12.3kWh/100km
Kia	Niro EV	15.9kWh/100km	14.5kWh/100km
MG	ZS EV	16.2kWh/100km	14.6kWh/100km
Mini	Cooper SE	16.8kWh/100km	14.0kWh/100km
Mercedes-Benz	EQA250	17.7kWh/100km	22.9kWh/100km
Nissan	Leaf e+	18kWh/100km	16.3kWh/100km
Mazda	MX-30 e35	18.5kWh/100km	16.3kWh/100km

[11] Australian Bureau of Statistics. 'Survey of Motor Vehicle Use, Australia' 12 months ended 30 June 2020
[12]Driving range numbers are measured to the 'Worldwide harmonised light-duty vehicles test procedure (WLTP) combined' standard, a global test measurement protocol established by the United Nations Economic Commission for Europe to establish a standardised comparative number to use between models on a test cycle which approximates real-world conditions.
[13]Energy consumption numbers are measured to the 'Worldwide harmonised light-duty vehicles test procedure (WLTP) combined' standard, a global test measurement protocol established by the United Nations Economic Commission for Europe. The 'combined' protocol refers to a test which uses a percentage both of open-road and urban driving, and therefore represent a relatable standard for basis of comparison between models.
[14]These numbers have been calculated by independent tests published on CarsGuide. Test conditions may vary considerably, so noted here to depict variability of real-world efficiency.

Charging infrastructure[15]

Because of Australia's relative scale and the distances between capital cities, our density of electric vehicle chargers is probably never going to match a country in continental Europe. However, this snapshot provides an idea of the states and territories that are taking the lead in the rollout of infrastructure, which will hopefully add up to bigger numbers over time.

STATE	AC Chargers	DC Chargers	Total Chargers
ACT	16	1	17
NSW	523	96	619
NT	7	0	7
QLD	333	15	348
SA	143	29	172
TAS	64	8	72
VIC	408	31	439
WA	189	5	194
Total	**908**	**185**	**1093**



Again, New South Wales takes the lead here with the largest number of chargers - over half of all chargers available in the country. While the chargers here essentially mirror the state populations, they are also affected by geography. The ACT, for example, is relatively small by size and population and therefore needs far fewer charging locations.

As mentioned above, the federal government's recently announced Australian Renewable Energy Agency (ARENA) infrastructure program is designed to create more high-speed charging locations along the east coast, allowing more chargers to pop up in Victoria, NSW, and QLD. NSW also takes the lead for the spread of high-speed chargers across the state, allowing more realistic 'weekend trips' while most other states have the charging infrastructure centered in capital cities, which therefore limits travel outside urban areas.

[15]Data collated from sources at ChargeFox, Tesla, Evie, Jolt and NRMA. Data correct as at 28 February 2022

Environmental impact

What do electric cars really mean for the environment?

Electric cars have the obvious environmental benefit of generating no harmful emissions like carbon dioxide (CO2) or nitrogen oxides (NOx) while they move, but there are other factors that need to be taken into account in terms of transport sustainability.

