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EV talk

AUGUST 2019

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HARLEY'S LIVEWIRE

WE RIDE IT IN THE USA

INSIDE

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EVtalk

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MOTORCYCLING'S ELECTRIC SHOCK – HARLEY'S LIVEWIRE

The motorcycle sector has lagged behind the rest of the automotive industry in terms of EV product availability, so can Harley-Davidson's first electric product – the LiveWire – reshape the industry?

BY MATHIEU DAY-GILLETT

While it may come as some surprise that the motorcycle industry's first fully-electric global market product comes from Harley-Davidson, the company admits electrification has been on its mind for some time.

At the global media launch of the all-new Harley-Davidson Livewire in Portland, Oregon, the company told us that development of the LiveWire dates back to 2010 when a small group of engineers were tasked with exploring the idea of what an electric bike from the manufacturer would look like.

The result was Project LiveWire, a small run of 33 prototypes which toured the world getting feedback from thousands of riders on the electrification of motorcycles for Harley-Davidson. At the time, Harley promised that the company's first electric motorcycle would debut some time around 2020.

The biggest surprise, however, isn't the fact that Harley-Davidson managed to keep its promise but the fact that to date no other mainstream motorcycle manufacturer has also produced a premium EV motorcycle product.

To be fair, BMW has produced an electric scooter, but for the majority of motorcyclists, a step-through scooter is about as much a motorcycle as a Tesla is a 4x4.

Obviously with LiveWire being electric this comes with a number of pros and cons. The most obvious pro is the fact that electricity is much cheaper than petrol with a full charge costing roughly $5. There is a con in there though and that is the range and recharge time.

While Harley-Davidson dealers who sign on to sell LiveWire will offer free charging stations outside their dealerships for owners, the bike has a maximum range of 235km in the city, and this drops to 158km if you venture out into the highway..

Charging time for the 15.5kwh battery varies depending on whether the bike us utilising a DC fast charger or standard wall socket. On a fast charger the bike will charge to 100% from zero in an hour, with 80% available after 40 minutes. Charging off a regular AC wall socket at home drastically increases this to 10-12 hours.

The motor – dubbed the "Revelation"

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MOTORCYCLING'S ELECTRIC SHOCK – HARLEY'S LIVEWIRE

Continued from page 3

by Harley – runs along the base of the battery pack and produces 78kW and 116nm from 0rpm. Power is sent to the belt final drive via a bevel gear system, which in turn gives the LiveWire its unique sound.

That sound, which is best described as similar to a jet turbine engine, becomes apparent when the bike is moving – and getting the bike to really move was hard to resist with 100kph achieved in a fraction over three seconds. As your speed increases so does the whine from the bike right up until you hit the bike's top speed of 177kph.

There is one last potential issue with LiveWire and that is the pricing of the bike when it arrives in New Zealand next year. With pricing in the USA set at $29,799 just converting that to NZ dollars on the current exchange rate puts LiveWire at nearly $44,000, and that is before any taxes, registration and other on-road costs are added.

Whether LiveWire will reshape the motorcycling industry is something time will tell. If anything, the premium LiveWire is treading a similar path to other EVs before it and early adopters will have a large part to play in whether the bike is a success. ■

NEW PEOPLE AT EVTALK

EVTalk has two new people on the advertising side of the website and monthly magazine.

They are **Sophie Song**, former assistant business manager of *TransportTalk*, and the general manager of Auto Media Group **Deborah Baxter**.

Song will be getting around all *EVtalk's* foundation sponsors and advertisers in the next week or two and will use her digital skills to increase the already strong partnership that exists between *EVtalk* and its supporters.

She will be assisted by Baxter who is already known to most *EVtalk* advertisers and supporters through her role as Auto Media Group general manager.

Apart from her experience with *TransportTalk*, Song studied media at the University of Auckland (including research on audience behaviour and the future of communication/advertising). Before joining Auto Media Group, she had an internship at *TVOne* and worked for an Auckland broadcasting station on both television and e-commerce platforms.

Sophie Song

Deborah Baxter

The two can be reached at **sophie@automediagroup.co.nz** (021 778 745) and **deborah@automediagroup.co.nz** (027 530 5016). ■

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EVWORLD NZ SUCCESS SHOWS EV INTEREST

More than 4300 people swarmed to the EVWorld NZ expo and conference in Auckland on August 1-3, especially for the public open day at the ASB Showgrounds on the last day.

A variety of new electric vehicle related products were launched or appeared at some of the more than 80 show exhibits.

These included a solar panel roofed carport from **YHI**, new EV charging solutions from the likes of **ABB** and **Evnex**, **Audi's e-tron** electric car, **Fuso's new eCanter** electric truck and **Hyundai's Nexo hydrogen** fuel cell car.

More is promised for next year's show with **Volkswagen** due to have its **ID** electric range out by then and offerings coming from other manufacturers and exhibitors.

