

Electric vehicle benefits beyond skipping the pump

By  Mike Whitfield

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In the coming decades, it won't be a question of if the general public will adopt electric vehicles (EVs), but when. The National Association of Automobile Manufacturers of South Africa (Naamsa) noted that 2015 saw the adoption of 1.5 million EVs and plug-in hybrids worldwide, about 0.1% of cars on the roads globally. By 2040, this number will skyrocket to 35% of all cars on the road.



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The most critical concerns from potential buyers are about an EV's range. While technology is quickly extending range with the latest models boasting impressive autonomy figures in excess of 300 kilometres there are numerous benefits EV owners can enjoy today.

Aside from contributing to the environment and society at large by driving a zero-emission vehicle, boosting the local South African economy and skipping that fortnightly petrol fill-up, EV owners can receive the following benefits:

V2H technology

'Vehicle to home', also known as V2H technology, enables parked and plugged-in EVs to provide energy to the residence. From your garage, using the power you filled up with at the mall or a nearby dealership, you can actually reinvest that power into your home. During an emergency, a storm or routine load-shedding, EV owners could actually use their car to power important appliances in their home.



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The technology was originally used in Japan and made its way to South Africa when the Nissan Leaf entered the market in 2013. Since then, the technology has evolved to include 'vehicle to grid', or V2G technology, which transfers energy from the vehicle back onto the grid. This means the EV in your garage would trade with utility companies, ultimately increasing capacity and helping to stabilise the grid during peak usage.

Battery second-life

One challenge potential EV owners face, at times preventing them from making a purchase is the cost of replacing the battery that powers the vehicle. As with all battery powered devices, it ages over time and output may be reduced. What's important to remember is how you charge the battery. For example, between normal EV charging and fast charging, the latter is recommended only occasionally, as it can increase the wear and tear on the battery.

However, when that time comes to say goodbye to your original battery, it can easily be replaced. But what's to be done about the old unit? Enter battery second-life, where an old battery may be used to store energy generated from solar. That energy can later be used at night to power your home, again using the V2H technology.



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To bring this technology to life, it's up to the car manufacturers in South Africa to step up and continue evolving technology, as well as partnering with government entities to lay the groundwork and infrastructure needed to make EV adoption a reality in South Africa. That's why Nissan partners with uYilo e-Mobility Programme, which brings together government, car manufacturers and other mobility stakeholders to fast-track the development and adoption of EV.

As you evaluate the benefits of [electric vehicles](#), look beyond the reduced cost of ownership and remember, you could one day be helping power your home, and even your community, with your car.

ABOUT MIKE WHITFIELD

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