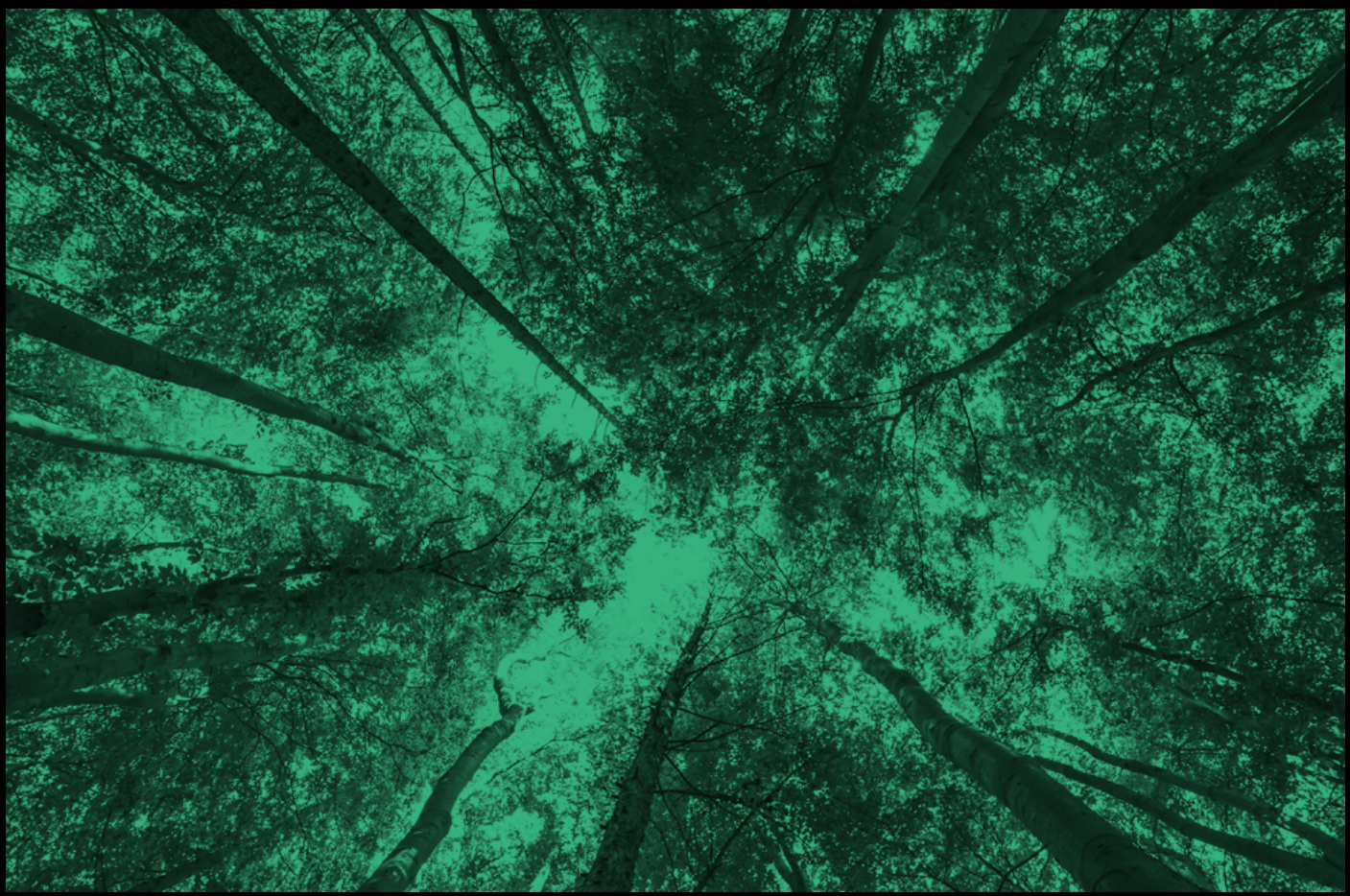
While overall emissions per kilometre for driving a purely electric vehicle are less than their combustion counterparts, even when the power is sourced from a fossil-fuel based energy grid, this does not include the extra emissions burden electric cars carry from the manufacture of batteries.

Polestar, for example, currently estimates it would take roughly 110,000km for its Polestar 2 to break even on its emissions footprint with the combustion equivalent from the Volvo, the XC40 SUV. This estimate is based on an average global mix of power grid sources (which includes a mix of both fossil fuel and renewable sources), according to its publicly-available life cycle assessment report for the car.[16]

This can of course be reduced if the power is sourced renewably, such as from solar panels or a grid which has better utilisation of wind, solar, or hydroelectric energy, ultimately falling as low as 40,000km. At this point the vehicle can start to become cleaner than a combustion car in terms of overall emissions.

