



Can we reach 64,000 EVs in five years?

The Government's vision for electric vehicles is to have 64,000 EVs on our roads by 2021.

This means a doubling each year from 2000 this year (currently 12-1300), to 4000 in 2017, 8000 in 2018, 16,000 in 2019, 32,000 by 2020 and 64,000 in 2021.

Can and will it be done?

YES, say the EV evangelists, backed by the Government's push to get EVs into fleets operated by major companies and local bodies, so that there will be a growing flow of used EVs in to the second hand market, over the next few years.

NO, say new car distributors, or at least not without meaningful Government subsidies. Steve Pragnell of Toyota NZ believes the government is dreaming with its target of 64,000 electric vehicles on the road by 2022.

"Round the world, the places where electric cars are booming is where there are big incentives," he says. "Until we get a breakthrough in this space and get up to decent range and energy density, the market will be limited.."

"We are on the cusp of solving some

of these issues, but at the moment a pure EV has a lot of compromises for New Zealand use."

The 64,000 question is how can we achieve the Government's 64,000 EVs by 2021.

The irony is that from a purely environmental and economic point-of-view there is no argument, EVs are it. But buying a car is an emotive decision.

Who cares than we can save up to \$9 billion a year on oil imports, and reduce our CO2 emissions from transport to near zero?

"The most effective marketing tool for EVs is to get people into EVs," visiting US EV advocate Chelsea Sexton told last month's EV symposium in Wellington. "The owners and drivers of EVs are the most effective selling tool we have."

"Once people experience the fantastic performance of EVs, their quietness and fun to drive, they are sold."

Mike Underhill, head of EECA – the government agency tasked with winning the hearts and minds of New Zealand car buyers – sees it this way.



Mike Underhill

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Biggest importer in strong EV move

The biggest importer of used vehicles into the country has thrown its weight behind the burgeoning electric vehicle (EV) market – offering free compliance on vehicles it imports for traders.

From August 1, Nichibo has removed the \$300 compliance inspection costs of any EV imported by the company for its network of 300 used vehicle traders nationally. The offer will not be exclusive to Japanese imports but will be extended to EVs imported from Australia and the UK.

And it is not a short-term offer – with a commitment to the plan for two years.

The offer covers just the inspection, not parts or remedial work, and saves the importing trader over \$300.

The incentive is possible through an agreement between Nichibo's significant importation business and its joint venture compliance operations Fast-Track, Motorsafe and a nationwide affiliated network which carries out the inspections required for used imports to be registered in New Zealand.

"Our motivation is to make EVs more affordable to the New

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Robert Young

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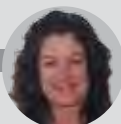
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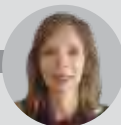
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Biggest importer in strong EV move



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Zealand public," says Nichibo director Robert Young.

"One of the biggest challenges to ownership of brand new EVs is the initial purchase price; that premium over an equivalent petrol car isn't offset by the fuel savings you experience with EV technology. A high quality used option, like those Nichibo sources for its clients, improves the whole of lifecycle proposition of an EV massively."

"It's very much a have your cake and eat it too situation. More and more environmentally conscious buyers are taking advantage of this."

Nichibo has imported close to 300 electric vehicles, almost 20% of the entire EV fleet.

Imported Motor Vehicle Industry Association chief executive David Vinsen welcomes the move.

"I think this is an excellent initiative by one of the leading suppliers in the country," Vinsen says.

"It follows a recent meeting with high-level government officials attended by the IMVIA, including Robert

Young. The government made it very clear it is serious about its EV targets.

"I have never seen a government initiative being picked up and developed as aggressively and comprehensively as EV vehicles."

The import market is set to play a key role in the shift to electric propulsion of the fleet.

"Certainly, the government's strategy is to encourage government depart-



ments and corporates to buy new electric cars, which can then trickle down as used cars to the public," he explains.

"However, that takes time, and the initial impetus is likely to come from the import of used vehicles that take advantage of tax advantages and incentives in the source market to materially bring prices down."

Nichibo expecting to play part in new EV market

Nichibo is also the national distributor for Mahin-

dra's new vehicles – a brand quickly emerging as an EV superpower globally. India has stated it wishes to shift 100% to electric vehicles by 2030. As the country's largest automaker, Mahindra is a mass producer of electric city cars and small commercials.

It confirmed its expertise in EV technology when it became a founding manufacturer in the FIA Formula E racing series. Robert Young was in London last month to see the brand take the podium for the first time.

"Mahindra is a fledgling brand in New Zealand, but the Formula E series shows we are capable of competing and beating well-known brands - the learnings we take from Formula E are fed into future models, so we have an exciting time ahead of us," Young says. "The e2o EV city car was recently launched in the UK, and we'll review that model for suitability in New Zealand."

"Our vision is to offer the lowest-cost entry into new EV passenger cars in New Zealand; I'm confident we can deliver on that in the not-to-distant future." ■

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The unlikely EV evangelist

She's the typical California girl who sold cars at 17 to pay her way through university.

Three years later she was recruited into a special General Motors group to develop and market the first large-scale production electric car in the US – the revolutionary EV1.

Ten years later she saw her dream destroyed when GM did not renew people's leases on EV1s; instead the cars were handed in and crushed.

Another 10 years on and Chelsea Sexton has been touring NZ with the 2006 Sundance Festival-winning film *Who killed the electric car?*, in which she features.

Now, at 40, she's the somewhat unlikely face of the US's foremost EV advocate and adviser.

