



EVs - the good, the bad and the battery

How secure is power supply for EVs? **EVtalk** raised the question after September's fuel pipeline incident which disrupted supplies from Marsden Point to Auckland.

Vector is the national number one provider of electricity. Its chief executive officer **Simon Mackenzie** covered the supply subject during his talk at the evworld NZ conference in Auckland on September 8, just days before the pipeline problem began.

We asked him to elaborate.

"Increased uptake of EVs globally presents both a massive challenge and limitless potential for utilities and regulators," he says.

"EVs are poised to become a significant part of New Zealand's transport mix, as car makers gear up to stay

ahead of demand," says Mackenzie

who expects reduced EV prices, improved travel range and increasing product choice will see uptake substantially exceed the current 5000 on our roads.

"It will have a tangible impact

on electricity networks, including our own.

"Many EV users plug in to charge around the same time after work, during times of peak demand. This means that while they will help reduce one of New Zealand's largest sources of greenhouse gas emissions, on current user behaviour trends EVs are set to add strain to networks and create resilience issues as more of the national fleet become reliant on electricity supply."

Mackenzie says resilience is in-

Continued on page 20



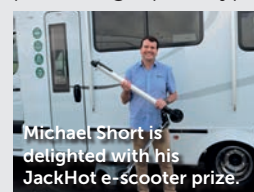
Vector's Simon Mackenzie.

Winners snap up micro-EVs

Our two micro-EV winners have been found. **More than 600 entries were received in the lucky draw at the EVtalk stand during the first two-day evworld New Zealand conference and show in Auckland last month.**

Michael Short won the JackHot electric scooter prize, kindly donated by **Henry Tan** and the team at Scoozzi, and **Maurice Andrews** won the HaloCity e-bike.

North shore based Short runs about 8.5km to his work at Action Manufacturing in Albany, currently producing a prototype EV camp-



Michael Short is delighted with his JackHot e-scooter prize.

ervan, and he's using the e-scooter to get home on the days he runs in.

Wife Belinda drops the e-scooter back in for him as she helps out at the business too. The e-scooter is foldable and weighs just 7.3kg so it's easy to load in the car boot.

Of course, she likes to use it herself in riding with their three children on their own bikes about 1.5km to school, and back. The kids are keen to try it too and the e-scooter has a speed safety feature especially for such a purpose.

Short's never had an e-scooter before and his first try around his work's

Continued on page 15

INSIDE

Hop in a driverless shuttle
French "ecoelectric" NZ tour
E-bikes and smart helmets
EVs at Big Boys Toys

3
5
15
21



3

5



Drive your business forward with
provident  insurance

Call Steve Owens now on 021 947 752

EVtalk

EVtalk Magazine is published by Auto Media Group
8/152 Quay Street, Limited.
P.O. Box 10 50 10,
Auckland City, 1030.
Ph. 09 309 2444.

EDITOR

Geoff Dobson
geoff@automediagroup.com.au
021 881 823

GROUP EDITOR AUTO TRADE TITLES

Scott Morgan
021 240 2402
scott@automediagroup.co.nz

BUSINESS MANAGER

Rachel Hadfield
021 778 745
rachel@automediagroup.co.nz

PUBLISHER

Vern Whitehead
021 831 153
vern@automediagroup.co.nz

MANAGING EDITOR

Richard Edwards
021 556 655
richard@automediagroup.co.nz

OPERATIONS MANAGER

Deborah Baxter
027 530 5016
deborah@automediagroup.co.nz

Auto Media Group Limited makes every endeavour to ensure information contained in this publication is accurate, however we are not liable for any losses or issues resulting from its use.

Printed by: Alpine Printers.

automedia
GROUP LIMITED

evtalk.co.nz **EVtalk**
evtalk.com.au **EVtalk**
autotalk.co.nz **autotalk**
autotalk.com.au **autotalk**
dieseltalk.co.nz **DIESELtalk**
dieseltalk.com.au **DIESELtalk**
wheeltalk.co.nz **wheeltalk**
identicar.co.nz **identicar**

EVtalk acknowledges the support of our foundation sponsors:



Ohmio sets the future in motion

It's a race to the future for self-driving vehicles.

Among the early leaders is Kiwi company HMI Technologies' Ohmio Automotion which will have a range of four autonomous electric prototypes ready by early next year.



Stephen Matthews in the golf cart prototype.

The name Ohmio derives from the Maori word "amio" meaning "travel round" and incorporates "hmi" with "o" for the wheels either side.

The name is clever and so is HMI's work.

Founded by Mohammed Hikmet with brother Ahmed, HMI has been specialising in intelligent transport systems for years from its Auckland base.

It's provided many of the electronic motorway signs, journey times and flashing warning signs to motorway drivers in New Zealand and Australia.

It launched Ohmio Automotion in September, showcasing three driverless shuttles carrying passengers, including schoolchildren, on a connected convoy circuit of the Christchurch Art Gallery.

A connected convoy is different from the "autonomous platooning" becoming associated with driverless vehicles travelling in line. Platooning usually means the front vehicle (leader) does all the thinking in directing the following ones (slaves) but in Ohmio's case each vehicle has independent capability and thinks for itself.

It all started with a new golf cart HMI adapted to become the first prototype in February. It was able to operate autonomously by May.

The fibreglass shells were made and now three Ohmio Hop (as in a

hop, skip and jump) versions - the Lift, Ride and cargo carrier the Move - are being designed.

The "brain" behind each autonomous vehicle is based on printed circuit boards (PCBs). These are not computers, more embedded systems, so cannot be hacked as has been feared with some overseas projects. In fact, any electronic communication is one-way, from the shuttle to a monitoring station.

Much of the circuitry was adapted from the type used in HMI's electronic signs.

Ohmio vehicles are distinguished from most others of a similar nature in that they have self-mapping and will draw upon artificial intelligence.



HMI quality assurance manager Matthew Breddy in the Ohmio Hop shuttle.

That means once they have completed a route, they can self-drive it repeatedly.

GPS, Lidar and cameras are used and the vehicles are able to stop quickly when they detect any obstruction.

The Hop vehicles can take up to four passengers at this stage and one version will have a lower floor with ramps to accommodate wheelchairs and people with mobility difficulties.

All are geared around level four autonomy, meaning they will be designed to perform all safety-critical driving functions and monitor roadway conditions for an entire trip. However, that's limited to the vehicle's operational design domain (ODD) so does not cover every driving scenario.

In autonomy, the levels range from zero (basic with the driver controlling all) to five (fully autonomous with vehicle performance equalling a human driver in every driving scenario).

Continued on page 22

Electric future for vintage car fan

When not working on vehicles of the future, Stephen Matthews spends his spare time putting together those from the past.

The vintage car enthusiast is HMI Technologies' global chief executive and has an extensive background in executive management and governance in the motor and petroleum industries, and in the service sector.

Matthews was Motor Trade Association chief executive officer for 15 years and was a director of Vehicle Testing New Zealand. He became chairman of Drive Electric's predecessor, the Association for the Promotion of Electric Vehicles.

He's also a fellow and past deputy chairman of the New Zealand Institute of Management.

After travelling overseas for three years, Matthews returned to join HMI in January. He's moving from Wellington to Auckland to be closer to the company's Pakuranga Heights headquarters.

He sees a big future for HMI Technologies' Ohmio Automotion and the team is expanding with his brother Martin, who has an extensive transport background, also coming on board.

HMI has about 70 people involved in its factory in China, along with about 54 people in Australia, New Zealand and the United Kingdom. Matthews is responsible for the big task of overseeing all operations.

It all started when Matthews completed a commerce degree at the University of Otago.

His work experience includes Europa/BP, which he joined in 1978, then oil exploration company Santos in Australia. He later joined Petrocorp, the former state-owned enterprise bought by Fletcher Challenge, and became Fletcher Energy general manager.

He then worked for himself for four years, setting up businesses, before joining the MTA. ■

Electric car-sharing charges into Auckland

A new transport alternative that might ultimately help address some of Auckland's transport challenges is being offered by Mercury and Cityhop.

The addition of electric vehicles to Cityhop's car-sharing platform brings together two parts of the solution to the problems caused by too much city traffic - clean electric-powered vehicles to reduce pollution and noise, and car-sharing to reduce vehicle numbers.

"Car-sharing and electric vehicles are part of the solution for decongesting Auckland and reducing pollution," says Auckland mayor **Phil Goff** who drives an electric car.

"Every car-share vehicle takes up to 13 cars off our roads and every electric vehicle is one less car sending carbon into our atmosphere."

Mercury and Cityhop's EV car-sharing trial is being extended with a second EV available at the Downtown carpark in Auckland, the same location where Mercury installed the Auckland CBD's first EV charger in 2015.

The trial began in May with a Nissan Leaf located in Newmarket. It has since been used by 35 different drivers and travelled more than 2200km.

Drivers have been impressed by the performance, the convenience of car-sharing and the overall experience of going electric.

"We've had consistent feedback

about how easy to drive the car is and how the Newmarket location suits them," Cityhop business development manager **Ben Carter** says.

Cityhop driver **Brett Berquist**, who used the Leaf early in the trial, says he

Its location at the Downtown car park brings EV car-sharing into the CBD, where more than 60,000 people live and around 65,000 work daily, including 1500 current Cityhop members.

"This partnership between Mercury and Cityhop is about testing innovative and sustainable approaches to ease Auckland's transport challenges," Mercury chief executive **Fraser Whineray** says.

"We're all about offering choice and freedom and it's great to be able to partner with Cityhop to offer Auckland drivers different electric vehicles to try.

"Mercury has owned and driven EVs since 2013 and we want more people to be able to enjoy the wonderful experience of EVs."

Carter agrees.

"We're extending the trial to the CBD where the bulk of our business and personal members are.

"The trial has shown us that the EV is used by Cityhop members for personal use outside of business hours, along with its use as part of the Mercury fleet.

"The sharing model has been perfect for these two groups of users."

Cityhop was established in 2006, co-founded by Jucy Rentals and former Auckland City councillor **Victoria Carter** and its first cars hit the streets in August 2007.

Visit www.mercury.co.nz and www.cityhop.co.nz for more information. ■



Mercury chief executive Fraser Whineray, left, Auckland mayor Phil Goff and Cityhop's Ben Carter are EV advocates, especially for car-sharing.

was intrigued about trying it out and he loves the car-sharing model.

"I like the convenience. No paying for a parking spot or garage, no car purchase and maintenance fees, proximity of location, and no need to top up petrol for short runs."

Another Cityhop driver **Anna Phillips** says, "It's much better for the environment and I don't have to worry about parking and petrol. I've been car-free for 10 years."

The new car-share vehicle is a Mitsubishi Outlander Plug-in Hybrid Electric Vehicle (PHEV), offering the option of a larger SUV while giving drivers another EV model to try.



All the EV Industry HOT NEWS every day as it happens on www.evtalk.co.nz

Subscribe online for FREE weekly 'Alerts' direct to your email or get the monthly printed magazine as well for \$96.90 a year (including GST)

EV adventure for intrepid French students

Two students from France are about to embark on a seven-month "ecoelectric" road tour of New Zealand in one or more EVs.

The 23-year-olds contacted EVtalk to publicise their project which aims to cover about 4300km.

Paris Sorbonne University environmental law and philosophy student Heloise de Bokay and communications and cultural management student Solene Trinquet plan to start their trip in January to discover innovative ideas around sustainable development.

Describing their project as "News&Land" in a take on New Zealand, the two say they will focus on the clean energy transition here.

"During our recent travels, we realised that it was necessary to rethink our method of discovering a new country," they say.

"Tourism today is no longer sustainable, which is why we decided to opt for a form of environmentally friendly transportation instead of a regular diesel van.

"Electric cars are a sensible solution in your country as more than 80% of your energy comes from renewable sources (only 22% in France).

"Travelling in an electric car is therefore a local and green solution."

Learning about The Better NZ Trust's Leading the Charge movement encouraged them to take up the challenge.