Electric vehicles also have an important role to play on an individual level, allowing owners a convenient place to store energy from home solar arrays which could otherwise be wasted on a power grid unwilling or unable to accept extra supply.[17]

Batteries themselves are also able to live longer than just the eight-year warranty most manufacturers offer, or even the average life of the car. Brands like BMW are investing in re-purposing batteries from old electric cars to be used in power storage units, which it estimates can be used for another 10 years. The batteries are ultimately recycled for their raw materials, as some valuable rare earth elements can be reclaimed from expended battery cells and used to forge new ones.[18]



[16]Polestar. 'Life cycle assessment 2021 — Carbon footprint of Polestar 2 variants' 13 July 2021.
[17]Keane, Daniel, et al. "Solar panels switched off by energy authorities to stabilise South Australian electricity grid." ABC, 16 March 2021.
[18]BMW.com. "From raw materials to recycling – the life cycle of a BMW battery cell." BMW.com, 3 September 2020.

New-energy cars sales in 2021

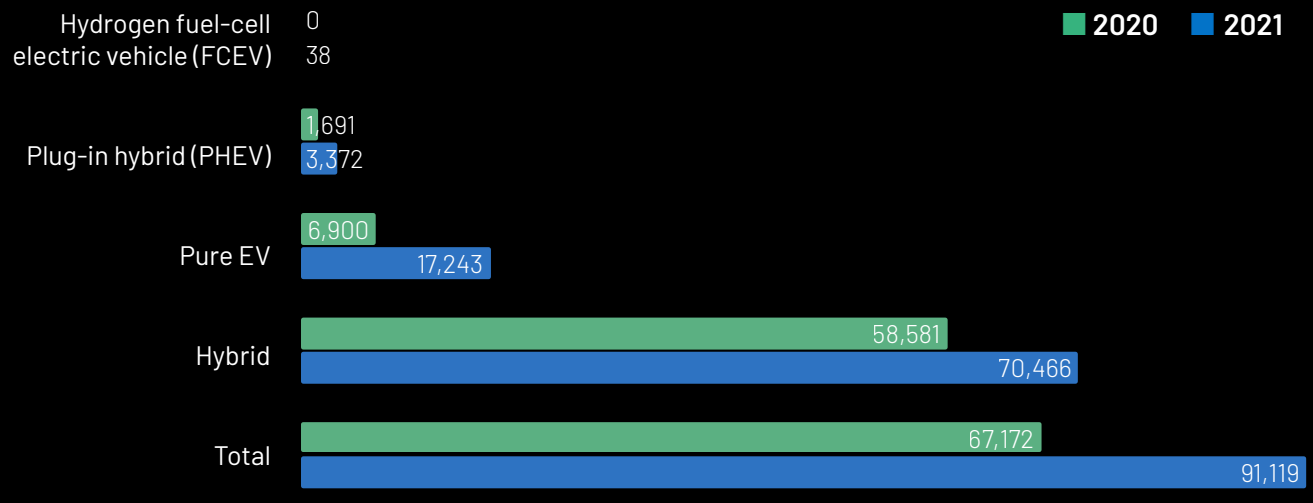
Pure EV car sales increase in 2021 vs 2020

It's clear for now that Australians are currently more comfortable with hybrid technology compared with full electrification. It makes sense; hybrids aren't as range limited, or constrained by new infrastructure in the way full electric or hydrogen fuel-cell cars (FCEV) are. Note that plug-in hybrid (PHEV) vehicles make up a fraction of this overall hybrid popularity.

New-energy car sales vs total Australian market in 2021[25]

New energy car sales 2021 vs 2020[19]

Comparing 2021 sales figures of new-energy vehicles with 2020, however, it's pure EV and plug-in hybrids that demonstrate the strongest growth. This not only reflects increased model availability, but also their intrinsic strengths. Newer pure EVs generally offer better value and outright usability than ever, while plug-in hybrids do the same while also enabling the flexibility to drive longer distances with the combustion element of their drivetrains. On this basis, we expect this relative growth of pure EV and plug-in hybrid models to continue at least through 2022.