Having travelled 3500km around New Zealand speaking to groups of EV enthusiasts and advising government agencies such as EECA, does she believe NZ will achieve the government's goal of 64,000 zero-emission vehicles by 2021 – without direct subsidies.

"It's possible, but I'm not yet sure if the agencies involved grasp the scale of what's required. There are lots of people working on EVs here, but the true assessment of their effectiveness is yet to be seen," says Sexton.

"EV owners and drivers are more experienced and used to answering questions than officials – and they really want to help. If you let them help, and if every EV driver convinces one person a year that EVs are the way to go, then the 64,000 EV target looks a lot less daunting, and it will cost lots less than big TV ads, etc.

"Smaller, less costly incentives such as access to peak traffic lanes and parking privileges motivate people more than actual financial incentives at the outset.

"However, there have to be ways to tease out better financial arrangements for leasing if we're going to make EVs affordable to the 'middle classes'. I know leasing is not big here (it's 75% of private car purchases worldwide), but it may be possible for companies to help fund EVs for employees – not financ-

ing, but helping to arrange funding."

Sexton says that generally OEMs – both car makers and dealers – are not the most helpful to EVs.

"All prior promotional efforts count for naught if there's no one in the dealership that is sold on EVs," she comments.

"Better training is part of the answer, but generally I have found EV coverage in sales training for dealership staff to be superficial at best. We need to beef this up.

"We need to put together dealerships and EV enthusiast groups in ways that are not threatening to the dealers. We have to get past the belief that the dealer is the enemy – they're not fine yet, and we have to change that.

"I come from the dealer world and do understand it. But if we continue to say we'll never buy another of your products because of what you've done in the past, what incentive is there for them to ever build and sell EVs?

"The people building GM's Volt in the US are not the same people that killed the EV1."

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'Pricing is downright abusive'

Some of the pricing for new EVs in New Zealand is 'downright abusive', according to US zero-emission vehicle advocate, Chelsea Sexton.

"The Outlander PHEV at \$49k is pricey, but the Renault Zoe – a Nissan Leaf-sized vehicle – at \$74k is just crazy," she says.

"The Audi E-tron is \$76k here – in the States it is US\$38k. Even with a little bit of shipping and the exchange rate taken into account, it's costly.

"The same with the Nissan Leaf when it was sold here new.

"The distributors are making sure, with pricing like that, that there is no market for new EVs in New Zealand."

Sexton says that it is the CARB



Mitsubishi Outlander "pricey".



Renault Zoe – "pricing just crazy."

mandate (named after the California Air Resources Board) that is driving EV sales in the States.

"There are 10 'carb' states in the US – California and Oregon in the west, and eight other states in the east," she says.

"Their emissions' mandates are driving EV sales with their strict emissions requirements – as is the case in Europe .

"The vehicle manufacturers might have lost the moral high ground to the politicians – through the cheating on emissions from Volkswagen and Mitsubishi etc – but this does not stop their shenanigans around lobbying." ■

THE UNLIKELY EV EVANGELIST

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Sexton says that one constituent group that should be included in the promotion of EVs are electricity distribution companies such as Northpower.

"Northland would not be the leading region (for the installation of rapid charging stations) if not for Northpower. There are opportunities for deeper partnerships not only with the lines' companies but with regional

and local governments," she adds.

"We have to have their enthusiastic buy-in."

The EV advocate says it took 100 years to reach one million EVs worldwide – now the number has doubled in only 18 months.

"By 2030, 40% of the world's vehicle production will be electric. By 2018 there will be plenty of choice, led by the Germans, Koreans and smaller manufacturers such as Mit-

subishi. And, of course, EV-only makers such as Tesla, and the Chinese."

Sexton says that when she drove her first EV at 20, and was totally sold on the experience, she did not dream than 20 years later she would still be advocating for EVs.

"In many ways I am an unlikely advocate – I'm quite shy," she says.

Well, you could have fooled me. ■
– By Vern Whitehead, EVTalk publisher.



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Can we reach 64,000 EVs in five years?

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"To achieve the Government's target we need to start winning over both new and second hand car buyers," he told the symposium. "We have to dispel the myths, and reinforce the benefits."

Underhill admits there are some trade-offs in the NZ market with 70% of Kiwis only buying second hand, and the 30% of new cars going mainly into fleets.

However, his agency will be spending \$1 million a year over the next five years promoting and providing information on EVs.

- "We're drawing on others expertise:
- Norway's experience (with the highest penetration of EVs in the world)
- Canada's emotive campaign
- Work by local advocates – the Better NZ Trust, Drive Electric etc"

Underhill promises we'll learn more from September. In the meantime EECA is also tasked with administering the Government's \$6 million a year 'contestable fund' supporting innovative low emissions vehicle projects.

What's likely to fly with money from the fund? "Projects that might not otherwise occur," says Underhill, such as:

- Creation and promotion of branded tourism routes using EVs.
- Demonstrations of new zero emission vehicle types - e.g. Electric buses and commercial vans
- EV car sharing schemes that address

We want it to ...



30c
per litre
equivalent
cost.

90%
of daily travel
is < 90km.

80%
fewer CO₂
emissions
from car use.

- Open people's minds to the EV potential
- Make people feel excited about EVs
- Take them on a journey through to point of purchase
- Address barriers and bust myths.