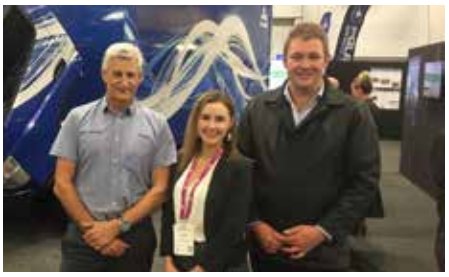
Show organiser Conferenz's **Dominic Duncan** is delighted with EVworld's success.

A plethora of electric bikes, e-scooters and other mobility devices were displayed and tried out on test tracks at the show, while queues formed to try out the virtual reality ride in Mercury's converted 1957 Ford Fairlane 'Evie'.

Free seminars available to the public and the trade included the benefits of vehicle electrification such as reduced greenhouse gas emissions, future fuels such as hydrogen, truck conversions like those using **SEA Electric**'s truck drivetrains, EV charging infrastructure and e-mobility.

An industry conference ran over the show's first two days with New Zealand's proposed 'clean car' fuel emission standards and feebate scheme discussed and lessons shared from similar schemes overseas. International speakers pointed to New Zealand's innovation and will to test and trial new transport forms from ferries to aircraft.

A motor industry panel heard that EVs are getting cheaper and more prevalent in a variety of forms, with electric utes and heavy vehicles due in numbers. Plus forms of mobility as a service (MaaS) from e-scooters to public transport were discussed, the idea of one payment form considered for all.



Fuso representatives Scott Bliss, left, Alisha Francis and Cameron Childs at their eCanter stand

Adam Hollard helps people with VR headsets at Mercury's Evie stand

TRIBUNAL DECISION CARRIES WARNING FOR EV DEALERS

Traders who sell Nissan Leafs - or for that matter any electric vehicle where the battery condition can be assessed - have been given a strong warning in a recent Motor Vehicle Disputes Tribunal decision.

The case, Khoo vs Autolink Cars, related to a purchaser's claim that he had been mislead by the trader telling him the Nissan Leaf he was considering had a battery "State of Health" of 78%. Within 10 months of ownership this has fallen by 9%.


Henry Schmidt


Dave Boot

SOH is a number generated by the car's battery management system and accessed through aftermarket software. The car displays battery health using a less-volatile 12-bar gauge. Leaf spy is commonly used to access the data from Nissan EVs, though alternative software exists for other vehicles.

In support of this submission, the trader - Autolink director **Henry Schmidt** - referred the tribunal to an article published on the **flipthefleet.org** website, dated November 1, 2018, which it says confirms that battery SOH can decrease significantly after importation from Japan.

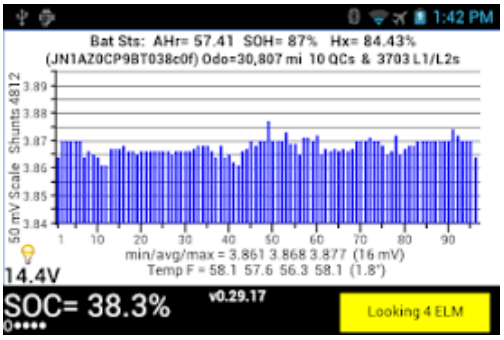
The tribunal's assessor agreed - noting the explanation provided by the trader is entirely plausible, and that the vehicle's battery SOH can reduce substantially when a vehicle is imported into New Zealand from Japan because of factors such as the time taken to import the vehicle into New Zealand, changes in weather conditions and temperature and changes in the vehicle owner's driving and charging habits.

The tribunal found for Autolink in that the car had no fault under the Consumer Guarantees Act, although found against him under the Fair Trading Act by failing to clearly advise the customer the number could change.

"Given the importance of this information, I consider that a reasonable consumer would expect that, where a motor vehicle trader makes a representation as to the vehicle's SOH before it is imported to New Zealand, the trader would then tell it that the battery SOH could reduce by as much as 8% when the vehicle was imported into New Zealand."

The adjudicator noted this decision could have ramifications for dealers.

"I appreciate that this finding is likely to have significant ramifications for traders who sell electric vehicles imported from Japan and who use the vehicle's pre-import SOH reading in their marketing. And so it should. If traders want to use this type of potentially unreliable information in their marketing, they must make it clear to prospective purchasers that there is a real risk that the battery SOH could be significantly lower once the vehicle is imported into New Zealand. Failure to do so will expose those traders to potential liability under the FTA."



Speaking to *AutoTalk*, Schmidt noted he was given a clear warning by the adjudicator that traders need to be careful about advising customers of "State of Health."

Schmidt, an early mover in the electric vehicle market, says the dealership stopped advertising SOH figures following the case - but has since reversed that decision to providing them.

"It is because 99% of the customers ask for it - we much prefer talking about bars," he says. "If we do not promote

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GENTER ON HARD-SELL MISSION OVER CLEAN CAR PLANS

Associate transport minister **Julie Anne Genter** pitched her Clean Car schemes to an audience at EVworld NZ in Auckland.