	YoY Difference	% increase
Pure EV	10,343	149.90%
Hybrid	11,885	20.29%
Hydrogen fuel cell electric vehicle (FCEV)	38	
Plug-in hybrid (PHEV)	1,681	99.41%
Total	**23,947**	**35.65%**

[19]Sales data taken from VFACTS December 2021 report. Tesla sales numbers from EV Council report VFACTS, Federal Chamber of Automotive Industries, December 2021

How does Australia stack up against our international counterparts?

The numbers show Australia is still well behind the US, which shares similar geographical challenges, and a state-by-state approach to subsidies.

Like Australia, the UK is also a right-hand-drive market, which affects the models available. However, the limited distances between cities, its proximity to the EU, and relatively proactive government policies have nurtured its EV market.

China is well ahead when it comes to technology and is actively mandating high numbers of EV sales from its local automakers. The result is a huge uptake of electric vehicles, jumping from 1.2 million to 3.4 million registrations between 2020 and 2021[20], with a corresponding explosion of local makes and models. China also benefits from having a highly urbanised population, with generally lower range requirements.

Norway continues to be the global leader in EV uptake, with a staggering 65 per cent of new cars sold being fully electric. Locals benefit from living in a relatively small, rich country with generous EV incentives and strong investment in infrastructure.

Number of vehicles sold and percentage of market

New pure-EV models in the Australian market for Q1 2022

Make	Price	Range
Polestar 2	From $59,990	Up to 540km
Kia EV6	From $67,990	Up to 504km
BMW iX3	From $114,900	Up to 460km
BMW iX	From $135,900	Up to 630km


Polestar 2


Kia EV6


BMW iX3


BMW iX

[20] [23] [24] [25] International Energy Agency. "Electric cars fend off supply challenges to more than double global sales – Analysis - IEA." 30 January 2022
[21] Electric Vehicle Council. 'EV sales boom presents chance to capture serious electric benefits, if government acts now' 31 January 2022
[22] The Society of Motor Manufacturers and Traders (SMMT). 'SMMT MOTOR INDUSTRY FACTS 2021' November 2021

New pure-EV models set to arrive in 2022

With at least 11 new pure-EVs set to launch locally over the course of 2022, this represents an expansion of almost 50 per cent of models available to Australian buyers. This is great news for consumer choice, but also underlines manufacturer intent to expand in this space despite a relative lack of government incentives.

Make/model	Expected timing[26]
Mercedes-Benz EQS	Early
Genesis GV60	Early
Tesla Model Y	Mid
Kia Niro (new generation)	Mid
Mercedes-Benz EQE	Mid
BMW i4	Mid
BYD Atto 3	Mid
BYD EA1	Mid
Hyundai Ioniq 6	Late
Volvo C40	Late
MG ZS EV (update)	Late


Mercedes-Benz EQS


Genesis GV60


Tesla Model Y


Kia Niro (new generation)


Mercedes-Benz EQE


BMW i4


MG ZS EV (update)


BYD Atto 3


BYD EA1


Hyundai Ioniq 6


Volvo C40

Pure EVs not currently available in Australia

With limited market scale and a relative lack of government incentives, combined with rapidly growing international demand, numerous manufacturers are choosing not to prioritise our market for new EV model launches. Globally, many manufacturers are also facing supply shortages and a re-think of logistics as factories are re-aligned to battery manufacturing centres. As a result, Australia misses out on some of the most promising EV models.

Top 5 pure EVs not available in Australia

Make	Bodystyle	Context[27]
Volkswagen ID.4	SUV	Coming to Australia in 2023 - High demand in Europe
Volkswagen ID.3	Hatchback	Coming to Australia in 2023 - High demand in Europe
Rivian R1T	Ute	Potential Australian launch in 2023 - Left-hand drive production
Ford F150 Lightning	Ute	Australian arrival unlikely - Left-hand drive production
Ford Mustang Mach-E	SUV	Likely for an Australian launch, but unconfirmed - High US and European demand


Volkswagen ID.4


Volkswagen ID.3


Rivian R1T


Ford F150 Lightning


Ford Mustang Mach-E

[26][27] Based on indications from manufacturers.