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Urban myths waiting to be busted

- "EVs will use all the electricity."
– We have more than enough capacity.
- "EVs mean burning more coal."
– NZ's electricity is 80% renewable – and heading for 90%
- "EV batteries only last a few years and cost thousands to replace."
– Battery life is long. It's improving all the time and costs continue to drop.
- "Electric vehicles deplete rare earth metals."
– No significant difference to petrol or diesel vehicles.



transport demand in a different way. "New Zealand is uniquely well-placed to get the best from EVs," says The EECA boss.

"But it needs government, local

government, electric, automotive and charging sectors to work together – so buyers are confident and willing.

"64,000 EVs by 2021 is not going to happen by itself," he states. ■

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BMW banks on plug-ins

Before meeting with BMW New Zealand managing director Florian Renndorfer to discuss the company's electric vehicle plans, I had the chance to test out the firm's likely volume plug-in model, the 330e iPerformance.

As I entered his office, he asked what I thought of the car. And for the want of a better word, I answered, "Unremarkable."

"That's exactly where that vehicle needs to be," Renndorfer said. "It needs to be something people can pick up and go, 'This is just a normal car.'"

It is hard to argue BMW has been at the front of the NZ new market, particularly with its i3 model which took out last year's AA NZ Motoring Writers Guild New Zealand Car of the Year.

The i3 also gathered attention for winning the prominent EV fleet business of Air New Zealand, totalling 34 units so far.

It has since expanded its range with a battery only version, and now has the biggest plug-in lineup in



New Zealand, rolling out plug-in versions of the 2-series, 3-Series, 5-Series and X5. More are on their way, and an i5 battery SUV is rumoured.

"We were one of the first movers and made a clear statement on electric cars worldwide, especially if you look at the i3, which is a car that was built from scratch as an EV," he says.

"The next step in the strategy is to go in the director of the plug-in hybrid elective

vehicle," he explains. "We will offer in New Zealand the widest range of PHEV possible."

Rather than pricing the vehicles well out of step with the rest of their line-up, additional costs are marginal - just \$1900 more in the case of the 330e.

"We have a price difference here, but it's a very similar price setting in the market. Why? Because we heavily believe in the new technology, and we also see

that there is a market out there if the price difference between the combustion engine and hybrid is reasonable."

EVtalk pressed Renndorfer on how such a price difference was achievable, questioning if the company was making a loss on the vehicles to build the market.

"There is a clear policy at BMW that we don't lose money on the price," he asserted, implying there had been some very strong negotiating with the factory.

Who are the buyers that will opt for a plug over the standard model?

"They are [people who are interested in technology, and also those who have an environmental interest. These cars are really strong from an environmental point of view, but also from a cost of ownership angle."

What are his sales expectations? He says it is too hard to tell at this point.

"What we do see is that the demand and interest from the dealers are huge."

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The company will be gauging customer acceptance through a series of iPerformance customer days, getting backsides in seats.

"With these cars, you have to drive them; you have to experience them. You said, and I would like to quote, it is an unremarkable difference. I am convinced the customer has to drive the car and experience it for themselves."

Government support

Renndorfer is positive about the government's EV strategy and support package.

"I think it's very positive. We are very happy that the government has announced it and is therefore now supporting awareness. I'm also

happy to hear there is a fund for promoting electrical vehicles."

'Unremarkable'

EVtalk had the chance to take a 30-minute drive in the new 330e and came away thinking it would be illogical for anyone to buy the non-plug-in 330i.

Just \$1900 more than the standard model at \$89,900, the 330e can do 37km on battery, at speeds up to 120km/h. Combined consumption is just 2.1-litres per 100km.

Where are the pitfalls? There is a slight loss of boot space, it feels a smidge heavier, and when you are out of battery-charge on the open road, it can be very slightly thirstier.

Outside of that, it is the usual 330 experience, class leading steering and chassis feel, and a gutsy response from the 180kW, 420Nm drive train.

The electric motor is sandwiched between the engine and transmission and produces 80kW on its own. In electric-only it is surprisingly brisk, but call for full power and it will wake the 2-litre turbocharged four-cylinder.

Unlike most electrics, the 330e puts electric drive through the 8-speed automatic transmission, which increases how seamless the electric mode and input feel.

It can be set to run electric-only, automatically choose between power sources, or to maintain battery charge.

Charging is via a type-1 plug in a port behind the passenger-side wheel. The 330e is not fast-charge capable. ■



New service offers EV safety verification

A new safety verification inspection specifically for EV and hybrid vehicles, has been launched on to the NZ market by vehicle inspection specialist, VINZ.

"As a key service delivery partner for NZTA, the inspection industry needs to take a lead to support others in this space, to provide innovative services to make it more appealing for customers to purchase EVs and hybrids," says Gordon Shaw, CEO of VINZ.

"VINZ - as a member of CITA, motor vehicle inspection committee - has been actively involved in the development of a global standard for the minimum inspection requirements for electric and hybrid-electric vehicles.

"The market for a specific EV/hybrid safety verification, outside of the



Gordon Shaw

current WoF process, is small but will grow, and VINZ is making an investment in this area to give consumers the opportunity to have an independent verification undertaken, and to show market stewardship and leadership in this space," says Shaw.

VINZ is suggesting that If you own a hybrid or EV, it is recommended that every year you get a VINZ Safety Verifi-

cation Check undertaken, and this can be done at the same time as the WoF check.

Initial focus for VINZ is in Auckland, Wellington and Christchurch.

The inspection is based on a multi-point safety verification that has been designed to provide customers piece of mind that the vehicle is safe to operate and there are no issues with the electrical components.

VINZ trained technicians will check items such as engine bay cabling, underbody cables and connectors, connection components and charging cables, to name a few.