"Using an electric car means we will have to travel at a slower pace and thus increase our drop points. We wish to discover the country in its entirety and not just the tourist sites."

Their objective is to meet people willing to share their commitment to environmentally friendly projects or a green way of life.

They are keen to contact those involved in promoting EVs, combating climate change and invasive species, and those dealing with waste management and recycling.

"We are going to share our adventure through a web series showing these initiatives and our electric road trip experience on the other side of

the world. We will mix our day-to-day adventure with informative subjects on energy production and management."

De Bokay and Trinquet are also organising an exchange between a French and New Zealand school class to discuss and create a project around sustainable development.

"We believe that it's essential to make children aware of these environmental issues as well as confront them with new cultures."

They have several sponsors to help fund their project and have been working for the past few years to pay for their trip which is costing them about \$66,370.

"However, we have still not found a major car sponsor because New Zealand is rarely a commercial target for European car companies," they say.

But they aim to fulfil their dream of touring New Zealand "even if we have to take out a loan".

EV models they have been seeking include the Nissan e-NV200 van or the Mitsubishi Minicab MiEV van.

"We have organised the layout of

our trip according to the electrical stations found on ChargeNet NZ. If we do not find the right ones we can always charge our car with a 12-hour classical power outlet.

"It is very likely that we will experience setbacks but this is what will make our trip an adventure."

Trinquet and de Bokay plan to record their adventure on social media and via their website. They will also produce a short film.

Contact them on news.land@hotmail.com if you can help or for more information. ■



Heloise de Bokay, left, and Solene Trinquet.
Video link <https://www.ulule.com/news-land/>

EVelocity ramps up momentum

E Velocity has grown so much in four years it's now spread around most of the country from its Christchurch base.

The charitable organisation runs a programme in schools in which teams of students design, build and compete in electric vehicles.

It fosters engineering training around EVs, giving students a hands-on role in building the single-seater EV racers of usually three wheels or four.

After starting in Canterbury in 2014 with 16 teams from 11 schools competing, EVelocity now has more than 100 teams from Auckland, Waikato, Wellington, Nelson and Canterbury competing.

Regional finals events are held and the top regional teams move forward to the national finals race day on December 2 at the Christchurch A&P Showgrounds.

The event is part of a EVelocity's Electric Wheels Festival, also featuring e-bike test rides, EV test drives and a

range of exhibits and activities.

Such challenges use many of the practical and academic skills taught in science, technology, English and mathematics (STEM) subjects and are helping address a long-running shortage of skilled engineers.

The electric

wheels festival is shaping up to be a bigger event each year and EVelocity is spreading its vision, incorporating electric bike test rides and electric car test drives at many of its events.

Its aim is to develop knowledge, skills and passion in design, engineering and technology, preparing young people for 21st century careers and empowering them to help create a more sustainable future.

The organisation also focuses on educating the drivers of today and tomorrow about the environmental and economic benefits of electric vehicles.

Students taking part in EVelocity develop interests in mechanical engineering, electrical engineering, power electronics and programming. But all that comes at a cost, which is growing.

Historically, all of the funding to support the engineering and EV education programmes in schools has come from grants and sponsorships.

"Unfortunately, this is not a sustainable revenue mode so we have launched the MeloYelo brand of electric bikes to create a growing and sustainable revenue stream," EVelocity executive director **Rob McEwen** says.

MeloYelo e-bikes are built to EVelocity's specifications in China and are distributed through a growing network of what it calls "associates".

Most "associates" are retired or semi-retired people looking for part-time income while supporting a good cause. They are equipped with demonstrator bikes and a range of marketing materials, and get out and about in their communities offering test rides, selling the bikes and delivering after-sales service support, McEwen says.

Visit www.meloyelo.nz to view the range of MeloYelo e-bikes. ■



Rob McEwen, front, and Colin Lunt at eworld NZ.

EVs a powerful argument for change

Risk reduction and supply security significantly favour EVs over ICE vehicles in a climate change sense, Ecotricity director Mark Yates says.

Ecotricity provides 100% "carbonZero" certified renewable electricity, mainly from hydro and wind and a growing solar generated base.

"Climate change is bringing more and more severe weather events," he says.

"With this comes energy supply

disruption, whether it be a tree across a power line, flooding as we have seen recently in Florida and parts of New Zealand which can disrupt fuel tankers or earthquakes disrupting pipelines and electricity lines.

"These events are becoming more common."

Yates says a petrol

station, for instance, requires underground tanks to be sound, regular tanker deliveries and electricity supply to pump the fuel. Electricity is also required for fuel payment.

"In contrast, EVs only need the electricity supply. So, in a dramatic climate



Continued on page 19

DRIVE ALL DAY, SAVE ALL NIGHT.

With Mercury's Plug-in Vehicle Fuel Package you can re-charge your EV at home and save 20%* on your entire home's electricity costs from 11pm-7am. It's just another way we're making energy more wonderful.

Visit mercury.co.nz/ev to find out more.

*The 20% discount is applied against your standard Mercury variable electricity price between 11pm - 7am (standard electricity prices will apply during other hours). See full terms at mercury.co.nz/ev.

Energy made
Wonderful

Mercury 



Where will the car industry fit in the future of mobility?

Disruption

In the arguably not too distant future, you'll walk out of your office door and a driverless car will pull up.

You'll jump in and it will whisk you away to a meeting before disappearing.

Or, you'll be part of a car-sharing scheme - an app will select a nearby car for you, you'll walk up to it, your phone will open it and start it and arrange to bill you for your use.

The technology to provide these services is either already here or developing. But one question remains: who will own and even profit from providing them?

There is a range of options - corporate ownership, shared public ownership or government involvement. It is essential for the automo-



Kristian Aquilina

tive industry to find a position in all this.

It will continue to play a roll in developing and manufacturing vehicles but the profitable business of selling to the public and servicing individuals is set to wane.

For retail operators, that could mean an even more significant death knell.

The first out of the gates to stake a claim on the future are the manufacturers. Most major operators have either launched their own car-sharing programmes or partnered or invested in others.

The most prominent is General Motor's Maven, BMW's ReachNow and DriveNow and Ford's investment in both Chariot ride-sharing and its app for the payment of shared transport services.



The only sign of such deals in New Zealand so far has been Audi's arrangement with Wellington-based service Mevo.

Mevo is an exciting example of legacy transport businesses wanting to be in on the future - with fuel supplier Z Energy recently taking a stake.

Across the Tasman, investment in ride-sharing is more direct. Holden is operating

the first wave of the Maven service, called "Maven Gig".

Maven in the United States is a car-sharing service but in Australia the early investment is in ride-sharing. Uber and Uber Eats drivers, for example, can lease a serviced, insured vehicle from A\$215 a week.

A pilot programme called "Maven Campus" has also been tested internally

Continued on page 19

Driverless cars could worsen congestion

Disruption

An Australian study released last month suggests autonomous vehicles might seriously increase road congestion if buyers do not give up private ownership of vehicles and car-share.

Sydney University Business School's Institute of Transport and Logistic Studies survey found Australians are looking forward to self-driving cars but are unlikely to share their vehicles with other travellers, contrary to predictions by transport experts and the motor industry.

Institute director Professor **David Hensher**

says the Australian Government might have to impose a levy on the use of private cars to combat increasing congestion.

One in four survey participants said they would buy a self-drive car for family use if they were available but only a third would lease their vehicles to other travellers when they were not in use.

The survey also noted that 40% of participants say they would probably use their cars more as travelling became easier and more than 30% said they would use their cars rather than some public transport.

No survey participants expected their daily travel to remain the same in the driverless era.

Hensher says the results indicate there could be more traffic congestion on Australia's roads rather than less as predicted by some transport analysts - and a deterioration in public transport services.

"The survey suggests a strong uptake which is encouraging at this stage in the debate on the future of driverless vehicles; however, the real challenge is getting society to become more sharing, either by allowing others to use their cars or

through a third-party mobility plan," Hensher says.

"Pundits promoting the virtues of driverless cars were suggesting that they would contribute to a significant reduction in traffic congestion. Our findings appear contrary to that view.

"We now need to contemplate how society more broadly and the Government might respond through new laws ensuring that disruptive transport technologies serve the public while managing their negative impacts through various measures, including a private car use levy." ■

Find your new EVs here!

EV FRANCHISE DEALER LIST

BMW

AUCKLAND CITY BMW

7-15 Great South Road
Newmarket Auckland 1051

WINGER BMW

138 Hutt Road, Kaiwharawhara,
Wellington 6035

CHRISTCHURCH BMW

30 Manchester St, Christchurch
Central, Christchurch 8011

MITSUBISHI

ARCHIBALD MOTORS

143 Commerce Street, KAITIA

PACIFIC MOTOR GROUP

70 Porowini Avenue,
WHANGAREI

SIMON LUCAS NORTH SHORE

Cnr Wairau & Target Road,
Takapuna, AUCKLAND

ANDREW SIMMS MITSUBISHI

500 Broadway, Newmarket,
AUCKLAND

AUCKLAND MOTORS MITSUBISHI

686 Great South Road,
MANUKAU CITY

ROGER GILL MITSUBISHI

Corner Manukau & Kitchener
Roads, Pukekohe, AUCKLAND

SAUNDERS MITSUBISHI

201 Pollen Street, THAMES

INGHAM MITSUBISHI

450 Te Rapa Road, HAMILTON

BAY CITY MITSUBISHI

140 Cameron Road, TAURANGA

PIAKO MITSUBISHI

254-256 Fenton Street,
ROTORUA

WINGS & WHEELS

85 Heu Heu Street, TAUPU

W R PHILLIPS

156-158 Devon Street West,
New Plymouth

WAYNE KIRK MITSUBISHI

19 Thackeray St, NAPIER

MCVERRY CRAWFORD MITSUBISHI

29 Kimbolton Road, FEILDING

MCVERRY CRAWFORD MITSUBISHI

2 Princess Street,
Palmerston North

WAIRARAPA MITSUBISHI

313 Queen Street, MASTERTON

BRENDAN FOOT MITSUBISHI

10 Railway Avenue, HUTT CITY

WELLINGTON MITSUBISHI

75-78 Cambridge Terrace,
WELLINGTON

HOUSTON MITSUBISHI

168 Rutherford Street, NELSON

HOUSTON MOTORS

42 Scott Street, BLENHEIM

CHRISTCHURCH MITSUBISHI

Cnr St Asaph & Montreal Streets,
CHRISTCHURCH

CAROLINE MITSUBISHI

23-27 Barnard Street,
TIMARU 7910

STEPHEN DUFF MOTORS

280 Andersons Bay Rd, South
Dunedin, Dunedin 9012

BALCLUTHA MITSUBISHI

79 Clyde St, Balclutha 9230

SOUTHERN MITSUBISHI

209-221 Dee Street, Invercargill
176 Dee Street, Invercargill

NEW EV CAR TYPES

MAKE	MODEL	TYPE	PRICING RRP est.	APPROX RANGE KMS
Tesla	Model S	BEV	\$113,695	450 - 570 km
	Model X	BEV	\$129,145	415 - 540 km
Renault	Zoe 22 kwh	BEV	\$68,900	220 km
	Zoe 40 kWh	BEV	\$68,900	300 km
Hyundai	Kangoo van	BEV	\$74,990	160 km
	Ioniq	BEV	\$59,990	220 km
Volkswagen	Ioniq Elite	BEV	\$65,990	220 km
	e-Golf	BEV	\$61,990	220 km
BMW	i3 Full Electric	BEV	\$75,700	200 km
	i3 - Range Extender	PHEV	\$86,900	200 km + 150 km
	i8	PHEV	\$281,200	37 km + 400 km
	225xe	PHEV	\$69,800	41 km + 550 km
	330e	PHEV	\$91,600	40 km + 550 km
	530e	PHEV	\$136,400	50 km + 600 km
	740e	PHEV	\$202,700	48 km + 550 km
	X5 xDrive40e	PHEV	\$152,700	30 km + 800 km
Mini	Countryman	PHEV	\$59,900	30km + 500 km
Mitsubishi	Outlander	PHEV	\$60,990	50 km + 500 km
	A3 Sportback e-tron	PHEV	\$69,900	45 km + 600 km
Audi	Q7 e-tron	PHEV	\$158,400	54 km + 800 km
	Mercedes Benz C350 e Sedan	PHEV	\$96,290	31 km + 700 km
	C350 e Estate	PHEV	\$99,790	31 km + 700 km
	E350 e Sedan	PHEV	\$143,890	30 km + 600 km
	GLE500 e	PHEV	\$153,290	30 km + 700 km
	S500 e	PHEV	\$255,000	30 km + 700 km
Porsche	Cayenne S e-hybrid	PHEV	\$177,800	20 km + 750 km
	Panamera Turbo S e-hybrid	PHEV	\$428,400	30 km + 750 km
Volvo	XC90 T8	PHEV	\$134,900	44 km + 600 km

BEV - Battery Electric Vehicle
PHEV - Plug-in Hybrid Electric Vehicle

Do you sell EVs?