Consumer interest

The articles EV buyers and intenders care about the most. Top 10 most viewed advice articles on CarsGuide in 2021.[28]

Our EVGuide top 10 stories ranked by traffic should give you an idea of what Australians want to know about electric cars. Clearly, hybrids are Australia's preferred form of electrification, thanks to the popularity and convenience of Toyota's expansive range, plus the reputation they've garnered from being on the market for more than two decades. However, the interest in electric cars by price shows there's a broader interest in electrified vehicles beyond hybrids.

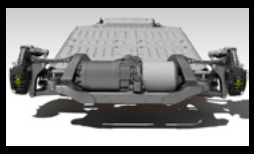
1. **10 best hybrid vehicles in Australia**
   As much as people want to buy a fully electric car - hybrids for convenience and upfront cost are still king!

2. **Cheapest electric cars in Australia**
   Confirming the trend - people are primarily motivated by price when it comes to searching for an **EV.**

3. **Electric SUVs: Five best electric SUV cars in Australia**
   Again on-trend, buyers are desperate for electric vehicles in popular bodystyles.

4. **Hybrid vs plug-in hybrid: What is the difference between hybrid and PHEVs?**
   Perhaps one of the more confusing topics in the new-energy space, PHEVs are hard to understand.

5. **Full electric car: 10 best fully electric cars available in Australia (or coming soon)**
   Looking to the future, buyers are aware that their best option probably hasn't arrived in Australia yet.



6. **Electric car battery manufacturers: Who makes batteries for electric vehicles? The Complete List of EV battery companies**
   Perhaps a stand in for the engine - the topic of battery manufacture and construction will be a hot one.

7. **Electric trucks: Five best electric pickup trucks in Australia**
   Pick up trucks, or 'utes' as we know them in Australia are the most popular bodystyle - but will there be EV versions?

8. **Every electric car available in Australia**
   The title of this one speaks for itself - buyers want to know what their options even are!

9. **Chinese electric cars: Top five electric vehicles from China**
   Chinese brands have been brought to the fore of the market in the last year - and are bringing innovative electric models with them.

10. **Electric 4x4: Top five 4WD electric cars in Australia**
    Like their ute siblings, 4x4 SUVs are all the rage in Australia - people are quite rightly looking for their electrified options in this space.

[28]CarsGuide Google Analytics. March-December 2021

Looking to 2023

The upcoming federal election may put the spotlight on the electric vehicle industry as it becomes a battleground to win votes.
We expect existing projects like ARENA will be championed, but there could be significant promises for subsidies or infrastructure at both a federal and state level.

Bigger, bolder commitments from automakers which could accelerate the decline of combustion technologies.
As Europe becomes more wary of a reliance on fossil fuels, there is a chance the end of combustion production will be decided faster. Will Australian policymakers follow suit?

More competition from China and Europe will put pressure on Tesla as supply shortages are predicted to ease.
Will Tesla be able to maintain its EV dominance into 2023? Volkswagen is nipping at its heels in Europe with its popular and keenly priced ID range, and more affordable models out of China from SAIC, BYD, and Great Wall pose a legitimate threat.

Battery supply and technology will become the industry's biggest focus.
As electric vehicles begin to gain mainstream popularity, consumers and manufacturers are beginning to ask what the real cost of an electric car is. The realities of the industry, like the sourcing of controversial materials like cobalt used in battery construction, are likely to become more harshly scrutinised.

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[29]Nielsen Digital Content Ratings (Monthly) Tagged, January-December 2021 Text, P18+, PC, Smartphones & Tablets, Unique Audience