VINZ is also working with a number of providers, and EECA, to look at adding EV charging points at VINZ testing stations around the country.

For more information see www.vinz.co.nz ■

Australian company puts charge into Geneva buses

The world's fastest flash-charging connection technology - taking less than 1 second to connect electric buses to the charging point - has won a US\$16 million (NZ\$22.14 million) contract from Transports Publics Genevois (TPG), Geneva's public transport operator, and Swiss bus manufacturer HESS from Aussie firm, ABB Group.

The 15-second flash charging technology developed by ABB will be used for for 12 TOSA (Trolleybus Optimisation Systeme Alimentation) fully electric buses, which will run on Line 23, connecting Geneva's airport with suburban Geneva. The electric buses can help save as much as 1000 tonnes of carbon dioxide per year, when compared with existing diesel buses.

As part of the TOSA project in

Geneva, ABB will deliver and deploy 13 flash-charging stations along an urban transit bus route, as well as three terminal and four depot feeding stations.



The world's fastest flash-charging connection technology - it takes less than 1 second to connect the bus to the charging point. The on-board batteries can then be charged in 15 seconds with a 600-kilowatt boost of power at the bus stop. A further 4 to 5 minute charge at the terminus at the end of the line enables a full recharge

of the batteries.

When fully commissioned in 2018, the high-capacity articulated buses will depart from both terminuses at 10-minute intervals during peak times. The line carries more than 10,000 passengers a day and the replacement of diesel buses by TOSA e-buses reduces noise as well as greenhouse emissions.

As part of a separate award by HESS, ABB will supply 12 flexible drivetrain solutions for the buses including integrated traction and auxiliary converters, roof-mounted battery units and energy transfer systems (ETS), as well as permanent magnet traction motors.

Both contracts include five-year maintenance and service agreements to ensure operational reliability, efficiency and safety. ■

'Tipping point for mass EV uptake is here'

We believe the tipping point for mass EV uptake is upon us.' This is the view of the UK's Edward Jones, EV manager, Nissan Motor (GB) Ltd.

'As electric vehicle sales take off, the charging infrastructure is keeping pace and paving the way for convenient all-electric driving in the UK.

"Combine that with constant improvements in our battery performance and we believe the tipping point for mass EV uptake is upon us," says Jones.

"As with similar breakthrough technologies, the adoption of electric vehicles should follow an 'S-curve' of demand. A gradual uptake from early adopters accelerates to a groundswell of consumers buying electric vehicles, just as they would any other powertrain."

Nissan claims to be the first manufacturer to introduce a mass-produced electric vehicle, and has sold more EVs than any other car brand worldwide.

The company has also been a strong advocate of supporting a convenient charging infrastructure – even going so far as to partner with Ecotricity last year, and calling on the UK government to introduce official EV charging point road signage.

Whilst the vast majority of electric vehicle owners charge at home, 98% of UK motorway services now have charging stations, including rapid connectors that can charge a Nissan Leaf's battery to 80% in just 30 minutes. The 30kWh Leaf, launched in January, delivers up to 250 kilometres on a single charge – a range that covers more than 90% of the average daily commuting requirements.

Nissan also recently announced the joint development of an atomic analysis methodology that uses amorphous silicon monoxide (SiO) to increase the energy density of its lithium-ion batteries. This development alone could increase driving range of future Nissan electric vehicles by 150%.

According to Go Ultra Low, the joint



UK government and car industry campaign, more than 115 electric cars were registered every day in the first quarter of 2016, equivalent to one every 13 minutes. The campaign also believes electric power could be the dominant form of propulsion for all new cars sold in the UK as early as 2027, with more than 1.3m electric cars registered each year.

Electric car uptake surges 31.8% in UK

- Year-to-date electric car registrations up 31.8% versus first six months of 2015
- April to June growth marks 22nd consecutive quarterly rise for plug-in car uptake
- 19,252 electric cars registered so far in 2016, three months ahead of last year when it took until September to achieve this volume

Motorists in the UK are buying more electric vehicles than ever; with latest figures confirming continual quarterly rises in plug-in car uptake. Since records began in 2011, volumes of electric car registrations have risen steeply as motorists realise the benefits of owning an electric vehicle, which include low running costs, tax savings and a fun driving experience.

In the April-June period of this year, 38.0% more electric cars were registered compared to the same timeframe in

2015, building on a 27.4% pick-up in the first quarter. In addition to these quarterly gains, the first six months of this year pushed electric car registrations 31.8% ahead of the first half of 2015.

Plug-in registrations totalled 19,252 for the year-to-date, 4640 units ahead of the same period last year.

The bumper start to 2016 pushes registration volumes close to 70,000 units since government introduced its 'Plug-in Car Grant' in January 2011.

The rapid rise in registration volumes show more people than ever are realising the benefits of going electric, and with government support worth hundreds of pounds for home charging equipment, drivers can enjoy the convenience of a fully charged car every morning.

Transport minister John Hayes says: "I am delighted to see record numbers of motorists coming round to the benefits of cleaner, greener vehicles, which are also cheaper to run. The low-emission sector supports over 18,000 UK jobs and is a key pillar in our ambition for a low carbon, high tech and high skills economy.

"We want to make the UK a world leader in electric vehicle uptake and manufacture, to ensure that by 2050 every car and van on our roads is a zero emission vehicle. We are backing this with one of the most comprehensive support packages in the world, with more than £600m of government investment to help grow the UK market."