Talk to Rachel Hadfield
about advertising
your business here
with EVTalk

- in print
and online



Phone: +64 21 778 745 or
Email: rachel@automediagroup.co.nz

USED DEALERS LIST	
NAME	CITY
Cash Back Cars	Whangarei
Autolink Cars 09 378 9090 autolinkcarsltd@gmail.com	Auckland
GVI Electric 09 216 7106 ev@gvi.kiwi	Auckland
Harwood Cars 027 492 2218 www.harwood-cars.com	Auckland
PlugN Drive NZ	Auckland
Volt Vehicles	Auckland
Farmer Auto Village	Tauranga
EV Central	Taupo
The Car Man	New Plymouth
Gazley - 0800 668 668 sales@gazley.com	Wellington
Cooper Auto Company 04 586 2295 sales@cooperauto.co.nz	Wellington
The Car Company Nelson	Nelson
HVS Motors	Timaru
Hopmans QEII Quality Cars 0800 HOPMAN (467 626) sales@hopmans.co.nz	Christchurch
Stadium Cars	Christchurch
Metro Christchurch	Christchurch
Wheeler Motor Company	Christchurch
HVS Motors	Gore
Auto Court - 03 455 3000 info@autocourt.net.nz	Dunedin

Find your



HOPMANS QEII

QUALITY CARS

CHRISTCHURCH'S LARGEST NISSAN EV DEALER

Over 20 Leaf and e-NV200 vans in stock

Free NZ charging cable – Free 2 Year Warranty
- Free on road costs

Hopmans QEII EV Quality Cars – Servicing Christchurch for over 30 Years

Cnr Travis Rd & Bower Ave
sales@hopmans.co.nz

0800 HOPMAN (467 626)
www.hopmans.co.nz

USED EV CAR TYPES				
MAKE	MODEL	TYPE	PRICING RRP EST.	APPROX RANGE KMS
Nissan	LEAF Generation 1	BEV	\$9.6k - \$16k	120 km
	LEAF Gen 2 - 24 kWh battery	BEV	\$15.5k - \$28k	135 km
	LEAF Gen 2 - 30 kWh battery	BEV	\$23K - \$40k	180 km
	e-NV200 van	BEV	\$19k - \$30k	140 km
BMW	i3 Full Electric	BEV	\$35k - \$43k	200 km
Mitsubishi	i-Miev	BEV	\$10k - \$14k	100 km
	B-Miev Van	BEV	\$13k	100 km
Renault	Zoe 22 kWh	BEV	\$30k - \$50k	220 km
	Zoe 40 kWh	BEV	\$40k - \$45k	300 km
Hyundai	Ioniq	BEV	\$48k - \$60k	220 km
	Ioniq Elite	BEV	\$55k - \$66k	220 km
Kia	Soul EV	BEV	\$35k - \$38k	150 km
Volkswagon	e-Golf	BEV	\$42k	200 km
	S P85	BEV	\$150k	350 km
	S 90D	BEV	\$172k	420 km
Tesla	X 90D	BEV	\$170k	410 km
	C350 e Sedan	PHEV	\$72k - \$79k	31 km + 700 km
	GLE500	PHEV	\$120k	30 km + 700 km
	E350 e	PHEV	\$130k	30 km + 600 km
Mercedes Benz	S500 e	PHEV	\$135k	30 km + 700 km
	Toyota Plug-in Prius	PHEV	\$17k - \$39k	26 km + 800 km
Audi	A3 Sportback E-Tron	PHEV	\$48k - \$70k	45 km + 600 km
	Q7 e-tron	PHEV	\$148k	54 km + 800 km
BMW	i3 REX	PHEV	\$40k - \$50k	200 km + 150 km
	225xe	PHEV	\$60k	41 km + 550 km
	330e	PHEV	\$58k - \$75k	37 km + 550 km
	X5 xDrive40e	PHEV	\$140k	30 km + 800 km
	i8	PHEV	\$150k - \$170k	37 km + 400 km
Mitsubishi	Outlander	PHEV	\$33k - \$68k	50 km + 500 km
Volvo	XC90 T8	PHEV	\$130k	44 km + 600 km

BEV - Battery Electric Vehicle
PHEV - Plug-in Hybrid Electric Vehicle

NZ EV INDUSTRY NEWS

EVtalk

Register for
FREE
news updates

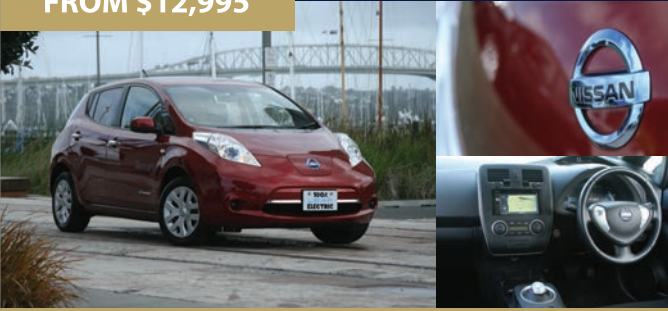
Receive
twice-weekly
news alerts to
your email

www.evtalk.co.nz

Quality used EVs here!

AUTOLINK
CARS RMVT

FROM \$12,995



SPECIALISING IN 100% ELECTRIC VEHICLES

ZERO EMISSIONS

FREE CALL: 0800 378 9090 WWW.AUTOLINKCARS.CO.NZ

The South Island's biggest selection of EVs

Join the EV revolution. Call us today to discuss the benefits of driving electric

Enquire about our nationwide free shipping



- LEAF
- Outlander PHEV
- eNV200
- ZOE
- MiEV Truck & Van
- Prius Plug-in

03 455 3000

info@autocourt.net.nz

View our stock on www.autocourt.net.nz



Kent & Cambridge Terrace,
Wellington
Victoria Street,
Lower Hutt

www.gazley.com **G**

ELECTRIC VEHICLE SPECIALIST

Sales, Parts & Service



Wellington's only **LEAF** authorized service center

Open Saturday 9am-5pm and Sunday 10am-4pm



AUTO COMPANY
ELECTRIC VEHICLES

CALL TO DISCUSS OUR CURRENT RANGE
OR ORDER YOUR NEXT EV DIRECT FROM
JAPAN

04 586 2295

sales@cooperauto.co.nz

www.cooperauto.co.nz



Full range of Support & Service | NZ's largest range of EVs | We ship nationwide



gvi electric

Contact our EV Expert Andrew on 021 454 287 | www.gvielectric.kiwi | 575 Great South Road, Penrose

Boot's kick-starting the EV charge

Dave Boot is spreading the EV word. You could say that's his job at Stadium Cars in Christchurch where he's the sales manager.

But it's more than that – he's a true EVangelist, convincing not only customers but staff and anyone else who'll listen of the drive towards an electric future.

He convinced Stadium Cars director **Tony Gosling** quickly enough and landed the job of specialising in EVs, helping with staff instruction and dealing with the growing number of EV customer enquiries.

"Customers are very well educated on EVs," says Boot who maintains vehicle sales personnel need to be well up with play.

"You have to know what the customer is talking about and to make sure it's accurate information as well."

Stadium Cars has about 400 used vehicles in stock at any one time, with Nissan Leafs and e-NV200 electric vans now more frequently introduced.

Boot says the arrangement works well because there's little point in establishing a separate yard for EVs – "otherwise it might be good for five years then we'd have to shut the other yard," he laughs.

"You can't stop the EV onslaught."

EVs are brought to Stadium Cars with dash conversions and any other work already completed.

"So they're good to go for the customer," Boot says.

And it's the customers who are among the best EV sales people, he reckons.

"They tell everyone and are very passionate about EVs, particularly for their zero emissions. Some delight in saying they're never going to a petrol station ever again."

The EV community has its own network, like those on Facebook, and any post usually generates a response.

"There's a lot of enthusiasm and many people are great ambassadors for EVs."

Boot says they're well informed and any misinformation is usually quickly corrected.

Some of that can be based around charging times – one issue including the need to reset charging timer clocks from Japanese to New Zealand times so the charger automatically switches on and off at the right times, he says.

Some concerns like "range anxiety" – how far an EV can travel on a single charge – are fast disappearing "especially after someone has driven an EV for a few days".

Boot says the Christchurch City Council is especially supportive of EVs, which are ideally suited to the city's mainly flat landscape.

In fact, much of the EV innovation is coming out of Christchurch. The city recently saw the launch of Foodstuffs' 28-strong e-van delivery fleet, is hosting driverless vehicle trials and has seen a range of EV charging developments.

Boot's been in the automotive

industry since the age of 18, working for three dealerships with his stay at Stadium Cars extending to three-and-a-half years.

It seems a little ironic that at 34 he's yet to see many single young people aged even up to 40 show much interest in EVs. That will probably come.

Meanwhile, he says his biggest EV customers are couples over the age of 50, usually in professional careers, who often want an EV to supplement their internal combustion engine (ICE) vehicle.

They soon come to use their EV more than their ICE.

EV owners are very aware of each other too, often tooting and waving at fellow EV drivers.

"They'll even let you into a gap in the traffic with a knowing wink," Boot says, who drives a company Leaf.

The EV landscape is changing ever more rapidly, with new innovations appearing almost week by week, Boot says.

And he loves keeping up with the play, saying he enjoys reading EVTalk alerts and the magazine.

Many local body politicians are now realising EVs are the "thing to do", particularly in Christchurch, he says.

It's a future he has no doubt about and he's keen to ensure everyone is ready.

Stadium Cars is based in Moorhouse Ave in Christchurch and has another yard in Rangiora.

It's known as the home of the "Good Sports" who often contribute to worthy causes such as the Dogwatch Sanctuary Trust for the rescue and rehoming of dogs, Home and Family parenting and counselling services, and to sports clubs.

Visit www.stadiumcars.co.nz for more information and a video. ■



Countryman a first step for Mini

BMW's Mini brand is following its parent into the plug-in market. A full battery electric model is likely to be a few years away but its first plug-in hybrid has already arrived in the form of the Mini Countryman Cooper S All4.

In the context of the entire BMW Mini range, it makes a lot of sense. It is based on the same platform as the BMW 2-Series so giving the option of the same plug-in hybrid drivetrain as the 225xe model will have taken little extra work.

