

A VISIT TO UNIQUE EVs

By Greg Smith



On Sunday 18th December 2022, Enzo Simeone and Greg Smith went to a presentation by a new electric vehicle transformation company, based in Perth, called Unique EVs. The company ran a workshop and barbecue at their facility in Bibra Lake. In addition, the Australian Electric Vehicle Association (AEVA) was present in support of the event.

The photos shown below demonstrate the types of vehicle transformations that Unique EVs has undertaken. Brochures are also provided covering what is possible. As a newly formed company, Unique EVs has present capacity to complete about 8 vehicle electrifications a year, here in WA.



Most of the vehicles they have worked on have been various types of VWs. Each has been brought back to the highest quality of 'as-new' appearance prior to being electrified to the individual specifications and requirements of their owners.

In discussions with the Unique EV and AEVA people present, it seems the most suitable old cars for these special transformations may be 1960s-70s older cars, in reasonably good bodywork condition and relatively restorable. After complete reconditioning of the vehicle shell and interior, Unique EVs then installs the electric drive, battery and control systems. Some cars also had complete undercarriage replacements too.

During discussion, I was told that from an electrification point of view, earlier cars without power steering, air conditioning, etc., may be better choices for transformation to become EV-powered classics. Evidentially, these transformed vintage cars, powered electrically, could be among the most desired historic cars in another 20 or 30 years. The owners of those electrified 1960s and '70s VWs shown at the workshop had nothing but the most positive things to say about their rather expensively restored toys now with 21st century drive systems.

On what sort of Alfa Romeo might it be worth spending about \$70k to remake it into a vintage electric vehicle, I wondered? The VW examples shown suggest some good Alfa choices might exist where, after a full restoration of the shell and interior, electrification of the drive system would lead to a second vehicle lifetime and a new use pattern for an otherwise rather weary, older Alfa Romeo. Food for thought, perhaps?



WHO ARE UNIQUE EVS?

We're a group of creative car lovers who have built a business to change the world.

With a love for unique classic cars and a passion to help stop climate change, we have come together to lead the way in the electric vehicle conversion market.

Our team has experience in multiple industries, including renewable energy, automotive manufacturing and the maritime sectors. That combined depth of knowledge has created a team of diverse professionals and world-class problem solvers.



Future proof your ride.



WHAT IS AN EV CONVERSION?

An electric vehicle conversion is the replacement of a car's internal combustion engine (ICE) and connected components with an electric motor and batteries, to create an all-electric vehicle. When deciding to convert your vehicle it's important to think about the style of driving, the distance between battery charges and performance you would like. Conversion is generally performed on unique and classic vehicles. A unique or classic vehicle is typically 20 years or older.

WHAT DOES THE PROCESS INVOLVE?

We Make Cars Electric.

At Unique EVs we like to learn more about your vehicles. To do this we complete an Initial Review based on your EV conversion expectations and requirements.

EV Conversion information we gather for the Initial Review covers:

- Desired Distance Per Battery Charge
- Time taken to charge the Vehicle Batteries
- How you will use the Vehicle and Estimated kms travelled per year
- Your Style of Driving

Once our Initial Review is completed, we schedule a meeting to discuss options with you and provide options for your EV conversion. From there we complete a Vehicle Assessment Report (VAR) at our workshop. This is a comprehensive review of your vehicle, including works required and a fixed quote for your EV conversion.

Please contact us for more information.

CONVERT YOUR VEHICLE.

Today is the day to embrace the future and convert your unique classic vehicle.

Contact Us:

Email: info@uniqueevs.com.au
Phone: 1300 277 999

To complete an Initial Review please fill out our EV Conversion Form at www.uniqueevs.com.au



Never gets thirsty.

Currently word has it the average cost of an Electric Car in Australia is over the \$55,000 dollar mark. And there's the lead times.

But who wants to drive your average Electric Car in Australia?

Like all good things they take time. Like taking the little bug down to Mandurah and back. It also takes time to grow arms and legs.

So how long does it take to pay off a new electric vehicle with Fuel and maintenance?

A guy at the pub who didn't really know said: 'Stinky' cars travelling about 12,000km per year drink about \$2k worth of fuel and suck up \$350 pa maintenance.

It takes time to pay for good things so your Electric Converted VW may cost you \$550 a year in charging costs.

Given the Price for an Electric Conversion hovers around the same as a new EV; but not looking like depreciating anytime soon.

It's better than money in the bank!

Speed, Maintenance, Cost Saving and just that its cool as – your little electric powered VW will get you there with money in your pocket.

For more information see our website at

www.uniqueevs.com.au



UNIQUE EVS





We Make Cars Electric.



UNIQUE EVS
We make cars electric.

'The Zombie'

Tesla Powered 1969 VW Single Cab


			
0-100 km/h Fast	Range 250-300km	Power 60kW	Conversion Cost \$75,500+

The Zombie was purchased in 2021 and was almost recognisable. Originally used for a Market Garden work Ute it had been off the road of decades resting away. She is powered by a Tesla Small Drive unit and a 52.8kW Battery Pack.

www.uniqueevs.com.au
info@uniqueevs.com.au
1300 277 999

Contact us to convert your classic or unique vehicle to full electric drive or scan the QR code.