Poppy Welch, head of Go Ultra Low says: "The continued growth in uptake of electric cars speaks for itself as registration records continue to be broken by motorists encouraged by the benefits electric motoring can bring. As awareness grows and motorists see the wide variety of vehicles already on UK roads, coupled with benefits such as running costs from as little as 2p per mile, more

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Mercedes-Benz gazumps competition with full electric heavy truck

Mercedes stunned the heavy trucking world last month by presenting its Urban eTruck in Stuttgart, as the first fully electric truck with an admissible total weight of up to 26 tonnes.

"In light distribution trucks, our Fuso Canter E-Cell has already been undergoing intensive customer trials since 2014. And with the Mercedes-Benz Urban eTruck, we are now electrifying the heavy distribution segment, up to 26 tonnes.

"We intend to establish electric driving as systematically as autonomous and connected driving," says Dr Wolfgang Bernhard, responsible for Daimler trucks and buses.

"This means, that in the future, heavy trucks will take part in urban distribu-

tion operations with zero local emissions and hardly a whisper. The market launch of this technology is conceivable for Daimler Trucks at the beginning of the next decade.

"In the light distribution sector, Daimler Trucks has already been impressively demonstrating the day-to-day suitability of the fully electric truck in customer trials with the Fuso Canter E-Cell since 2014. The development of electric trucks and series production maturity are fixed parts of the strategy of Daimler Trucks to build on our technological leadership.

"For this purpose a considerable part of the future investments by the truck division in the fields of research and development flow in the further development of the full electric drive.

ETruck battery

"Electric drive systems previously only saw extremely limited use in trucks. Nowadays costs, performance and charging times develop further so rapidly that now there is a trend reversal in the distribution sector: the time is ripe for the electric truck.

"And with the Mercedes-Benz Urban eTruck, we are now electrifying the heavy distribution segment up to 26 tonnes. We intend to establish electric driving as systematically as autonomous and connected driving," adds Bernhard.

Growing urbanisation requires fully electric trucks

Better air quality, lower noise and restricted-access zones are now important keywords in large metropolises worldwide, because more and more people worldwide are moving to cities. 2008 was the first year in which more people lived in cities than in the countryside. The trend is continuing:

The UN predicts a global population of nine billion people by 2050, with approximately 70% of them living in cities. In future, it will be necessary to transport goods in urban environments for increasing numbers of people – and with the lowest possible emissions and noise. By now large cities, such as London or Paris, are considering a ban on internal combustion engines in city centres in the future. That means: there will be fully electric trucks ensuring the supply of humans with food or other goods of daily needs. ■



'Tipping point for mass EV uptake is here'

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drivers than ever are becoming motivated to go green.

"Since the 'Plug-In Car Grant' was introduced in 2011 the variety of electric models has expanded significantly, notably so in the past two years, giving motorists more choice than ever before."

Of the vehicles that have made up

these continually-improving figures for the first half of the year, the Mitsubishi Outlander PHEV has proved most popular with 5738 of the plug-in SUV rolling on to UK roads. The Nissan LEAF remains the most popular pure-electric car with 2336 first-half registrations in 2016.

Government support has been crucial to driving the success of elec-

tric vehicles in the UK. This includes generous purchase incentives including a grant of up to £4500 off the cost of a new car; tax benefits that could be worth thousands over the life of the car, such as the lowest rates of vehicle excise duty and company car tax, as well as support for home and public charging infrastructure contributing to the ongoing rises in uptake. ■

CHARGE!

A cautionary tale

If you know me in real life, or online, you'll know that my nature is to look on the bright side. I can find a silver lining glowing around most clouds. This is a trait that some of my friends and colleagues can find irritating, and they do not hesitate to let me know when they do.

Saying that, I'd like to spend this column earnestly cautioning electric vehicle enthusiasts who are considering purchasing a car that is not supported on New Zealand soil.

I'll be recounting to you our nine-month mission to get two cars serviced across the Tasman.

First, let me categorically state to you that we were never misled about servicing or repair arrangements by the manufacturer. We adore our cars, and would not hesitate to own one again, even after the rather long and sordid ordeal we have been through.

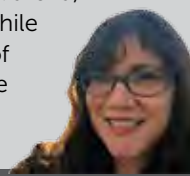
My husband and I own three Tesla vehicles. One roadster, one red P85+ which we named LOLGAS, and a black P90D we named QUIET — these are their licence plates, and the names they are known by whenever referred to.

Unfortunately there was an electrical issue with QUIET only a few short weeks after it arrived in New Zealand: our car's electronics shut down completely — apparently a known but rare fault that could have been fixed fairly easily at a well-equipped service centre.

We enlisted the help of a local automotive electrician, who after a valiant effort was unable to fix the problem.

Dianna West, along side her husband Steve, has been one of the most prominent faces in the EV enthusiast arena, and head the 'Leading the Charge' movement while investing in the **Charge.net.nz** private network of charging infrastructure. Early adopters, they have three Teslas and a Nissan Leaf.

Twitter: @deehobbit, Facebook: /DeewestNZ



Coincidentally LOLGAS had been recalled for some pre-emptive drivetrain work, so it became clear it was time to send QUIET and LOLGAS on a cruise to Sydney for servicing.

No problem, right? Wrong.

There are vehicle import approvals, documentation, bonds etc. that you must arrange in advance of a vehicle being landed temporarily in Australia. This is, in theory, fairly straightforward. We filled out all the appropriate paperwork, nominating our carrier's Australian agent.

Our car sat for months as we waited to hear back on the status of our import approvals, and then, when we

were contacted, it was to tell us that the permit was about to expire and we would need to reapply. Turned out the Australian agent had re-

in my employment treating customers the way we were treated during this ordeal, I'd be handing out a very stern written warning.