Continued on page 14



POWER DEALS FOR EV USERS

Company	Energy Deals	Where	Cost to charge LEAF*
Mercury 	Plug-in Vehicle Fuel Package	Auckland	\$5.21
	Includes 20% off your entire home's electricity costs between 11pm – 7am every day, one year fixed term, 12% PPD is included in these calculations.	Wellington	\$5.08
		Christchurch	\$5.03
Contact Energy	Freedom plan	Auckland	\$5.09
	Excellent night rates, no fixed term, 22% PPD has been included, check if the matching daytime kWh rate will affect your overall bill.	Wellington	\$4.34
		Christchurch	\$3.05
Ecotricity	Low Solar	Auckland	\$5.53
	Low Usage plan for EVs & can buy back solar energy, no fixed term	Wellington	\$3.74
		Christchurch	\$4.84
Electric Kiwi	One Plan with Hour of Power	Auckland	\$5.72
	Free hour of off-peak power daily – included and calculated to be 2 kWh for charging at 8 amps. Note: this could be different depending on your designated Hour of Power.	Wellington	\$5.50
		Christchurch	\$5.65
Flick Electric	Wholesale rates plus their Flick Fee.	Auckland	\$5.21#
	No fixed term, EV rate in Wellington. Calculated using a slightly higher average spot price of 5.7c per kWh.	Wellington	\$3.16#
		Christchurch	\$3.57#
Genesis Energy	Classic plan	Auckland	\$5.78
	Excellent night rates, no fixed term, 10% PPD has been included, check if the matching daytime kWh rate will affect your overall bill.	Wellington	\$3.58
		Christchurch	\$3.15
Meridian	Rest Easy EV plan	Auckland	\$4.49
	Lower night rate from 9pm to 7am, 3 year term, 15% PPD is included in these calculations, check if the matching daytime kWh rate will affect your overall bill.	Wellington	\$3.79
		Christchurch	\$2.55
Paua to the People	Cheap As Plan with EV night rates	Wellington	\$2.96#
	No fixed term. Calculated using a slightly higher average spot price of 5.7c per kWh		

*Approximate cost for a full charge of a 24kWh LEAF in the 3 largest centres of NZ.

Please note that rates vary around New Zealand – the above costs were from Mt Wellington in Auckland, Northland in Wellington and Linwood in Christchurch. They can also depend on your meter type & the company you use. Prices vary at the different times of the day eg charging during the day may have higher costs. Flick Electric in Christchurch has higher daytime rates in Winter due to variable pricing from the lines company.

The rates we have used above were calculated in July 2017 using a low user cost, overnight rates, includes prompt payment discounts (PPD) if available and GST, excludes daily charge. Please note that prices were correct at time of publishing and are subject to change. Prices above may not include extra discounts that some companies have available eg online discounts, etc. Please contact us if you would like any clarification.

Spot prices can go up and down as they are affected by demand in energy and weather conditions. We have calculated these prices using the average spot price of 5.7c per kWh at night over the last 7 years, however this is no guarantee of future prices.

Countryman a first step for Mini

Continued from page 13

That means the same 1.5-litre three-cylinder turbocharged engine paired with a six-speed automatic transmission driving the front wheels and an electric motor powering the rear.

When running in electric-only mode, the Mini is essentially rear-wheel drive, but running both engines, it can be front or all-wheel drive.

The petrol engine produces 100kW and 220Nm and rear engine adds 65kW and 165Nm. A total system output of 165kW and a combined torque of 385Nm is available when required - the car accelerates from zero to 100kmh in 6.8 seconds.

A 7.6kWh battery is positioned under the rear seat. At a wall box with a charging capacity of 3.6kW, it can be fully charged in around 2.30 hours. Charging at a regular 10A household socket takes about 3.15 hours.

The charging plug is type 1, with no DC fast-charging. The port is located forward of the front passenger door.

The battery causes the only practicality compromise compared to the normal model - the rear bench is fixed instead of sliding and sits very slightly higher.

But the boot retains its large under-floor storage area, including the ability to have a fold-out padded bench seat that flips over the tailgate. It's spacious at 450 litres and easily swallowed enough luggage for a couple and puppy to enjoy a weekend away.

The Countryman has a reasonable level of interior space both front and rear but a dark interior and tinted windows can make it feel a little closed in.

There is an excellent range of adjustment on the front seats - you can sit low like a sports car or high like an SUV. They are covered in high-quality leather and are firm and supportive.

A round control screen in the centre of the dash controls the audio system, navigation and vehicle information, and speed, engine speed, fuel and basic hybrid and battery information are provided through a cluster of pods mounted on the steering column.

The Countryman weighs the same as the 225xE but we think it feels slightly heavier on the road. That could come from a stiffer suspension and

quicker steering.

It's a lot of fun to drive with bags of grip, a quick shifting transmission and the additional boost of the electric motor. Eco and Sport modes change the engine, transmission and steering response to driver demands.

You can run in "eDrive" electric-only mode up to 125kmh for a claimed range of 41km but any call for performance will kick the petrol motor into life.

Cautious use, however, will allow most users to undertake a short commute using no fuel at all - leaving that for long weekend drives. We think 41km is a little optimistic - expect 30km in regular use with air-conditioning on.

We found one issue with the electric drive system. When attempting to drive up a modest gravel incline we experienced significant rear-wheel spin and subsequent traction control intervention.

If you want to ensure you have all-wheel drive, the car needs to be slipped into Sport mode to have the petrol engine running at the same time.

Our review vehicle was fitted with some technology to help drivers. Parking sensors and a reversing camera are standard and options added include low-speed autonomous emergency braking, adaptive cruise control, a heads-up display and speed limit information system.

The car came with an eye-watering price tag of \$72,000 although some of that was for optional

wheels, the driver assistance package and other extras.

The standard model retails for \$59,990 - \$2000 less than an Outlander plug-in. The Mitsubishi might offer more space and range but the Mini's drive and stylish looks make it an attractive package for some. ■





MICRO EVS



A good head for the e-bike business

The surging popularity of electric bikes is helping put businesses like Bikes & Barbers on the map, literally.

When owner **Christian Hoff-Nielsen** came to New Zealand in 2012 to "switch off" he had no idea it would lead to him switching on to e-bikes.

Danish-born but living around many parts of the world, Hoff-Nielsen had worked as an automotive engineer for about 30 years.

He did a variety of jobs from modifying vintage vehicles to working as a chassis engineer for Jaguar.

Arriving on Waiheke Island from Brussels with his partner, their children, a toothbrush and \$46, Hoff-Nielsen met an 80-year-old running a bike hire business and eventually bought it.

He still runs e-Cycles NZ, a mostly e-bike hire fleet, but now has five cycle shops around the country. He recently opened a branch in Queenstown.

About 40 staff work in the business and Hoff-Nielsen says it's now almost as busy in winter as in summer.

One reason for the success is keeping the business open seven days.

"People hire a bike on Saturday and buy it on Monday," Hoff-Nielsen says with characteristic humour.

More and more e-bike riders are enjoying the open air, scenery and good climate (for most of the year), and

there's a wide range of bikes to suit all.

Bikes & Barbers even has its own e-bike range, the Onya (as in "on ya bike"),

as well as imports from around the world. Others include Avanti, Surly, Smartmotion, Scott and Moustache.

Hoff-Nielsen saw a need to tailor bikes to suit Kiwis.

"Riders here are generally bigger

than what the bikes are designed for overseas so we worked on having New Zealand specifications – bigger spokes, better brakes, bigger motors and more.

"Some overseas cycle makers told me their bikes weren't suited to everyday use."

So he decided they would be.

"The bikes are more suited to New Zealand conditions and we provide a two-year warranty."

More buyers are opting for e-bikes as commuter transport so they often select a wide range of accessories such as wet weather gear, carry bags, plus smart and safe Livall helmets.

A variety of comfortable riding gear is available too and the business also caters for bike servicing and repairs.

The e-bikes vary in price from under \$2000 to nearly \$13,000 for the top of the range. Most of them allow the rider to do up to 35kmh-40kmh on the flat.



Christian Hoff-Nielsen, left, with an e-bike customer.

"It's a team effort, getting the health, fun and pleasure side of e-biking out there."

"E-bikes take the best bits out of biking and leave the worst bits out."

Bikes are provided for both on-road and off-road. They sport a variety of tyres for the various purposes, have different powered motors and come in a huge range of frames. Some even provide for cargo carrying.

Tyres are available for all conditions, with bikes like the Onya Tui sporting strong, long-wearing tyres that include reflector strips for side visibility.

The shops also provide Ubco off-road electric motorcycles.

In the Newmarket shop, 35 bikes alone are stored across the ceiling and 24 demonstrators are available on the shop floor.

The whole nationwide rental fleet caters for about 15,000 rides a year.

Meanwhile, Auckland University is looking at researching the health benefits of e-biking with 250 random users and Bikes and Barbers' help.

Oh! And about the name?

Yes, you can get a haircut while checking out the bikes.

Originally a barber's shop, the bike business moved in and shared the rent for several years. Now the barber is upstairs so men and women can still book a cut and an e-bike test ride close together.

Visit www.bikesandbarbers.co.nz or www.ecyclesnz.com for details. ■

Winners snap up micro-EVs

Continued from page 1

car park brought big smiles from both him and his colleagues who also wanted to try it.

"I've already done about 80km on it," he says.

Short finds it handy too for popping down the road to his local café.

The JackHot is worth about \$1400, has a 25kmh top speed and a 35km range, fully charging in just two hours.

Andrews, in his 70s, initially wondered what he'd do with the HaloCity e-bike he'd won.

He didn't have to think too hard – he'll be using it for 3km trips into Takapuna every second day for shopping and coffee with friends and will put the fold-up e-bike in the boot of his Lotus 7 when he takes that out.

The bike weighs 15kgs and can travel up to 35km on a single charge.



Maurice Andrews receives his HaloCity e-bike from EVtalk business manager Rachel Hadfield and HaloCity's Nellis Basson.

That means Andrews can take it on trips to Ellerslie to visit his four-year-old grandson.

He'll be riding 4km then taking the bus to the city, the train from Britomart, with another 4km journey from the Ellerslie train station.

"It's going to be useful when travelling too," Andrews says. He's planning to carry it in his campervan – once he buys one.

HaloCity says it created the bike, worth about \$3000, to assist with all urban mobile needs – amply demonstrated by Andrews. ■



MICRO EVS



E-bike convert tells her story

Helena Barkman spent an hour getting to work at the Auckland Council on the bus.

She switched to an electric bike in May and cut her commute to 18 minutes each way.

Uncertain if an e-bike was the right choice, Barkman tried one from the council's bike fleet for staff members to use on business trips around town.

After three days she was hooked. So she bought an e-bike and became a dedicated e-commuter.

"I thoroughly enjoy riding bikes in general," Barkman says. "For me, it means getting somewhere faster and being in control of my own destiny. So when you add the electric element to it, it is simply amazing. It literally makes me happy just to be out and about, especially with the summer coming."

She rides about nine kilometres from Epsom to Sandringham Rd then on to

Albert Street in downtown Auckland.

Her e-bike sports a child seat for daughter Ella, 15 months.



"I have just started riding to daycare with her to do the drop off in the morning – now it is a bit warmer. Then riding on to work.

"It's a lovely way to start our morning and she loves it!"

Barkman has a rule that if it's raining in the morning she won't ride, but says rain doesn't bother her when travelling home.

"I have ridden home in all sorts of weather. I had a lovely ride a few months ago when it was really foggy in the morning – everything just felt so crisp and clean."

Few bike lanes are on Barkman's route, so she uses the many bus lanes and sometimes takes to the pavement, riding very slow, if the road is too risky.

"Pedestrians don't mind – I think they understand," she says.

Barkman rides a mountain bike for recreation, and recently had two rides around Taupo, including a visit to "Cra-ters of the Moon" with family members.

Does she have any advice for others considering e-bikes?

"Do it!," she says. "It may take a little time to get used to the additional speed, but the freedom it gives you is simply amazing. Just take it slow to begin with while you get used to things."

Barkman says her e-bike is the best thing's she's bought in a very long time.

While e-bikes can be expensive, Barkman says long-term cost savings more than make up for it.

"I will save this money over time by not going on the bus. I am driven by saving money, so will now always opt for riding as I know I will also (door to door) beat the time if I went on the bus. And I get the added bonus of fresh air and exercise." ■

Smart thinking from battered bike fan

How many great ideas come to people by accident?

Brian Zheng had one of those moments when he fell off his bike in New Zealand while trying to pull his phone out of his pocket.

Recovering from a broken arm, he came up with the idea of a helmet phone so no other rider would have to go through what he did.