Julie Ann Genter

The scheme is made up of a Clean Car discount and a Clean Car standard which has been criticised by the automotive trade as unrealistic, and environmental advocates as not harsh enough.

Talking about Kiwis' love affair with utes and SUVs, Genter says more fuel-efficient versions are coming, including electrics and other low to zero-emission fuel varieties.

Genter told the audience fuel emission standards are designed for flexibility for a range of vehicles. A vehicle importer could offset larger more polluting vehicles by selling small more efficient cars, she says.


David Vinsen

Genter adds the proposal needs to ensure social equity so that low income people are not disadvantaged.

She also talked about the road user charge (RUC) EV exemption expiring in 2021 when a feebate scheme is expected to start, but indicated the possibility some other help with EV costs may come as RUC will likely apply to all vehicles at some stage to pay for road works mostly met from fuel taxes now.

She says the Government is examining options for EV uptake but that public consultation is important.

VIA chief executive **David Vinsen** says the industry is united against the Clean Car standard.


David Crawford

"The name, it is not about Clean Cars, that is misleading. Clean Cars is about noxious gases and health issues," Vinsen says.

"This is about fuel economy and efficiency."

Genter's repeated claim that New Zealand is being supplied with less fuel-efficient vehicles has been denied by the new vehicle trade.

"The MIA has consistently rejected the notion that importers deliberately supply less fuel-efficient vehicles compared to other markets," chief executive **David Crawford** says.

"Limiting supply through a fuel economy standard will lead to perverse outcomes as consumer preferred models already in the market place are held on to."

"If the proposed standard, as set out in the discussion document was to be implemented, than the first models to disappear out of the market will be a range of small vehicles under 1200kg in weight. So much for encouraging more fuel-efficient cars."

The MIA is seeking an extension on the consultation period - which ends on August 20.

A visiting Swedish expert on feebate and carbon dioxide emissions schemes says the targets set under New Zealand's Clean Car standard are not aggressive enough.

EVworld keynote speaker **Jakob Lagercrantz** of the Swedish National 2030-Sekretariatet - a "coalition of the willing" providing independent advice on all transport - described his country's similar feebate system called Bonus Malus after a year in force.

Lagercrantz says a feebate scheme needs to be combined with road taxes.

He says Sweden will review the Bonus Malus system next year and that frequent reviews are needed because of rapidly developing technology. He says a different policy may be required for rural areas.

He urges New Zealand to set a national policy, taking into account a fuel policy, taxes and more.

Lagercrantz says a review of road user charges is also important and can be used to promote further expansion of low emission vehicles of all kinds.


Drew Kodjak

Partnerships and other new strategic alliances, which include electricity companies, are necessary to help with low emission vehicle development, he believes.

Lagercrantz says New Zealand could possibly do even better than 105 grams - noting that this was where Europe already is.

The International Council of Clean Transportation (USA) executive director **Drew Kodjak** says New Zealand's proposed line on fuel emissions is higher than many others.


Jakob Lagercrantz

For new or near-new plug-in cars, battery electrics would receive an $8000 rebate, plug-in hybrids $6800 and hybrids $4800.

No vehicles over $80,000 would receive a discount – locking out many of the electric vehicles currently on offer.

While the highest penalty for a new vehicle is $3000, used import cars would sit on a different scale – with a maximum fee of $1500, and a maximum discount of $2600.

The plan could sit alongside a corporate average full economy style system that would require distributors, or used car traders, to ensure the balance of vehicles they sell each year fits a C02 average of 105 grams per km, down from the country's current 180-gram average.

If they fail to do so, they could face stiff monetary penalties: $50 per gram per vehicle per year for used imports, $100 per gram per vehicle per year for new vehicles.

The new rules will only apply to light vehicles, with a maximum tare of 3500kg.

The system could be implemented from 2021, either staged, with a lowering limit until 105 grams in 2025 or applying to a percentage of the distributor or importer's fleet. ■

SHORT, YET BRILLIANT, FIRST MODEL 3 DRIVE

The Tesla Model 3 has arrived in New Zealand, and *EVtalk* has driven it - albeit briefly.

With just 45 minutes behind the wheel, and the need to generate content in that time, we are far from ready to draw full conclusions on the vehicle.

On initial impressions, however, it is brilliant.

The model we got to drive was the Performance version, the top of a three-model range for now. Last time we reported on the range there were only two, a Standard Range Plus and the Performance, now you can have a Long Range version, and the Performance has seen a price rise to $101,100.

All models are pretty well specified, the Standard Range Plus gets 12-way power adjustable heated front seats, premium seat material and trim, upgraded audio, standard maps and navigation, LED fog lamps, centre console with storage, four USB ports and docking for two smartphones.

The Long Range and Performance get the premium interior package, satellite-view maps with live traffic visualisation and navigation, premium audio with 14 speakers, in-car internet streaming music and media, internet browser, location-aware automatic garage door opener.