Unique EVs
Unit 8 – 108 Barrington Street,
Bibra Lake, 6163 WA



UNIQUE EVS
We make cars electric.

The Green Machine

Electric 1969 Volkswagen Type 3 Square Back

			
0-100 km/h 6.5 Seconds	Range 150km	Power 35kW	Conversion Cost \$65,500+

The Green Machine is our flagship conversion, completed in late 2021 Hyper 9 Motor with 26.5 kW battery system with Regenerative braking

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UNIQUE EVS
We make cars electric.

'Bills Beasty'

Tesla Powered 65' VW Beetle

			
0-100 km/h Fast	Range 150km+	Power 60kW	Conversion Cost \$85,500+

Bills EV Bug is powered by a Tesla Small Drive Unit. The brief for this project included substantial upgrades to suspension. Included Air-conditioning, touch screen sound system and I-Phone Motor Displays.

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Batteries

Battery capacity is measured in kilowatt-hours (kWh) and varies considerably. More battery means more weight, and more up-front cost.

Batteries work best between 20°C and 35°C.

Any cooler they underperform; and any hotter they suffer degradation. High quality EV batteries are built with thermal management.

EV batteries should last at least 15 years before the range is deemed unacceptable. Batteries may be re-purposed for solar storage and when completely spent, they are 100% recyclable.

Choose an EV with a battery which suits your typical driving needs - there's no point paying for an enormous battery unless you really need it. For trips under 10 km, why not consider an electric scooter or bike!



Range

Range depends mostly on the size of the battery and the efficiency of your vehicle. Larger, heavier vehicles, and motorcycles, will be less efficient due to increased rolling drag.

Travelling faster also consumes more energy per kilometre, so you can expect your highway mileage to be worse than your city mileage.

An efficiency of 117 Wh/km around town means a 55 kWh battery offers 470 km range.

A highway efficiency of 180 Wh/km results in 300 km of driving before you need to recharge.

Consider the weather too - strong headwinds or rain might reduce your range by over 30%.

For more detailed information on a wide variety of including range, visit the AEVA website!



Australian
Electric
Vehicle
Association

Est. 1973



EV 101



A SIMPLE GUIDE TO
EV OWNERSHIP

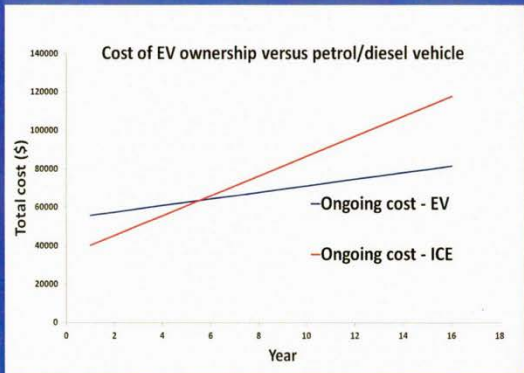
GO ELECTRIC!



W: WWW.AEVA.ASN.AU
E: SECRETARY@AEVA.ASN.AU
ABN: 27629533129



EV Economics



Electric vehicles might be more expensive up front, but the long-term savings are huge. Australians spend around \$2000 per year in fuel, while an EV charged from the grid might cost less than \$500 per year. This drops to zero if charged from solar. The more efficient your EV the greater the savings.

Maintenance on an EV is also considerably cheaper - there's so few moving parts, nothing wears out! The economics of EVs only get better with the more km driven, so if you drive a lot, expect the savings sooner!



Image courtesy of Ford

Can I tow?

With abundant torque from a stand-still, EVs make great towing vehicles. Several makes and models are rated to tow up to 2 tons, while others may have tow bars fitted with formal engineering certification. Driving range drops substantially when towing heavy or bulky loads, so plan your charge stops ahead of time, and slow down a bit.

More electric utes and vans will be offered for sale in Australia over the coming years.

For more specific information about towing, range and price for various makes and models, visit the Resources page on the website.



Recharging

Charging your EV is super simple – just plug in and walk away! Most people charge at home; overnight or on the weekends. A dedicated 32 amp EV charger is recommended for full convenience and functionality. Some chargers are even able to maximise solar generation, ensuring your EV is only charged on renewable energy.

Workplaces and businesses are increasingly offering EV charging to staff and customers. The average EV will only need one full charge a week, so set up a roster if there are several EV drivers. The Australian electricity grid often exceeds 50% renewable energy through the middle of the day; so let your EV soak up that clean energy!

On the highway, some DC fast chargers will provide up to 200 km in the time it takes to order a coffee, but others might take up to an hour. Most chargers require an App and/or a credit card for payment. Check out Plugshare.com for a global list of charge points, including their power levels, costs and accessibility!