Zheng, a Wuhan University graduate majoring in scientific and technical information and management and a Massey University MBA graduate (the reason he was in New Zealand), founded smart helmet company Livall.

The first smart and safe cycling helmet developed and designed independently by Livall was a big hit at the 2015 Internationale Funkausstellung Berlin (IFA) trade show in Germany.

It was the same story at the Consumer

Electronics Show (CES) show in the United States in 2016 and the smart helmet was soon attracting media attention.

Livall recently won a Smart Sports Device Innovation award at IFA 2017, just days after scooping up another award at the Eurobike 2017 show.



Christian Hoff-Nielsen, left, and Sanchit Mittal.

The company has established a European office in Berlin, New Zealand and Australia subsidiaries based in Auckland and a US subsidiary in San Francisco.

It is now reaching 65 countries and regions worldwide.

The latest award-winning BH51M helmet phone follows others in the line and features smart lights (including indicators), hands-free calling, the ability to listen to music and an SOS alert function that sends an automatic message to an emergency contact in the event the rider is knocked unconscious.

The helmet phone is paired to a smart-phone via Bluetooth and is controlled

through a button device attached to the handle bar. A combined phone holder and charger is among its accessories.

Livall (NZ) Sports Tech opened in New Zealand about a year ago, with **Sanchit Mittal** the first employee as sales and business development manager, based at Dairy Flat in north Auckland.

Electric bike retailer Bikes and Barbers has been testing the helmets for about two years.

Mittal, responsible for Australian and New Zealand markets, says Livall is getting a very positive response from both.

"My main motto is to connect Livall helmets not only to people who ride bicycles but also to the people who use their four-wheelers for commuting."

Twelve different types of helmets are available for children and adults. They are suitable for road bikes, e-bikes, mountain bikes, off-road motorcycles, quads and more.

Prices range from \$199 to \$300.

Go to www.livall.com or email sanchit@livall.com for more information. ■

THE WALLPOD EV CHARGING STATION



SMART CHARGING OPTIONS

- Optional GPRS connectivity
- Optional WIFI interactive
- Optional Smart system compatible
- Optional back office connectivity
- Optional Ethernet connectivity



Gearing up for EVs

The automotive market in New Zealand is changing faster than some predicted.

Many of the major vehicle manufacturers have recently announced they will be offering more models of electric/hybrid vehicles - and in some instances solely electrified vehicles - over the next few years.

And the Government is supporting electric vehicles (EVs) with initiatives such as trials allowing them to use the priority T2 and T3 lanes on selected motorway on-ramps and with exemptions from road user charges.

At Autosure we like to be at the forefront of new technology so we can use our innovative business model to develop new products and services tailored to our dealers and their customers.

That's why we were quick to create a mechanical breakdown insurance (MBI) policy designed specifically for electric/hybrid vehicles earlier this year.

It was certainly a good move for our dealers as recent statistics show as much as 60% of newly registered electric/hybrid vehicles in New Zealand are coming from the used import market.

Repairer network

As New Zealand's largest used car warranty provider, we have a responsibility to build a repairer infrastructure to provide back-up for our electric/hybrid policies and peace of mind for our dealers and their customers.

So we have created a specific list of electric/hybrid vehicle repairers. We have more than 4500 repairers on our database, each one thoroughly assessed in terms of training, safety and tools before being recognised as Autosure Approved Repairers.

Those on the EV list have taken the time to complete safety and knowledge courses on

electric/hybrid vehicles and a number of others have advised they are planning to attend those courses in the near future.

During the process of compiling the repairer EV list, we found some workshops had already embraced the future - attending courses, installing charging stations and even venturing overseas to attend seminars

relating to current and future electric/hybrid vehicle technology.

But there were a few repairers who felt no need to upskill. They had doubts as to the significance of the EV revolution.

Nonetheless, most we spoke to were more than willing to get involved, with many of their staff having

James Searle is general manager of DPL Insurance Ltd



already completed, enrolled in or looking for courses to upskill and future-proof their businesses.

Country-wide support

Although sales of electric/hybrid vehicles are small in some parts of New Zealand, battery ranges are improving and we need to ensure our policyholders' needs will be met - regardless of how far they venture from home.

We intend to expand our electric/hybrid vehicles network as demand increases and are confident in our strength to support policyholders from Kaitiaki to Invercargill.

Training's important

A recent article in the United Kingdom says the motor industry there plans to launch a campaign to persuade the British Government new regulations are needed to ensure mechanics are properly trained before being allowed to work with EVs.

Autosure is actively promoting the implementa-

tion of similar regulations in New Zealand. It's important these outline the minimum standard of knowledge and training a repairer will need before being allowed to service or maintain electric/hybrid vehicles.

It is also important to consider the safety of our repairers. With 300-plus volts of DC current in the batteries fitted to some EVs, a simple mistake could have fatal consequences.

So we are keen to see measures put in place to make sure repairers are not exposed to unnecessary risks associated with the repair and maintenance of electric/hybrid vehicles.

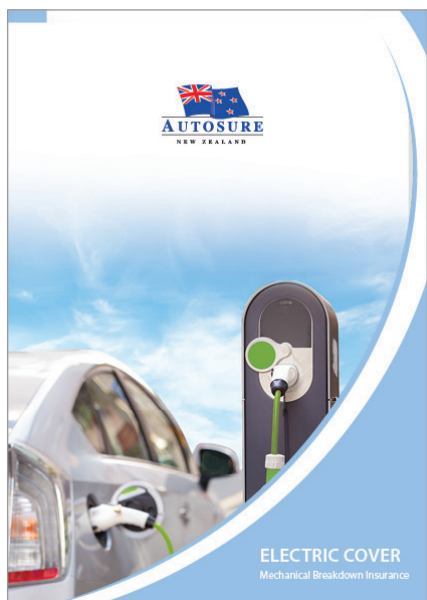
Future focus

EVs might look pretty much like any other car from the outside but it's a different story under the bonnet.

With proper training and processes repairs can be done safely, efficiently and often with the repairer staying a lot cleaner. Workshops have an opportunity right now to be ahead of the game and gear up for the EV revolution.

No matter how fast technology is changing, Autosure's focus is the customer. Our policies are designed to protect vehicle owners, providing peace of mind that they'll get sorted if something happens - whether their vehicle is powered by petrol, diesel, electricity or the sun.

And whatever vehicles dealers are selling today - and tomorrow - they can rely on Autosure having a product and service offering to support it. ■



Where will the car industry fit in the future of mobility?

Disruption

Continued from page 8

through its Port Melbourne base and Dandenong HSV facility since 2016. The pilot achieved 4400 bookings from 500 members.

"Maven Gig provides drivers access to vehicles for an all-inclusive rental rate," Maven Australia general manager **Matthew Rattay-Wood** says.

"We offer drivers the peace of mind of unlimited kilometres, service and maintenance, insurance and roadside assist with the latest technology in some of Holden's top-range vehicles."

Astra, Trax and Captiva are the vehicles now in use in the programme.

BMW Australia is offering a similar service through an intermediary leasing company.

Holden New Zealand managing director **Kristian Aquilina** has told Auto Media Group it is a case of "watch this space" around such services coming to New Zealand.

"We've been encouraged by the enthusiasm for Maven in North America and Australia, and so have many other GM locations around the world," Aquilina says.

"Our job is to ensure the GM business in New Zealand remains at the forefront so when the time is right, well, watch this space."

He acknowledges it could be the beginning of a move towards a change in vehicle ownership.

"Possibly. Change in our industry is inevitable and has been a feature of the last 100 years. In many ways, General Motors will lead it. Holden NZ is constantly assessing what the future might look like.

"As customers evolve their mobility needs, we will be ready to meet them."

Manufacturers will lead the charge to autonomous transport and mobility as a service, he says.

"Human transportation has evolved remarkably over the years and distributors have always evolved with it."

"This next wave of change is no different. In fact, like the transition from horse-drawn to the motorised carriage, OEMs will lead the change to autonomy and alternative mobility options."

Will dealers have a role to play? He predicts dealerships will become "the hub of mobility" for communities.

"As the business of mobility evolves, we can only see an expanded role for dealers. But it won't happen overnight and the pace of change will vary greatly across nations and, indeed, across regions within countries."

Will the import trade play a part?

The new vehicle industry will have the vehicles, and the money, to own and operate large fleets but what role will the import sector play?

VIA chief executive **David Vinsen** says it will continue to be a significant force in the trade but like other sectors, what shape it will take is unclear.

The association is investing in being part of the discussion around the future of transport to ensure it's not left behind, he says.

"We are going to see the models of use and then ownership of vehicles change over time - it is going to seriously impact on our industry."

"In 20 years time we will require fewer vehicles and who will own them will change."

He suspects the industry's role will be similar to where new vehicle distributors are

heading now.

"I don't know, but I can see that, instead of an importer bringing in 100 cars and selling them to 100 people, they might not sell them at all."

"They may retain ownership and operate them as ride-sharing vehicles."

Key import operators have long been seen as flexible entrepreneurs who have found a way to make the most of regulation and market conditions in the past.

Vinsen agrees the opportunity for those businesses to move into fleet ownership is comparable to import operators moving into rental cars in the past in a bid to find a different income stream to just retail.

The import industry now dominates the supply of ride-sharing vehicles with Japanese import hybrids but Vinsen doesn't see that as a hindrance to distributors investing in the market.

"Imports will be a contributing factor rather than a hindrance. The new vehicle market will have its place and the used vehicle market will have its place."

"They will pitch their businesses in different areas - just as Corporate Cabs do in the taxi trade." ■



David Vinsen

EVs a powerful argument for change

Continued from page 6

change event, ICE vehicles need all three attributes to be operational, whereas EVs only need the electricity.

"Of all the services that might be disrupted in a

climate event, typically electricity is the first to be reinstated."

Yates also reckons it's likely more frequent and dramatic climatic change events would not happen if everyone drove EVs.

"EVs are also significantly more economic to run from a consumer's perspective so it would appear everyone, apart from oil companies, benefits by moving to EVs."

Yates bought the first

Nissan Leaf in New Zealand in 2012.

"It has more than 90,000km on it and each year I save over \$2000 in fuel so over the last five years I have saved about \$10,000 of fuel." ■

EVs - the good, the bad and the battery

Continued from page 1

creasingly important with climate change bringing climate uncertainty and the severity of climatic events, therefore creating a greater risk of dry years affecting hydro-electric dams.

"As the uptake of EVs increases, a dry year will have a much greater impact – affecting how we move, as well as how we power homes and businesses."

"When you consider a national fleet reliant on traditional electricity production and the increasing unpredictability that climate change brings, it is obvious we cannot rely primarily on a hydro system."

"Resilient renewables" are needed, he says.

"By embracing emerging technology like solar and batteries, we are not only minimising our carbon footprint but ensuring long-term resilience.

"That's why Vector is pioneering Vehicle-to-Grid (V2G) technology in New Zealand. This is essentially a two-directional charger which allows vehicles to be charged, or reverse the energy flow, allowing EVs to discharge energy.

"V2G is a game-changer for EVs because it transforms them into rechargeable and mobile power sources."

An EV connected to a V2G charger can introduce extra power to buildings, as a cheaper power source during peak-hour consumption, power homes during power cuts and even release energy back to the network to support customer demand.

"People could charge up their car batteries overnight with cheaper energy and then use them as power boosts when needed, or in the morning and evenings when energy costs more," Mackenzie says.

"V2G offers increased customer choice and provides consumers with greater control over how they power

their lives."

A Nissan Leaf G2 with a 30kWh battery could power the average household for 10 hours. The new chargers could also integrate with other technologies such as solar and batteries to redefine a truly smart energy home or business.

"V2G will influence not just how owners power their vehicles but how they rethink their whole energy usage," Mackenzie says.

"As battery technology changes and at-home energy storage capabilities become more mainstream overseas, it won't be long before consumers here are demanding similar options – particularly if they have solar and are generating their own power.