Slip inside and the Model 3 is a different proposition to the S and X. In fact, even getting in is different. You tap your key card on the b-pillar to unlock and then you fold out the door handles - rather than them popping out. Inside the interior is dominated by the large central screen that controls most of the vehicle's functions - the only other significant controls are the steering wheel and the combination button/scroll wheels on it.

The dash feels low, and the vents - controlled from the screen - run almost full length across it. The slimmed down design helps the car feel very spacious, and also of a higher quality. Tesla seems to have avoided points where soft finishes meet curved edges - it all feels tighter and cleaner.

The seats themselves are very comfortable. We set the seats up for a 6'2" man to sit behind himself and there was decent room. The steering wheel does feel a little small and basic, but that is only by a measure of the rest of this technical marvel.

We hit the road. Our short drive meant we left the vehicle in Sport mode rather than chill mode. This allowed us to access all the available performance - this version is capable of achieving 0-100km/h in 3.4 seconds. It has a near perfect 50/50 weight distribution and, of course, all-wheel drive grip, none of which we could test at 11.30am in Grey Lynn.

I do wish Tesla would work to make their modes more adaptable, as Audi has done with the e-tron. Sport is sport, and comes with a slightly over-responsive throttle pedal that will probably force you to leave the car in Chill most of the time.

Otherwise, the short drive was impressive. The ride, for a sports-orientated model, was surprisingly good. The steering had a nice weight and response level to it, and the brakes bite well.

We briefly tried AutoPilot on the run back from Point Chevalier to the city and it reinforced our usual experience - that it goes forward in leaps every time we drive it. It drove the car the full motorway trip with little intervention. It even noted and dealt with a somewhat nosey motorcyclist who passed close to the car.

Full self-driving preparation adds $8000 to the price.

With Tesla Auckland building up to prepare for delivery, it will not be long will we see a lot more Model 3s on the road. Hopefully one will make it into the hands of the *EVtalk* team for a full review. ■

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FROM BOATS TO EVS

Both of our EV experts this week have messed about in boats.

Sally Roberts from the United Kingdom met her Kiwi husband **Lincoln** working on a superyacht in Antigua before they settled in Auckland, establishing European Car Imports which specialises in bringing EVs mainly from the UK.

"He was the captain and I was the cook," she says.

The boat connection didn't just end there. Lincoln has always been interested in cars, especially European brands such as Porsche and BMW. The superyacht owner was a car dealer and offered to help set up a business in New Zealand.

The couple had planned to settle in Australia, but the business offer saw the Roberts eventually establish in Waimauku, about 30 minutes' drive west of downtown Auckland.

"We are an import service rather than a dealership," Sally says of European Car Imports. "We 'import to order' high-end European vehicles and EVs from the UK, and clients get the benefit of the 20% tax reclaim on new or near new vehicles exported from there, we then manage all the import logistics and get the vehicles NZ road-ready."

The Roberts' business began in 2013 and they started getting EV enquiries by 2015. "We brought out our first Nissan Leaf 30kWh in early 2016," Sally recalls.

Amid growing demand from Kiwis for EVs, European Car Imports also helped early adopters Civic Contractors get six Nissan e-NV200 vans.

European Car Imports has recently brought in a Jaguar I-Pace and had previously imported a Tesla Model S, BMW I3, BMW I8 and 40kwh Nissan Leafs and e-NV200s, Porsche Cayenne hybrids and Mercedes hybrids.

Prices are still high for many new EVs, but Sally expects that will come down as more EV models with greater range and better technology become available.

"Customers come to us saying what they want and we go out and find exactly that and give them an accurate cost to their driveway in NZ so they can decide if it works for them," she explains.

Sally specialises in EVs and motorhomes, adding she's also had some enquiries for Nissan e-NV200 vans converted into campers.

With more premium EVs like the Mercedes EQC and Porsche Taycan due out soon, Sally sees demand growing at this end of the market.

"I think the next few years will be busier for the EV side of our business," she adds.

Common questions are usually about range and cost. "With EVs now capable of doing 200 to 400km on a single charge, range is becoming less of an issue."

Working mainly online (they don't store or hold stock so don't need a yard), the Roberts say they operate mainly on UK time for their business, which gives them the flexibility to work around school hours and enjoy time with their two young sons. Or at least that's the theory, but long days are certainly part of a growing business operating in two time zones.

While the Roberts don't own any EVs themselves yet, that's something they could consider soon.

And they also supply customers with chargers through **Paul O'Connor**'s OEM to ensure safety and compliance with New Zealand regulations.

Nearly 10% of all their imports are now EVs.


Rachelle Tilsley

The Better NZ Trust's events co-ordinator and social media administrator **Rachelle Tilsley** from Auckland's North Shore, includes boats among her many life experiences.

She and her family lived on a long keel yacht in New South Wales, Australia for two years, while her two daughters were pre-school age.

Until Tilsley started with ChargeNet NZ in May 2016, she had never heard of an EV before.

Working for ChargeNet founders **Steve** and **Dee West**, she soon learned the EV ropes, doing the administration, marketing, and helpdesk.