Mistakes happen. But it is the way a company handles mistakes that matters. Attempting to fix problems, if and when they arise, will win lifetime loyalty from me as a customer. Our first carrier has now lost our business, and naturally we can no longer recommend it to anyone who asks.

In conclusion, I'd like to caution anyone thinking of purchasing a Tesla before the service centre arrives here in New Zealand. If you have the means and the resources to get your car over the ditch before then, and if you have a plan B for yourself, your business and your family, then you will NOT be disappointed by your decision to become a Tesla owner.

If, however, this is your primary vehicle and you have to mortgage the house to buy it, perhaps you could wait until Tesla arrives here on our fair shores, in an much more official and accessible capacity. When that day arrives, thousands of Tesla fans, enthusiasts, owners and future owners will get out the ticker tape, I am sure. Only metaphorically of course, as ticker tape and confetti are terrible for the environment, and most of our EV enthusiasts care a great deal about the earth.

If you have any questions, please contact me on social media. ■

ceived the approvals almost immediately, but had simply ignored them.

Needless to say, we weren't very pleased with this error. We asked our shipper if it was willing to work with us to remedy the situation, but it did the corporate equivalent of shrugging its shoulders.

Not taking kindly to this level of customer service, we voted with our wallet and changed to a new shipper. Its service has been great, and our cars are now receiving the loving attention they deserve at Tesla's Sydney service centre.

Do I feel aggrieved by the treatment we received? You bet your sweet bippy I do. If I caught wind of anyone



Renault lands tiny EV in NZ

Renault New Zealand has landed the cute little Twizy two-seat electric vehicle – in spite of not yet being able to put it on the road.

Launched in France in 2012, the diminutive Twizy carries its passengers in tandem, and with a full charge will go up to 69km, with a top speed limited to 80km/h.

Classed as a 'quadricycle', the Twizy has car-like controls and offers occupants more protection than a motorcycle, including an airbag and seatbelt.

Renault brand manager Salvatore Marti says it has imported the Twizy as part of its promotion of EVs, alongside the Zoe and Kangoo ZE plug-ins it has already on sale.

"To help promote 100% pure electric vehicles, we are looking ahead to the long term future of road travel, some-

thing different – it is very cool. 100% pure electric, 100% fun."

The company is working on the process of getting the government to change rules around quadricycles, and make them a legal option for the road.

In parallel, the Imported Motor Vehicle Industry Association has also put a proposal to the NZ Transport Agency to have the vehicles classified.

The two that have landed will be used for promotion, while they could be sold initially for use on private land or in tourism activities.

Pricing has yet to be announced, but we understand it could be steep compared to a 'normal' vehicle – at around \$30,000.

So what is it like to drive?

Supposedly car-like, controls are the same as pretty much any other elec-

tric vehicle, with forward, reverse and neutral controlled via buttons on the dashboard.

Drive is largely silent, and the unassisted steering direct but surprisingly slow for what you would expect to be like a gokart. My reasoning is the need to avoid sudden changes direction for stability.

It does not feel quick, but quick-enough for tooling around a city centre – although in fairness we were restricted to the commercial compound where Renault is based in Mt Wellington for the test.

The main downside? No windows – weather shields are available – which we found fine heading into the rain and wind, but a bit chilly and damp when turning side on.

Almost worth it for the scissor doors. ■



June 2

First of 500 NZ Post EVs arrive

The first shipment of New Zealand Post's 500 new electric delivery vehicles has landed in Auckland for a nationwide rollout that starts later this year.

50 vehicles from Norwegian manufacturers Paxster AS have arrived so far for parcel and mail delivery starting on Auckland's North Shore..

"Within the next two years we plan to have 500 Paxsters in operation, which we believe will be the largest fleet of road legal, fully electric vehicles in New Zealand," says acting chief operating officer, Mark Stewart.

June 3

Solar flair powers up Nissan

Nissan's Sunderland plant in the UK has fired up a new solar farm as it aims for a zero emission facility.

The farm is made up of 19,000 photo-voltaic panels, which sit alongside 10 existing wind turbines, to generate clean power for the plant.

"Renewable energy is fundamental to Nissan's vision for intelligent mobility," said Colin Lawther, Nissan's senior vice president for manufacturing and supply chain management in Europe.

June 3

Another council plans plugging in to EVs

Christchurch City will join the growing number of councils moving towards electric vehi-

cle fleets.

The council's infrastructure, transport and environment committee has recommended it undertake the official procurement process to secure a zero-emission electric car fleet.

It suggested that the council share around 50 electric vehicles with Environment Canterbury and Meridian Energy.

June 7

Outlander hack: Mitsubishi taking 'seriously'

A British company that specialises in software security has successfully managed to 'hack' the Mitsubishi Outlander PHEV.

Pen Test Partners managed to use the Outlanders on-board wifi access point to access the company's system, enabling them to control the lights, air conditioning and disable the security system.

Pen Test suggests a way to further secure the car by turning on a security feature within the wifi system.

June 9

BMW beats Tesla to LAPD contract

Tesla has lost out to BMW for a lucrative police contract in its hometown.

BMW is leasing the Los Angeles Police Department 100 electric cars – its i3 plug-in – after Tesla's P85D.

The Tesla was more than twice the price of the plug-in BMW.

Nissan aims for 20% EV sales

Nissan's EV boss says up to

20% of its sales in Europe will be of electric vehicles within the next five years.