"With the right battery, they will be able to make three choices around their energy usage - use it there and then, store it and use it later (for example, to charge their vehicle) or sell some of it on to others."

Vehicle batteries can also have a second life through innovative recycling. "We have created a new mobile generator trailer, which utilises recycled car batteries," Mackenzie says.

"It is used by our crews to maintain or restore power where outages would otherwise be experienced. This extends the lifecycle of EV components, further reducing their impact on the environment."

Mackenzie says it will be essential to monitor the rate of EV uptake and location because of the pressure they could place on the electricity network without efficient co-ordination.

"Electricity distribution businesses are at the coal face of ensuring sufficient build out and upgrades are made to cope with the increased demand on the network," he says.

"Vector, and others, are using an array of public information to join the

dots and better understand the disruption unfolding, to create a smart, efficient, customer focussed and resilient energy future."

Christchurch based EVNEX is building intelligent systems to help utilities and end users monitor and control EV charging stations from anywhere in the world.

"We believe that this technology will become crucial to electricity network stability as EV fleet numbers and EV power requirements continue to increase," chief executive **Ed Harvey** says.

"Furthermore, as the effects of climate change grow, we're also going to see more consumers taking an active role in how they consume power and how that power is generated."

Harvey says reliability of electricity networks, generation and storage will soon underpin the availability of almost all forms of transport.

"EVNEX is looking at how IoT technologies, combined with machine learning, can help lower the stress on electricity networks, and provide network managers and generators with better data to forecast demand and predict possible issues."

New information from overseas shows projects like OpenLV are opening up electricity use data too, providing information on electricity capacity for EV charging.

Apps are being developed which provide an EV user with masses of information, including best times to charge, supply issues, power sources and more.

The upshot is that with the rapid pace of technology – including EV solar roof panels, better battery range and storage, wind and other alternative power sources – it's likely EVs won't face any major power disruption even when they become the norm on our roads. ■



All the EV Industry HOT NEWS
every day as it happens on www.evtalk.co.nz
 Subscribe online for FREE weekly 'Alerts' direct to your email or get
 the monthly printed magazine as well for \$96.90 a year (including GST)

EVs in the spotlight at Big Boys Toys

Electric vehicles are stepping up at November's Big Boys Toys show.

Tesla has an exhibition and The Better NZ Trust's Leading the Charge will offer visitors drives of six different EVs at the event at Auckland's ASB Showgrounds.

Manta 5 will launch its hydrofoil bike – an electric bike which rides across water – and a huge array of road electric bikes, including the Rayvolt bike, will be on show.

Five halls will be packed with the latest and greatest in products and services, allowing visitors to see, try and buy, event director **Dean Wilson** says.

The Driven Hall automotive show will feature vehicles ranging from those that can be taken home to those visitors might dream of owning. Included are classic cars to super cars, motorcycles to marine craft and the best from Ferrari, Honda, Jaguar, Land Rover, SRT, RAM and more.

This year's 2017 super car is the LaFerrari Aperta, one of only 200 in the world.

The Automania Showcase will showcase vehicles from race cars to street cars, D1NZ to super saloons and exotics to off-landers.

The Garage at Big Boys Toys will feature the Best of Repco Beach Hop, interactive displays and an array of tools.

Machinery from the construction industry will star in the CCNZ Construction Zone, which will feature an interactive format and include the Auckland Excavator Operator Championships.

New instruments, interactive displays, old school vinyl, musicians and more will be on show at the new Music Zone, and the Milwaukee Action Arena will have an action-packed extreme sports show each day.

More than 35,000 people are expected at Big Boys Toys from November 10-12, 10am to 6pm.

Visit <https://bigboystoys.co.nz/> or search on Facebook for more information. ■



A Rayvolt Cruiser.



Manta 5 electric hydrofoil bikes feature at the show.



Tesla has a display at Big Boys Toys.

Importer REVs up own EV brand

A dedicated electric vehicle brand called REV has been introduced by importer Nichibo Japan Trading.

REV will operate in the fleet market.

It has already been involved in the Foodstuffs New Zealand project to bring 28 Nissan e-NV200 electric delivery vans from the United Kingdom, supported by an Energy Efficiency and Conservation Authority low emis-

sion vehicles contestable fund grant.

It has also imported electric fleet vehicles for Mercury Energy and Waikato University.

Apart from direct fleet sales, the REV brand could be extended for use by Nichibo-partnered used vehicle dealerships.

Nichibo streamlines and diminishes costs through the import processes

Continued on page 23



Robert Young, left, and Steve Vermeulen at the Foodstuffs' e-van launch.

Ohmio sets the future in motion

Continued from page 3

"OEMs are focussing on level five whereas we're focussing on level four plus," HMI global chief executive **Stephen Matthews** says.

Ohmio shuttles will follow dedicated routes, like a continuous circuit, within approved areas such as airports where they can relay people between transport hubs as a "last mile" solution, he says.

He reckons they might even be used to help transport people around Auckland's Viaduct Harbour and waterfront, especially if the America's Cup is held near there, or for getting passengers from cruise ships to hotels.

"Until people are more confident about using autonomous vehicles you won't see them on the motorways."

Tests are being done at approved locations and Matthews hopes Christchurch airport will be among the first options for utilising Ohmio vehicles.

The Kiwi number eight wire mentality has never been far away during preliminary testing.

Matthews laughingly recalls "a couple of guys with broomsticks" holding GPS systems walking around with the test vehicles to determine the best locations on the shuttles for GPS.

It turned out that was above the rear axles rather than in the centre of the roof, which helped eliminate vehi-

cle "wobble". The accuracy of the GPS signal has to be corrected to ensure the vehicle will travel the same route within 1cm every time.

Constant improvements have been made since May and a variety of people have been involved in various teams. One is engineer and researcher **Hartmut Beintken**, who Matthews describes as "the brains behind the brains" in the machines.

The Ohmio vehicles are usually tested at speeds of up to 10kmh but Matthews reckons they'll be doing around 20kmh-25kmh in further trials.

Vehicles will range in size from small to large shuttles with freight pods able to be customised to suit various purposes.

Engineer and quality assurance manager **Matthew Breddy** says the vehicles will also soon be able to be aware of any nearby cyclists, pedestrians and other potential risk factors in their environment.

"We want to showcase New Zealand's best engineering capabilities," he says.

Once testing and certification is completed, the shuttles - and possibly the technology - will be marketed under licence.

Matthews is confident the Ohmio self-driving vehicles will be a transport trendsetter globally.

"The race is on. And like the Olympics, there's no point turning up a day late."

Using another Olympic analogy, Matthews says preparation is key and continuing trials at Christchurch airport, Olympic Park (appropriately) in Sydney and La Trobe University in Melbourne will get Ohmio to the starting line in time.

"Does New Zealand want to lead the world or do we follow?"

Matthews says HMI's working relationship with transport agencies, its understanding of legislation, New Zealand's less restrictive regulations around autonomous vehicles and our reputation for innovation which has helped the company recruit international expertise, have all combined to put it at the forefront.

New Zealand is a good place to test such technology, he says.

Strategic investors are now being sought to help the company get further ahead.

"And we're only a nano-second away from the rest of the world now," Matthews says.

"I think the journey is only beginning for a company like us."

Go to www.ohmio.co.nz or search **Ohmio Automotion** on Facebook for more information.

Check out the Ohmio video at <https://youtu.be/vnTpKqVmoBk> ■

Continued from page 22

for REV. With Nichibo, REV is also able to supply compliance and back-up services. It offers a full door-to-door import service and can guarantee and lock in exchange rates to protect against forex swings.

REV can import from the UK, Japan and around the world and can source nearly new vehicles, which are normally very low mileage ex demo, or ex fleet cars (where company cars can be turned over after six months despite low mileage).

Specialising in quality vehicles, it can order cars where the spec sheet specifies a maximum mileage.

It is now offering a comprehensive three-year EV warranty policy, which covers the battery as well as 24-hour roadside assistance and tow.

As well as complementary services

and experience within the industry, its policy aims to provide a higher quality service, more in line with a new car service, for companies looking to purchase EVs.

Its dedicated team is passionate about expanding the number of EVs in New Zealand.

Nichibo Group marketing manager **Steve Vermeulen** has seen enthusiasm for EVs growing significantly in the New Zealand business community over the past six months.

When clients have test-driven the EVs the group has in stock, particularly the e-NV200 electric van, they are always impressed, especially with the torque delivery and acceleration compared with combustion engine vans, he says.

Digital marketing specialist **Noah Robertson** says there's been exponentially diminishing resistance to EVs this

year, most likely as the technology gets more media coverage and wins over more people.

Nichibo managing director **Robert Young** says the company is firmly committed to the growth of EVs here.

"To have put about 25% of New Zealand's total number of EVs (including PHEVs) on the road, is an achievement our entire organisation is extremely proud of," he says.

The new REV website went live a few weeks ago at www.rev.co.nz and it also has a Facebook page www.facebook.com/rev.electricvehicles where REV representatives can speak with EV community members, share some EV photography and run an occasional prize draw.

REV has a small showroom for test drives at **4 Newton Rd, Grey Lynn, Auckland.** ■

EV DIRECTORY

The comprehensive guide to every service an EV owner or dealer could use

EV CHARGING

charge.net.nz

CHARGENET NZ
0800 2 CHARGE
(0800 224 274)
info@charge.net.nz
www.charge.net.nz

New Zealand's only nationwide network of Rapid DC Chargers for electric vehicles.



ChargeMASTER LTD
021 448 107
nigel@chargemaster.co.nz
www.chargemaster.co.nz

Our mission is intelligent charging - for residential, commercial/fleet, public & high capacity bus/port/mining charging.



YHI (NEW ZEALAND) LTD
A subsidiary of YHI International Limited

YHI (NEW ZEALAND) LTD
Freephone 0800 877 359
ev@yhi.co.nz
www.rolec.nz &
www.yhipower.co.nz

YHI offers nationwide product solutions for electric vehicle charging and power systems.

EV EQUIPMENT

OEM AUDIO
0508 6362 8346
sales@oemaudio.co.nz
www.oemaudio.co.nz

EV Charging cables that are made, tested & compliant for the NZ market.

EV IMPORTER

METRO CHRISTCHURCH LTD
03 348 5855
chris@metrochch.co.nz
www.metrochch.co.nz

Registered dealer and specialist importer of electric vehicles, custom orders available, ships nationwide.

EV MEMBERSHIP ORG



DRIVE ELECTRIC
drive@driveelectric.org.nz
www.driveelectric.org.nz
Drive Electric is a not-for-profit membership organisation with one goal - making EV ownership in NZ mainstream.

FINANCE



UDC FINANCE
0800 500 832
www.udc.co.nz
Quick and easy car loan applications. Fast approvals. Rates from 9.55% p.a. UDC lending criteria, terms and conditions apply.
Find out more

VEHICLE INSPECTION



VINZ
Vehicle Inspection NZ
0800 GO VINZ
enquiries@vinz.co.nz
www.vinz.co.nz
NZ's independent vehicle inspection specialists - ask about our hybrid & electric vehicle safety check.

VEHICLE SERVICING

GILTRAP NISSAN
09 522 9928
service@giltrapnissan.co.nz
www.giltrapnissan.co.nz
Nissan NZ Authorised EV Service Centre conveniently located in Newmarket, Auckland. Open 6 days.

Car loans from
9.55% p.a.
With fast approvals.
Apply now at
www.udc.co.nz
Lending criteria, terms and conditions apply.
UDC
New Zealand's Finance Company

Do you sell EVs?

Talk to Rachel Hadfield
about advertising
your business here
with EVTalk

- in print
and online



Phone: +64 21 778 745 or
Email: rachel@automedialogroup.co.nz

EV interest fast growing

More Kiwis are considering electric vehicles, particularly in Auckland, Wellington and Canterbury regions, Trade Me Motors says.

The number of views on EVs increased by a whopping 330% in the last year, according to its latest data.