"My job has always included marketing and desktop publishing," the published author says.

"The Wests are like family to me and they eventually helped me into my current role as part-time events co-ordinator for The Better NZ Trust."

The trust was set up by the Wests,


Sally and Lincoln Roberts

along with **Carl Barlev** of Blue Cars, to help facilitate the uptake of EVs in New Zealand.

Kathryn Trounson became trust chair and, with trustee **Sean Dick**, is heavily involved in the day-to-day operation. Well known for his work with EVs, **Sigurd Magnusson**, of Wellington, is also a trustee.

Tilsley says the trust is undergoing a change of direction, as consumer needs are changing. More information days are now planned, rather than just EV rides and drives. Much of the education is around busting myths.

Known for its annual Leading the Charge EV tour of New Zealand, and International Drive Electric Week in September, the trust also had a big presence at EVworld 2019 in Auckland from August 1-3, where the #LeadingTheCharge volunteers provided cars for EV rides.

"The Auckland Showgrounds is like a second home to me, and organising expos is just second nature," Tilsley says, who grew up with shows and expos with dad **Bob Tilsley**, renowned for his work in agricultural associations.

The trust now has about 13,000 annual registrations and more than 200 volunteers. Regional leaders in each area organising their own events throughout the year with flags, gazebos, brochures and other items supplied by the trust.

Asked about the Government's clean car plan, Tilsley says the trust supports it generally and is putting in a submission before the August 20 consultation closure.

Tilsley drives a BMW i3 she bought from Auckland City Electric Vehicles which sponsored part of the #LeadingTheCharge trip in March.

The charitable trust is always looking for sponsors with a view to championing sustainable options for New Zealanders.

View from the Northern Motorway

EV 'GENIUSES' FOR NEW BMW DEALERSHIP

The new Continental Cars BMW showroom in Wairau Valley on Auckland's North Shore, is set to be the largest, boldest luxury multi-level car dealership in New Zealand.

EVtalk took a hard hat tour of the construction site. Scheduled to be completed by September, the building will span four levels, with views from the northern motorway. It features solar panels and rainwater catchment and recycling for car washing.

The 6900 sqm dealership will take full advantage of its high-profile Wairau Road site. The showroom will have BMW products displayed behind the glass on the top floor, so thousands of motorists on both Wairau Road and the motorway can see the site.

The new showroom will showcase the BMW EV product range.

The site is currently under construction

Dealer principal **Geoff Light** says the new showroom will be great for the future of EVs as BMW releases EVs and hybrids in the future.

"We're able to future proof with this showroom," Light says. "Once we move in there, we will be able to provide a vehicle solution for everybody."

EVs will have their own dedicated area within the showroom.

Proposed dealership interior

"It's an exciting journey for us," Light says. "EVs are a little bit of the unknown but equally exciting. We're going on a learning journey ourselves."

Continental Cars BMW North Shore will have product "geniuses" there to assist customers in EV knowledge and take them through the products. Their job is not to sell cars but to provide the correct information to customers.

The new showroom will have five 22kW EV chargers, which can charge 10 electric cars at any one time.

Twenty-five electrified models (battery electric and plug-in hybrid) are now planned two years earlier than expected by the BMW Group, adjusting its e-mobility target from 2025 to 2023.

The group also plans more than half of increased sales by 2025 to be all-electric.

A Mini-branded BEV city car is due for release at the end of 2019.

EVtalk online reported that BMW chief executive **Harald Kruger** announced his retirement after less than five years in office this month.

His indecisive and insufficient response to the fast shift of the premium segments towards EVs contributed to his resignation, according to commentators.

BMW put out the i3 in 2013, likely to remain in production until 2021 with progressive improvements made. The Mini EV, the iX3, the i4 compact sedan and the iNext are all confirmed for delivery.

Continental Cars BMW North Shore is located on the last undeveloped, high-profile commercial site in the area.

Construction is expected to be completed shortly, weather permitting.