"We believe that by 2020, where the market conditions are right, we'll be selling up to 20% of our volume as zero-emissions vehicles," Gareth Dunsmore, head of the Japanese manufacturer's European electric vehicle division.

Dunsmore told *hybridcars.com* that the pace of EV adoption in Europe supported this belief, pointing at sales of its Leaf and eNV200 in Norway, the top plug-in electric market in the world.

June 13

Daimler to reveal big range EV prototype

Daimler will show a long-distance EV prototype in Paris this October – but it could be up to 10 years before we see it on the road.

Chief development officer Thomas Weber said the electric Mercedes car will be built to compete with Tesla's Model X SUV during a press event in Stuttgart.

"The structure is ready, the teams are working and the initial results from road tests are coming in quick succession," he said, while noting that it would be "sometime in the next decade" before it was production-ready.

June 20

Nissan launching China-only budget EV

Nissan plans to release an electric car for the Chinese market, priced 30% cheaper than existing models.

Its launch will be timed to coincide with a national campaign aimed at increasing the number of eco-friendly vehicles on the road.

Nissan currently sells the Venucia e30, an updated version of the Leaf via its Dongfeng Motor Group joint venture Dongfeng Nissan Passenger Vehicle Company.

June 21

Honda takes electric NSX to Pikes Peak

Honda is taking on the iconic Colorado Pikes Peak International Hillclimb in its new NSX supercar – but is ditching its savage twin turbo V6 ICE in favour of pure battery power.

Acura – the US branding for the fancier vehicles in the Honda range – is labelling it the NSX-inspired EV Concept.

It will run an experimental version of the four-motor 'super handling all-wheel drive' powertrain – SH-AWD – which powered a CRZ-based prototype that won last year's exhibition class at the hillclimb.

June 22

Great Wall to launch first EV

Great Wall Motors is set to launch its first electric vehicle – the C30EV.

Based on the Great Wall C30 sedan, the awkward-looking crossover SUV is powered by a 240Nm motor which at a constant 60km/h, has a 245 km range. At 100km/h the range drops to 200 km.

The front-wheel-drive EV isn't exactly a rocketship and takes a glacial 10 seconds to accelerate from 0-100km/h on its way to a top speed of 140 km/h.

June 23

Auckland road pricing shouldn't negate EV benefits

While the New Zealand Council for Infrastructure Development (NZCID) welcomes the Auckland Transport Alignment Project (ATAP) interim report, it says road pricing shouldn't negate the benefits of emerging technology such as electric vehicles and driverless cars.

"Rigorous analysis of the costs and benefits of each ATAP approach is required to determine the optimum mix

Continued on page 14

Continued from page 13
that will get Auckland moving," says NZCID chief executive Stephen Selwood.

"The purpose of a transport network is to enable the movement of people and goods, and it is the responsibility of officials to achieve this at the lowest overall price. Demand management is an opportunity to get the most out of networks, not discourage travel," he says.

June 27

EV toll break not on the cards

Electric vehicles won't be given exemption on toll roads planned for Auckland, says transport minister Simon Bridges.

Tolls are potentially coming for Auckland as a way of alleviating the city's ever-increasing traffic woes, and when Bridges was questioned about it at an electric vehicle symposium over the weekend, he indicated that this was unlikely.

Asked whether toll breaks were a realistic way of the government encouraging the use of zero emission vehicles.

July 5

30 tonnes of CO2 saved by Vector chargers

Vector's electric vehicle charging stations continue to be used regularly.

Since the company began installing chargers in November 2015, it has served 21.82MWh of electricity, potentially saving as much as 29,000 kilograms of CO2 from being emitted into the atmosphere.

July 8

Panasonic expects to double sales of electric car batteries in three years

It is forecasting strong demand for its lithium-ion batteries from Tesla, as well as other manufacturers

Kenji Tamura, an executive officer in charge of Panasonic's automotive and industrial systems business, told Reuters the firm's annual automobile battery sales will grow to 400 billion yen (NZ\$5.4 billion) by the 2019 business year – from less than half that now.

The company is planning on bringing forward its investment in Tesla's Gigafactory to meet orders for the Model 3.

July 12

Toyota appoints EV specialists at 6 dealerships

Even before Toyota NZ has a new EV to offer its customers, it has taken the forward looking step of naming hybrid/EV specialists at six of its dealerships, nation-wide.

Charging stations are being installed across the country at Manukau Toyota, Auckland City Toyota, Hawkes Bay Toyota, Manawatu Toyota, Rutherford and Bond Wellington, and Miles Toyota Christchurch.

These dealerships are the first to promote a specialist hybrid area, with more dealerships expected to follow.

July 15

Trolley bus conversion to electric on track

The poles have come off Wellington Trolley Bus number 362 as it becomes the prototype self-propelled electric bus for the NZ Bus fleet.

NZ Bus are refitting a Wrightspeed battery system with a turbine range extender to number 362, and the company told Stuff it is expecting the vehicle to be operational by the middle of October.

The first trolley bus conversion is taking place in a workshop in Newlands under Wrightspeed project engineer Syste Tacoma, who was hired by Wrightspeed founder, New Zealander Ian Wright.

July 20

Used EV stock's meteoric surge since 2014

The growing popularity of electric vehicles (EVs) has prompted a rise in the availability of affordable, second-hand EVs in the UK over the past two years according to the AA's used car portal AA Cars.

AA Cars looked at the numbers of EVs advertised on its portal in the second quarter of 2016 and found that stock levels were a staggering 652% higher than in the second quarter of 2014. Figures were also up two thirds at 66% on the same period in 2015.