Electric vehicles are becoming "an attractive alternative" for car buyers, Trade Me Motors head **Alan Clark** says.

The Nissan Leaf are the most popular EV here.

"People in the market for a new or used car are attracted to their smooth and silent performance, low maintenance costs and environmental benefits."

Clark says the financial outlay is increasingly competitive too.

"The average price of an EV on Trade Me Motors is \$23,300, which is less than 15% dearer than a non-electric hatchback of a similar age. This gap has shrunk very quickly over the past few years."

In the past year, the number of EVs for sale has increased dramatically.

"The number of electric vehicle listings climbed 127% since August last year, with the Nissan Leaf proving to be the most popular model amongst Kiwis," Clark says.

"Our three main metros are a prime example of where electric vehicles are thriving, with a dense population and access to numerous charging stations, they are a convenient alternative."

Between June and August, the Auckland, Wellington and Canterbury regions were leading the charge on EVs, making up 39.6%, 12.5% and 14.2% respectively of EV watchlist activity on Trade Me.

Clark expects the EV numbers in Auckland to climb over the next year.

"The announcement from the NZ Transport Agency that it will allow EV drivers to use selected special vehicle lanes in Auckland for the next year will flush out more electric vehicles as super city commuters attempt to save time."

Regional New Zealand isn't so taken with EVs.

Northland and Southland make up 3.3% and 1.2% of Trade Me watchlist activity. ■

EV fleet nears significant milestone

The electric vehicle fleet is fast approaching the 5000 milestone, with a big month for the Nissan Leaf leading the charge.

The model entered the top 20 used import passenger car list with 182 vehicles registered.

The overall electric fleet now totals 4909 vehicles, boosted by 334 extra units in September, 245 of them used imports and 89 new vehicles.

Most of the overall fleet are owned by private individuals rather than companies - 2957 to 1446 with 506 not accounted for.

The Hyundai Ioniq beat out the Tesla for the top spot in the new electric vehicle market with 19 registered.

The Tesla Model S hit 11 registrations for the month and the Tesla

Model X had eight.

The Volkswagen eGolf was next with six registrations - including some rentals through Europcar. BMW sold three i3 battery-only models and one new Renault Zoe found a home.

The Mitsubishi Outlander again dominated plug-in hybrid registrations, with 24 registered.

The Audi A3 was next on 11, followed by the Mini Countryman on three.

The Nissan Leaf dominated im-

port EV sales with 182 although the Renault Zoe was a notable entry into second place with eight vehicles, mostly new long-range versions from

the United Kingdom.

In third place, the Nissan eNV-200 recorded seven vehicles, followed by the BMW i3 on five. ■



NEW MAKES AND MODELS SEPTEMBER 2017

Make and Model	September 2017
ELECTRIC	
HYUNDAI IONIQ	19
Tesla Model S	11
Tesla Model X	8
VOLKSWAGEN GOLF	6
BMW I	3
RENAULT ZOE	1
RENAULT KANGOO	0
PLUG-IN HYBRID	
mitsubishi outlander	24
AUDI A3	11
MINI COUNTRYMAN	3
BMW I	1
BMW 3 SERIES	1
VOLVO XC60	1

USED IMPORTS SEPTEMBER 2017

Vehicle Make	Vehicle Model	Total Vehicles
NISSAN	LEAF	182
RENAULT	ZOE	8
NISSAN	E-NV200	7
BMW	i3	5
MERCEDES-BENZ	B250	1
MITSUBISHI	MIEV	1
MITSUBISHI	MINICAB	1
VOLKSWAGEN	GOLF	1



Honda makes EV move

Honda is launching into the electric vehicle space with two cars set for release in 2018.

One will be for the Chinese market and the other is likely to be released in Europe, *Business Insider Australia* reports.

Honda introduced its urban EV concept at the Frankfurt Motor Show.

September 4

Chev Bolt blasts Tesla

The Chevrolet Bolt EV out-sold the Tesla Model S and Model 3 in the United States on a combined July/August basis.

It also out-sold the Tesla Model 3 there in August by 28 to 1, Seeking Alpha reports.

General Motors sold 2107 Chevrolet Bolt EV units in the US last month, while InsideEVs estimates 75 Tesla Model 3 units sold there in August.

September 5

EV registrations climbing

August was another record month for EV registrations.

Actual registrations totalled 4121, up from 3797 in July.

Adding in NZ Post's electric Paxter delivery vehicles brings the August total to 4541, EV enthusiasts group Leading the Charge says in its monthly report.

September 6

Wireless charging progresses

Scientists from Stanford Uni-

versity have made a significant step towards wirelessly charging electric vehicles.

The theory is that a coil on the bottom of a car could receive electricity from coils connected to an electric current in the road, *CleanTechnica* reports.

The Stanford team can now wirelessly transfer enough electricity to power a 1-milliwatt LED bulb.

What to do with EV batteries?

The number of companies looking at recycling batteries from electric vehicles is on the rise.

Recycling is a complex process because of the battery chemicals involved, with different companies using their own formulations, Linda Gaines from the Center for Transportation Research at the Argonne National Laboratory told *FT.com*.

"Lead acid batteries are way simpler," she says.

One hundred EVs for Yoogo

One of the largest transitions from combustion engines to pure shared electric vehicles in the Southern Hemisphere is set to take place in Christchurch from November.

Canterbury organisations and residents will soon have access to a pool of 100 all-electric vehicles, one of only a few cities internationally to offer a 100% battery electric shared fleet service.

Kiwi fleet management company Yoogo, known for its innovative electric car-sharing model, was selected by the Christchurch City Council to implement the service.

Maori EV stamp

A stamp showing a waka hiko (electric car) featured in a New Zealand Post set celebrating Maori Language Week from September 11-17.

NZ Post worked closely with the Maori Language Commission, designer David Hakaraia and illustrator Elisabeth Vüllings to create a stamp issue celebrating the growth and adaptability of the Maori language.

It's to demonstrate that te reo Maori is a living language.

First electric rubbish truck arrives

Waste Management NZ's first electric truck for residential wheelie bin waste collections will start work in October.

Christchurch will be the first city in the Southern Hemisphere to put a 100% electric residential waste collection truck into service.

More electric trucks will go into Waste Management's fleet in other cities near the end of this year.

New Leaf launched

The new Nissan Leaf has had its official world premiere.

Nissan says the Leaf has been completely reinvented, combining greater range with a dynamic new design and advanced technologies.

It went on sale in Japan on October 2 and is slated for deliveries in January 2018 in the United States, Canada and Europe.

September 8

EV champs honoured

The electric vehicle community has honoured some of its top proponents at the first ever eworld Champion Awards.

It was run in conjunction with electric vehicle event eworld held at the Vodafone Events Centre in Manukau, Auckland.

The major award winner was **Mark Nixon**, who picked up the EV Champion prize for his efforts volunteering to promote electric vehicles, in-

cluding organising test drives and media promotion.

Keen interest in eworld

Hundreds of people keen to learn more about the electric vehicle world poured into the eworld New Zealand expo in Auckland.

It was held at the Vodafone Events Centre in Manukau with a trade day and conference on the first day and a free public open day on the second.

"Be ready for a sudden tipping point," international keynote speaker **Peter Harrop** of IDTechEx told a packed conference opening.

Jaguar to go electric by 2020

Jaguar Land Rover says all of its vehicles will be electrified by 2020.

It will offer customers a mix of mild hybrid, plug-in hybrid and pure electric vehicles.

"Every new Jaguar Land Rover model line will be electrified from 2020, giving our customers even more choice. We will introduce a portfolio of electrified products across our model range," Jaguar Land Rover chief executive **Ralf Speth** says.

September 12

More voltage for VW

Volkswagen says it will have an electric version of all its 300 models by 2030.

It will double its investment in zero-emission vehicles to A\$29.8 billion and is planning 80 new electric cars across the group by 2025, the *BBC* reports.

That follows Mercedes-Benz promising electric or hybrid versions of all its cars by 2022.

Jaguar electrifies E-Type

Jaguar has retro-fitted the classic E-Type roadster with a bespoke battery electric drivetrain that could signal new life

Continued on page 26

Continued from page 25
for low-emission classic cars.

Based on an original Series 1.5 1 E-Type, the car features a 220kW electric motor which hustles the old metal from 0-100km/h in 5.5 seconds – a full three or four seconds quicker than the 1968 original.

Launched as part of Jaguar's 'Tech Fest' event in London, the E-Type Zero concept claims a 270km range based on mixed usage.

September 13

First production e-race series

A ten-race world international all-electric production car championship will start late next year.

The Jaguar I-Pace eTrophy will be the support series for the FIA Formula E championship, taking place on the same weekends at the same city circuits.

An 'Arrive and Drive' package is offered for up to 20 drivers at each race, including a different VIP driver at every venue, with electric I-Pace race cars on the grid in cities such as Hong Kong, Paris, Rome, Sao Paulo and New York.

September 15

EVs feature at fleet awards

Churches of Christ has been recognised for its use of electric vehicles at the Australasian Fleet Management Association Awards.

Procurement, fleet and sustainability group manager Richard Schuster accepted the Fleet Environment Award on the association's behalf.

The organisation has introduced electric vehicles to its fleet, installed fuel and emission-saving telematics equipment, offset 1800 tonnes of carbon dioxide by planting 7000 native trees and made stop-start vehicle technology integral across its fleet to reduce fuel consumption in congested driving.

September 18

Priority lanes for EVs

EVs can soon use 11 special priority lanes on state highways in Auckland as part of a year's trial.

NZ Transport Agency safety and environment director Harry Wilson expected the lanes to open to EVs by the end of September.

EV owners listed on the motor vehicle register will receive an information pack about the trial, including an EV sticker for their vehicle as identification.

September 19

Tesla ready to launch electric truck

Tesla's electric truck will be launched on October 26 in Hawthorne, California.

The Tesla Semi unveiling was announced by Tesla chief executive Elon Musk in a tweet.

Whether the truck will have any autonomous capabilities isn't yet known. But it has been reported it will be semi-autonomous and able to operate in a convoy or "platoons".

September 20

Ford and Mahindra talk alliance

Mahindra Group and Ford Motor Company are exploring a strategic alliance to drive growth.

The agreement will allow each to leverage their mutual strengths during a period of unprecedented transformation in the global automotive industry.

Areas of potential cooperation include mobility and connected vehicle projects, electrification, product development, sourcing and commercial efficiencies, distribution within India (improving Ford's reach there) and global emerging markets (improving Mahindra's reach).

Electric bus sets world record

Heavy duty electric transportation innovator Proterra says it has set a world record for driving an EV the longest distance on a single charge.

Proterra's 12 metre Catalyst E2 max electric bus travelled 1772.2km with 660kWh of energy storage capacity at the Navistar Proving Grounds in New Carlisle, Indiana.

"For our heavy-duty electric bus to break the previous world record of 1013.76 miles (1631.48km) – which was set by a light-duty passenger EV 46 times lighter than the Catalyst E2 max – is a major feat," Proterra chief commercial officer **Matt Horton** says.

Fuso launches eCanter in New York

Daimler Truck's Fuso brand is launching the world's first series production all-electric truck, the eCanter, globally in New York.

The eCanter has a range of 100km and a load capacity up to three and a half tonnes – depending on body and usage. Its electric powertrain contains six high-voltage lithium-ion battery packs with 420 V and 13.8 kWh each. It uses CCS charging.

Mitsubishi Fuso Truck and Bus Corporation says UPS is the first commercial customer for the eCanter and it is also providing vehicles to four non-governmental organisations in cooperation with the New York attorney-general.

Greenwood moves to Drive EV

EV Central Taupo dealership founder **Steve Greenwood** has moved literally up the road to begin his new business, Drive EV.

The new dealership specialising in just EVs is open online and its yard at 60 Tuwharetoa St is being renovated and is just over a month away from opening.

It will be able to accommodate up to 40 EVs, Greenwood says.

New Zealand a world leader in zero emission renewable power

New Zealand leads the world in zero emission renewable grid electricity, now at 85%.