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NEW EV CAR TYPES

MAKE	MODEL	TYPE	PRICING RRP est.	APPROX RANGE KMS
BMW	i3	BEV	$77,200	200 km
	i3s	BEV	$85,900	200 km
Hyundai	Ioniq	BEV	$59,990	220 km
	Ioniq Elite	BEV	$65,990	220 km
	Kona	BEV	$77,990	400 km
	Kona Elite	BEV	$83,990	400 km
Jaguar	I-Pace S	BEV	$144,900	470 km
	I-Pace SE	BEV	$154,900	470 km
	I-Pace HSE	BEV	$164,900	470 km
Kia	Niro EX289 (39 kWh)	BEV	$67,990	289 km
	Niro EX455 (64 kWh)	BEV	$73,990	455 km
LDV	EV80	BEV	$80,489	180 km
Renault	Zoe 40 kWh	BEV	$68,990	300 km
	Kangoo van	BEV	$74,990	160 km
Tesla	S - Standard Range	BEV	$129,700	520 km
	S - Long Range	BEV	$146,500	630 km
	S - Performance	BEV	$161,200	610 km
	X - Standard Range	BEV	$139,200	375km
	X - Long Range	BEV	$156,000	565 km
	X - Performance	BEV	$170,700	540 km
	3 - Standard Range Plus	BEV	$73,900	460km
	3 - Performance	BEV	$94,200	560km
Volkswagen	e-Golf	BEV	$68,490	220 km
Audi	A3 Sportback e-tron	PHEV	$69,900	45 km + 600 km
	Q7 e-tron	PHEV	$158,400	54 km + 800 km
BMW	i3 - Range Extender	PHEV	$84,500	200 km + 130 km
	i3s - REX	PHEV	$91,900	200 km + 130 km
	i8	PHEV	$281,200	37 km + 400 km
	i8 2018 Coupe	PHEV	$286,200	55 km + 400 km
	i8 2018 Roadster	PHEV	$309,900	53 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
Hyundai	Ioniq Plug-in	PHEV	$53,990	63 km + 1040 km
	Ioniq Plug-in Elite	PHEV	$59,990	63 km + 1040 km
Kia	Niro	PHEV	$55,990	55 km + 850 km
Mini	Countryman	PHEV	$59,900	30km + 500 km
Mitsubishi	Outlander	PHEV	$55,990	50 km + 500 km
Mercedes Benz	C350 e Sedan	PHEV	$96,400	31 km + 700 km
	C350 e Estate	PHEV	$99,400	31 km + 700 km
	E350 e Sedan	PHEV	$143,500	30 km + 600 km
	GLE500 e	PHEV	$149,900	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
Toyota	Prius Prime	PHEV	$48,490	50 km + 1000 km
Volvo	S90 T8	PHEV	$125,900	34 km + 600 km
	XC90 T8	PHEV	$134,900	44 km + 600 km
	XC60 T8	PHEV	$94,900	40 km + 600 km

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

EV FRANCHISE DEALER LIST

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HYUNDAI	
Energy Motors **06 759 8070 | hyundai@energymotors.co.nz** **Cnr Gill & Eliot Streets, New Plymouth**	**New Plymouth**

FIND YOUR QUALITY USED EVS HERE!

USED EV CAR TYPES

MAKE	MODEL	TYPE	PRICING RRP EST.	APPROX RANGE KMS
BMW	i3 - 22 kWh	BEV	$35k - $45k	120 km
	i3 - 33 kWh	BEV	$52k - $80k	200 km
Hyundai	Ioniq	BEV	$47k - $55k	220 km
	Ioniq Elite	BEV	$57k - $66k	220 km
	Kona	BEV	$74k	400 km
Kia	Soul EV	BEV	$30k	150 km
Mercedes Benz	B250 e	BEV	$44k - $47k	140 km
Mitsubishi	i-Miev	BEV	$11k - $14k	100 km
	B-Miev Van	BEV	$16k	100 km
Nissan	LEAF Generation 1	BEV	$9k - $16k	120 km
	LEAF Gen 2 - 24 kWh	BEV	$13k - $34k	135 km
	LEAF Gen 2 - 30 kWh	BEV	$26k - $36k	180 km
	LEAF ZE1 - 40 kWh	BEV	$43k - $63k	250 km
	e-NV200 - 24 kWh	BEV	$27k	140 km
	e-NV200 - 40 kWh	BEV	$60k	200 km
Renault	Zoe 40 kWh	BEV	$37k - $68k	300 km
	Kangoo ZE Van	BEV	$42k - $46k	160 km
Smart	Fortwo	BEV	$20k	100 km
Tesla	S P85D	BEV	$95k - $120k	330 km
	S 90D	BEV	$125k	420 km
	X 75D	BEV	$109k	340 km
	X 90D	BEV	$129k	410 km
	X 100D	BEV	$149k	480 km
	X P100D	BEV	$230k	460 km
Volkswagon	e-Golf - 36kWh	BEV	$63k - $70k	220 km
Audi	A3 Sportback E-Tron	PHEV	$41k - $50k	45 km + 600 km
	Q7 e-tron	PHEV	$125k	54 km + 800 km
BMW	i3 REX - 22 kWh	PHEV	$33k - $50k	120 km + 120 km
	i3 REX - 33 kWh	PHEV	$50k - $68k	200 km + 120 km
	225xe	PHEV	$50k	41 km + 550 km
	330e	PHEV	$50k - $76k	37 km + 550 km
	530e	PHEV	$140k	50 km + 600 km
	X5 xDrive40e	PHEV	$140k	30 km + 800 km
	i8	PHEV	$110k - $140k	37 km + 400 km
Hyundai	Ioniq	PHEV	$46	63 km + 1040 km
Mercedes Benz	C350 e Sedan	PHEV	$63k - $75k	31 km + 700 km
	GLE500	PHEV	$130k	30 km + 700 km
	E350 e	PHEV	$120k	30 km + 600 km
	S500 e	PHEV	$96k	30 km + 700 km
Mini	Countryman Cooper SE	PHEV	$68k	30km + 500 km
Mitsubishi	Outlander	PHEV	$27k - $56k	50 km + 500 km
Porsche	Cayenne S e-hybrid	PHEV	$129k	20 km + 750 km
Toyota	Plug-in Prius	PHEV	$17k - $22k	26 km + 800 km
Volvo	XC60 T8	PHEV	$115k	40 km + 600 km
	XC90 T8	PHEV	$115k	44 km + 600 km