Secondhand electric vehicle stock in June was also at its highest ever level on the AA Cars website.

July 21

Full range of Teslas in development

Tesla founder Elon Musk has today issues his second master plan for the company – announcing plans to take on even more automotive sectors.

While the company had started off focussing on niche parts of the automotive market, it was time to become a broader brand – with vehicles in more segments.

That will include a compact SUV, a ute/pickup truck, a large truck and a city bus.

22 July

Samsung invests \$625M into Chinese EV maker

Electric vehicle manufacturer BYD, already backed by Warren Buffett's Berkshire, has received a huge investment from electronics and engineering giant Samsung.

Shanghai Samsung Semiconductor bought 52.3 million BYD shares at 57.4 yuan apiece in a private placement that raised 14.5 billion yuan in total from six investors, according to a statement to Shenzhen stock exchange.

Samsung pursued a stake

in BYD after its affiliate was among foreign battery makers left off a list of suppliers approved by China, where sales of electric vehicles are surging and the government has sped up construction of charging points.

July 25

EV epoch spells change for motor mechanics

Electric vehicles (EVs) will mean no oil changes or spark plugs to replace, fewer parts to maintain and less wear on brakes and therefore less need for car servicing and repairs.

That could spell upheaval for New Zealand's 15,000 motor mechanics even though Careers NZ is telling school leavers it's a good career option and many in the industry aren't anticipating big changes in the near future, according to Stuff.

But, in the short term EVs will require mechanics to have more skills, not less. Britain's Motor Industry Institute warned only in January that unqualified technicians risked electrocution when tinkering with EVs.

Commotion over electric cars in bus lanes

Simon Bridges is being lambasted for failing to consult with councils in favour of sole consultation with New Zealand Transport Agency in his quest to get more Kiwis to purchase electric cars by allowing them to access bus lanes.

And this in the face of documentation from the ministry revealing that he was informed it would be "important to discuss" the measure before making any form of announcement and that councils would probably be uninterested in allowing electric vehicles (EVs) in bus lanes because of the impact on public transport.

So it is no surprise that his announcement that electric cars will be allowed to use bus lanes has met with resistance from councils, with one saying it won't implement the policy and another considering whether to enforce it. ■

Biggest month for Leaf ever

Used import registrations of electric vehicles continue to rise, with the best ever month for EVs ever in July.

A total of 67 used import Nissan Leafs were registered, up significantly from an already strong 50 units in June.

Interestingly two used eGolfs also crossed the border - the first time they have been registered through the used import market.



NEW ELECTRIC VEHICLE REGISTRATIONS - JUNE 2016

Make and Model	Current Month Current Year	YTD Current Year	Total
ELECTRIC			
RENAULT KANGOO	0	2	2
RENAULT ZOE	0	2	2
Total	0	4	4
PLUG-IN PETROL HYBRID			
MITSUBISHI OUTLANDER	22	91	91
BMW I	14	32	32
BMW 2 SERIES	4	10	10
VOLVO XC90	2	11	11
AUDI A3	1	9	9
PORSCHE CAYENNE	1	4	4
BMW 3 SERIES	0	1	1
BMW X5	0	3	3
Total (Autobase)	44	161	161

NEW ELECTRIC VEHICLE REGISTRATIONS - JULY 2016

Make and Model	Current Month Current Year	YTD Current Year	Total (Autobase)
Electric			
VOLKSWAGEN GOLF	1	1	1
RENAULT KANGOO	0	2	2
RENAULT ZOE	0	2	2
Total (Autobase)	1	5	5
PLUG-IN PETROL HYBRID			
MITSUBISHI OUTLANDER	11	102	102
BMW I	10	42	42
MERCEDES-BENZ C-CLASS	6	6	6
VOLVO XC90	3	14	14
BMW X5	2	5	5
BMW 2 SERIES	1	11	11
AUDI A3	1	10	10
PORSCHE CAYENNE	0	4	4
BMW 3 SERIES	0	1	1
Total (Autobase)	34	195	195

A BMW i3 and Outlander were also on July's slate.

In June, joining the leaf was a single i3, a Kia Soul and a Nissan E-Nv200.

eGolf registers as new

The first of Volkswagen's new eGolfs has shown in registration data, the first and only new pure-plug-in vehicle registered in the last three months since Renault's Zoe landed earlier in the year.

In the plug-in hybrid space, the Mitsubishi Outlander had 11 units, followed by the Bmw i3 on 10.

Interestingly, the month saw the arrival of a large number of new, premium market plug-ins. The Mercedes-Benz C-Class landed with six units, a total of three Volvo XC90s were registered, as well as two BMW X5, a BMW 2-Series and an Audi A3.

USED IMPORTS JULY 2016

Vehicle Make	Vehicle Model	Total Vehicles
NISSAN	LEAF	67
VOLKSWAGEN	E-GOLF	2
BMW	I3	1
MITSUBISHI	OUTLANDER	1
Total		71

USED IMPORTS JUNE 2016

Vehicle Make	Vehicle Model	Total Vehicles
NISSAN	LEAF	50
BMW	I3	1
KIA	SOUL	1
NISSAN	E-NV200	1
Total		53

100% Electric charge, 0% Inspection charge.

Nichibo and FastTrack are committed to making sustainable electric vehicles more affordable and accessible to all. To deliver on this commitment Nichibo and FastTrack will provide compliance inspections on all Battery Electric Vehicles supplied through their channels from August 1, 2016 and August 1, 2018 **Free of Charge***

*Contact your local Nichibo representative for more information.