So says Peter Harrop, chairman of IDTechEx which analyses emerging technologies. Harrop was here earlier this month as the evworld NZ conference keynote speaker.

He says New Zealand has a nice balance between geothermal, hydroelectric, unusually continuous wind power and some solar. The country therefore has less intermittency of green power than most, Harrop says.

"Next comes devolution of these sources to off-grid supply on buildings and even on land, water and airborne vehicles."

September 22

Evo makes comeback as an EV

Mitsubishi is relaunching one of its most famous nameplates as an electric car.

The new Evo will make its return at the 45th Tokyo Motor Show as the e-Evolution concept.

"The corporation will wave the flag under new circumstances to usher a new era of longterm growth and sustainable development, returning to where it belongs to better embrace the future," the company says.

NRC adopts EVs

Electric vehicles are playing a big part at the Northland Regional Council, which boasts a 10-strong EV fleet.

Regional councillor Justin Blaikie told *Stuff* it is a mix of seven pure electric vehicles and three plug in hybrids.

And it plans on extending the number of EVs in its 60 vehicle fleet in the future, although not all vehicles in the fleet have appropriate EV options available on the market yet.

Continued on page 27

Continued from page 26

September 25

PHEVs emit more CO2 than diesels

Plug-in hybrid electric vehicles can consume more fuel and produce more CO2 than diesel models, a research company says.

The Miles Consultancy, which monitors fuel use for fleets and company car drivers, analysed real-world fuel consumption data on 14 hybrid models and seven plug-in hybrids using its mileage capture and audit system.

These represented 12 different auto manufacturers.

Big spend on driverless cars

About 10 billion yuan (NZ\$2 billion) will be spent on new self-drive car projects over the next three years by Chinese internet company Baidu, one of the world's artificial intelligence leaders.

It's an attempt to catch up with US rivals by enlisting outside help, the BBC News reports.

The launch of Baidu's Apollo Fund coincides with the release of Apollo 1.5, the latest version of its open-source autonomous vehicle software.

UN recognises Volvo Cars' electrification strategy

Volvo Cars has been recognised by the United Nations for its ground-breaking electrification strategy.

That comes in the latest report from the UN's Global Compact, the world's largest corporate sustainability initiative.

The report, launched at the Global Compact's annual high-level meeting in New York, focuses on the progress Global Compact members have made in supporting the delivery of the UN's Sustainable Development Goals (SDGs).

September 26

When's the new Nissan Leaf due in New Zealand?

The new Nissan Leaf is expected to arrive in Australia in late 2018, which gives an indication of when it could come here.

"Generally, we're in line with Australia," Nissan New Zealand managing director John Manley says.

The new Leaf went on sale in Japan on October 2 and starts deliveries elsewhere in January.

September 27

Dyson definite on "radical" car

British vacuum cleaner company Dyson has confirmed plans to spend £2 billion (NZ\$3.7b) developing a "radical" electric car.

The all-electric vehicle is expected to be launched in 2020.

Dyson says 400 staff have been working on the secret project for the past two years at its headquarters in Wiltshire, *BBC News* reports

Mercedes-Benz's big EV investment

Mercedes-Benz is setting up a US\$1 billion (NZ\$1.38b) electric vehicle production facility in the United States.

The company plans to produce EQ-branded SUV models at Mercedes-Benz US International, its Tuscaloosa, Alabama site, from around 2020.

Work on a battery plant nearby will start next year and it's also likely to open in 2020.

Porsche plug-in added to Panamera Sport Turismo line

Porsche is expanding its hybrid range with a powerful plug-in added to the Panamera Sport Turismo model line.

The new Panamera Turbo S E-Hybrid Sport Turismo flagship model combines a

four-litre V8 engine with an electric motor, resulting in a system power of 500kW (680hp). Even when just above idle speed, the Panamera Turbo offers 850Nm of torque.

This means it accelerates from zero to 100km/h in 3.4 seconds, and reaches a top speed of 310km/h, plus has 3.0 litres fuel consumption.

September 29

Audi expands EV range

Audi has announced a global plan to manufacture electric vehicles at a variety of sites around the world as part of its zero-emission goals.

Plants that will build the vehicles include Mexico and Hungary, Reuters reports.

"In future, electric cars will roll off the line in all of our plants," chief executive **Rupert Stadler** says.

Tipping point this year?

Electric vehicles could reach their tipping point this year, the world's largest mining company says.

BHP Billiton told FT.com that's illustrated by the demand for commodities like copper and nickel, which are used when building EVs.

"I think if we look back in a few years we would call 2017 the tipping point of electric vehicles," BHP marketing head **Arnoud Balhuizen** says.

Overseas service stations introducing pump-like EV chargers

Shell's first EV charging stations look like gas pumps.

The oil giant earlier announced plans to put EV charging sites in Britain and the Netherlands, Electrek reports.

It says a first look shows they're just like gas pumps.

As electric cars increase in popularity, gas stations will be forcefully downgraded to convenience stores and consequently will lose sig-

nificant revenue from people normally stopping to get gas, *Electrek* says.

Electric planes possible within a decade – EasyJet

Battery aircraft might be flying from the United Kingdom to European destinations within a decade, *EasyJet* says.

It's in partnership with US engineering start-up Wright Electric to develop electric aircraft which can fly for up to two hours, That would allow travel on short-haul routes like London to Paris and Edinburgh to Bristol, EasyJet says.

The aerospace industry will follow the lead of the automotive industry in developing electric engines cutting emissions and noise, *EasyJet* chief executive **Carolyn McCall** says, *The Guardian* reports.

September 30

Z Energy invests in Mevo

Electric car sharing company Mevo is thrilled at Z Energy's decision to invest \$250,000 in the business.

Mevo will use the money to boost its Wellington-based fleet up to 50 vehicles, NZ Herald reports.

Mevo co-founder **Erik Zydervelt**, says the funding is a win for the company. ■

NZ EV INDUSTRY NEWS

EVtalk

Register for FREE news updates

– Receive twice-weekly news alerts to your email

evtalk.co.nz

NZs EV Charging Infrastructure

Fast Charger Locations – North Island

Kawakawa - 4 State Highway 1, Kawakawa 0210
Dargaville - 111 Totara St, Dargaville 0310
Tikipunga - Paramount Plaza, 1 Wanaka St, Whangarei 0112
Whangarei - Northpower Substation, 11 Alexander St, Whangarei, 0110
Raumanga - McDonalds, 130 Tauroa St, Raumanga, Whangarei 0110
Kaiwaka - 1 Kaiwaka-Mangawhai Rd, Kaiwaka 0975
Warkworth - New World, 6 Percy St, Warkworth 0910
Warkworth - BP Warkworth, 67 Auckland Rd (SH1), Warkworth 0910
Silverdale - Kings Plant Barn, 17 Hibiscus Coast Highway, Silverdale 1025
Kumeu - Kumeu New World, 120 State Highway, Kumeu 0810
Albany - 186 Don McKinnon Drive, Albany, Auckland 0632
Rosedale - McDonalds Constellation Dr, 14-16 Constellation Dr, Rosedale, Auckland
Hobson St - 21 Hobson St, Auckland, 1010
Z Beach Rd - 150 Beach Rd, Auckland 1010
Newmarket - 1 Gillies Ave Newmarket, Auckland 1023
Greenlane McDonald's - 356/320 Great South Rd, Greenlane, Auckland 1051
BP Pakuranga - 322 Pakuranga Rd, Pakuranga Heights, Auckland 2010
Z Botany Downs - 550 Te Irirangi Dr, Botany Downs, Auckland 2013
Airport Shopping Centre - 400 George Bolt Memorial Dr, Auckland Airport 2022
Z Skyway - George Bolt Memorial Dr, Auckland Airport 2022
Takanini Village - 30 Walters Rd, Takanini, Auckland 2112
Pukekohe - King Street Carpark (Seddon Lane), 56-60 King St, Pukekohe 2120
Pukekohe - Counties Power, 14 Glasgow Rd, Pukekohe 2120 (Business hours only)
Thames - 505 Mackay Street, Thames 3500
Tairua - Tokoroa Rd Carpark, 6 Tokoroa Rd, Tairua 3508
Te Kauwhata - 16 Wayside Rd, Te Kauwhata 3782
WEL Networks - 114 Maui St, Waikato 3200
Hamilton - Tesla Supercharger (x4), Te Rapa Rd & Warere Dr, Hamilton 3200
Hamilton - Caro St, Hamilton City 3204
Ruakura - Waikato Innovation Park, 9 Melody Ln, Ruakura, Hamilton 3216
Raglan - 43 Bow St, Raglan 3225
Tauranga - The Strand, Tauranga, 3110. (BYO cable)
Mt Maunganui - Bayfair, 19 Givern Road, Mt Maunganui Rd 3116
Cambridge - 73 Queen Street, Cambridge 3434
Te Awamutu - 10 Scout Lane, Te Awamutu 3800
Te Kuiti - New World, 39 Rora St, Te Kuiti 3910
Rangitaiki - Rangitaiki Lodge Café, 3281 SH5, Rangitaiki
Whakatane - i-SITE, 30 Quay St, Whakatane 3120
Rotorua - 1134 Haupapa St, Rotorua 3010
Taupo - 1 Kaimanawa St, Taupo
Gisborne - 21 Gladstone Rd, Gisborne, 4010
Turangi - 1 Pihanga Rd, Turangi 3334
Waiouru - State Highway One & Hassett Dr, Waiouru 4861
Te Haroto - Mc Vicar Rd, Napier-Taupo Highway, 4237 SH5, Te Haroto
New Plymouth - 66 Courtenay St, New Plymouth 4310
Waiouru - State Highway One & Hassett Dr, Waiouru 4861
Napier - 206 Dickens St, Napier 4110
Hastings - 100 Queen St W, Hastings, 4122
Mangaweka - 2 Koraenui St, Mangaweka 4797
Waipukurau - Civic Theatre Carpark, 34 Russell St, Waipukurau 4200
Palmerston North - i-SITE, The Square, Palmerston North, 4410
Otaki - 155-163 Main Hwy, Otaki 5512
Masterton - 3 Dixon St, Masterton 5810
Porirua - 2 Serlby Pl, Porirua 5022
Featherston - SuperValue, 42 Fitzherbert St, Rimutaka Hill, Featherston 5710
Upper Hutt - 24 Queen St, Upper Hutt 5018
Lower Hutt - Dowse Museum & Square, 1 Stevens Grove, Lower Hutt 5010
Z Petone - 60 Hutt Rd, Petone, Lower Hutt 5012
Z Vivian Street - 174 Vivian St, Te Aro, Wellington 6011



Fast Charger Locations – South Island

Takaka - 16 Willow St, Takaka 7110
Nelson - Millers Acre Carpark, 37-39 Halifax St E, Nelson, 7010
Richmond - Tasman District Library, 11 Mcglashen Ave, Richmond 7020
Greymouth - 13 Tarapuhi Street, Greymouth 7805
Kaikoura - 51 West End, Kaikoura 7300
Northwood - New World, 2 Mounter Ave, Northwood, Christchurch 8051
Addington - Z Moorhouse Ave, 40 Moorhouse Ave, Addington, Christchurch 8011
Little River - 4235A Christchurch Akaroa Rd, Little River 7591
Rakaia - Rolleston St, Rakaia 7710
Ashburton - 109 West St, Ashburton 7700
Tekapo - Tekapo 7999
Alexandra - 9 Thompson St, Bridge Hill, Alexandra 9320
Timaru - 26A North St, Timaru 7910
Kurow - Wynyard St, Kurow
Waimate - 125 Queen Street, Waimate 7924
Oamaru - Eden St Carpark, 3 Eden St, Oamaru 9400
Hampden - 33 Lincoln St, Hampden
Dunedin - Filleul St Carpark, 193 Moray Pl, Dunedin 9016
Balclutha - 23 Charlotte St, Balclutha 9230
Invercargill - 116 Esk St, Invercargill, 9810