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

USED DEALERS LIST

NAME	CITY
Autolink Cars | 09 378 9090 autolinkcarsltd@gmail.com	Auckland
GVI Electric 09 216 7106 | ev@gvi.kiwi	Auckland
Harwood Cars | 027 492 2218 www.harwoodcars.com	Auckland
Auckland City Electric Vehicles 0800 248 9387 | www.acev.co.nz	Auckland
European Car Imports 021 616 550 | sally@europeancarimports.co.nz	Auckland
Drive EV | 027 521 0429 | 07 378 0082 steve@driveev.co.nz	Taupo
Coventry Cars Hybrid & Electric 04 384 4536 | salesteam@coventrycars.co.nz	Wellington
EV City | 03 972 5505 contact@evcity.kiwi	Christchurch
Metro Christchurch | 03 348 5855 chrisn@metrochch.co.nz	Christchurch
Auto Court | 03 455 3000 info@autocourt.net.nz	Dunedin

AH MERCANE, YOU'VE DONE IT AGAIN

Storm Rides has another fat-wheeled electric cruiser – a Mercane WideWheel e-scooter, just out in New Zealand.

The scooter comes with dual or single motor option, but we'd suggest sticking with the dual motor (total 1000W) as there's plenty of power on tap. Although governed to 25-30km/h, with an unlock sequence you can toggle off and on the speed limiter to get more.

A "beast mode" allows you hit about 40km/h on the flat. With the option of turning "kick and go" off it is also great for quick getaways at traffic lights, but keeping this mode on will chew through the battery.

Dual motors enable heavier riders to get about. The e-scooter is designed for those up to 110kg, but is capable of taking people nearer the 130kg mark uphill quickly, without using the legs to push like on lower powered scooters. It also means you won't arrive sweaty and puffed. The 1000W version truly does, as the marketing says, "Eat hills alive", even with a heavy backpack (laptop, lunch, tools, charger, etc).

The Mercane WideWheel has about a 32km real-world range (tested) and easily handles a 23km one-way commute, mostly along the northwestern cycleway. It could do nearly 50km on a single charge over even terrain.

A key turns on the scooter (providing security when at a cafe or shop) via a voltage meter which shows about 54V when fully charged and under 40V when going flat – a new addition. It has a battery meter, but voltage meters provide better battery performance accuracy.

The manual suggests avoiding using the e-scooter on "rainy and snowy days". It has an IP54 rating, meaning it is water resistant in normal rain and through most puddles, but it's not recommended for heavy rain or being immersed in water. Riding in heavy fog didn't deter it.

The signature wide wheels (10cm) provide stability but you need care on wet surfaces, especially when turning. The wide wheels give it a different ride feel, more akin to carving, and coupled with the dual swing arm suspension make it less harrowing on uneven footpaths.

Care in the wet was illustrated by an electric skateboard rider, luckily in protective gear, taking a nasty spill ahead on a damp downtown Auckland pavement.

E-scooter riders should wear helmets and some protection too.

Slow down around other shared path users, and use the bell provided. Check e-scooter (or e-bike) etiquette. Disc brakes stop it quickly.

A front LED light and rear tail light provide some visibility, but it's best to wear high-vis gear and carry more front and rear lights – especially in winter. The tail light flashes when braking.

The Mercane WideWheel

The scooter quickly and easily folds so it can be lifted into a vehicle or on the train. Both handlebars can drop and the steering column-mounted knob turns to lock or unlock it – but make sure it's properly tightened. Our column was slightly loose – a fault with the test scooter as it had already undergone some severe testing before we got it, Storm Rides assures.

By comparison, the column was rigid when locked on the single motor 500W Mercane WideWheel we checked. The dual motor e-scooter weighs about 20kg (the single motor almost half that), which is often less than an e-bike.

A thumb throttle keeps the speed up and cruise control can be activated for longer stretches. The throttle took some getting used to as it is jerky to operate when depressed, probably due to the instant acceleration. It didn't do that on the single motor scooter, however, making us wonder if the jerky throttle is perhaps also a fixable fault on the test dual motor scooter - which Storm Rides is checking.

No app is involved in accessing this scooter, unlike e-scooter rentals.

A control panel mounted on the handlebar column top also takes a few goes to get used to, but a guide is provided with the scooter - and YouTube has tutorials.

Pushing a button on it for a required number of seconds opens the display (four lights) and alters the mode from eco to power or back. You can use it to select more speed (beast mode) once you learn how.

The display is minimal, Mercane focusing on the scooter itself rather than extras.

There's no speedo – unless you attach one. You can get a mobile phone attachment as well or wear a smart helmet for hands-free cell phone use or listen to music, and with rear lights.

A battery charger is provided (along with an e-scooter user manual, Allen keys and a spanner), and full charging takes about four hours.

A seat can be fitted with four bolt holes already in the deck.

Korean designed and made in China, the Mercane WideWheel can go off-road if you wish.

The dual motor version sells for about $1995 and the single motor for $1595.

It's a goer – and we think with a few refinements the e-scooter will rate very highly with users.

Storm Rides reports the first order sold out within a fortnight, with a second order is on its way and selling fast as pre-orders offer a $200 discount.

If you are looking for an e-scooter with power, stability and a smooth ride for under $2000 then check out the Mercane WideWheel.

Visit **www.mercane.com** or **www.stormrides.nz** for more information.

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ITS New Zealand

TECHNOLOGY'S ROLE IN THE ROAD TO ZERO

Simon McManus

BY SIMON MCMANUS, EXECUTIVE OFFICER, INTELLIGENT TRANSPORT SYSTEMS NEW ZEALAND INC

The Government has announced a strategy to adopt a Vision Zero road safety strategy, making its case for this change with some grim statistics and disturbing trends.

In the first week of August we were pleased to host the Ministry of Transport's **Brent Johnston**, manager safety and mobility, to learn about the new strategy consultation document and in particular, to hear how new technology will play a part.

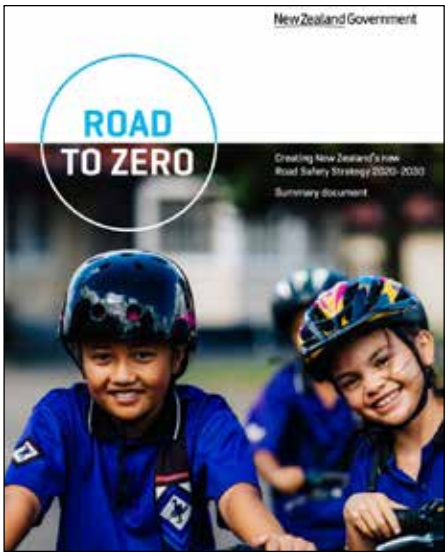
"Last year, 377 people were killed on our roads, and thousands more were seriously injured. Over the past six years we have seen an unprecedented rise in the number of deaths and serious injuries.

"The number of deaths and serious injuries are increasing at a much faster rate than can be explained by simple traffic growth. About half the people who were harmed did not contribute to the crash. They were harmed by other people's errors in judgment, and were let down by a system that failed to protect them from those mistakes."

As a core objective ITSNZ supports the development and adoption of solutions that make our transport network safer.

Therefore, we support an increased focus and target based approach to safety. Perhaps unsurprisingly, a recent survey of those who attended T-Tech earlier in the year found significant interest from the industry, with numerous respondents already implementing their own safety initiatives, research and trials.

At the presentations it was encouraging to hear that technology is considered key across numerous parts of the new strategy. In-vehicle technology and enforcement, another key area, while seeking evidence-based solutions should encourage trials of emerging technologies to prove efficacy in a New Zealand environment.



The ministry has clearly identified Scandinavian countries, Sweden and Norway being global leaders in Vision Zero and with similarities in topography and dispersed population, it is encouraging to see that these countries also place significant emphasis on technological solutions in vehicles and ITS.

As ITS NZ prepares to make a submission on the strategy out for

Continued on page 23

WHAT'S HAPPENING?

Innovations in Freight and Logistics
September 17th, University of Auckland
Details and Registrations via **ITSNZ.org** soon

ITS World Congress, Singapore
@ Suntec, October 21-24
Preliminary programme published
*Contact ITSNZ for promo opportunities & networking events

ITSNZ Awards
Entries open soon.
Awards night TBC, February 2020

LOCAL EVENTS

Tuesday September 17th
Presentations on Freight, Logistics, Technology

INTERNATIONAL EVENTS

October 21 - 25 2019
ITS World Congress
Singapore
Themed *'Smart Mobility, Empowering Cities'* the ITS World Congress attracts 10,000 delegates and covers all aspects of Intelligent Transport and Smart Cities. ITSNZ has an expo stand and events planned.

May 25 – 29 2020
ITS Asia-Pacific Forum
Brisbane

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AUTOSURE'S SUPPORT FOR EVS

By James Searle
General manager of
DPL Insurance Limited

At Autosure we like to do the right thing by customers, our partners, our country and the world. That's why we're keen to support the growth in clean energy and why we've got in behind electric vehicles in such a major way.

Part of the evolution

We like to be at the forefront of new technology, so that 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 vehicles in early 2017.

Since then we've continued to listen to and seen the change in the automobile New Zealand market. More and more manufacturers are getting on board with electric vehicles, delivering more models with longer ranges, faster charging times and lower prices.

The New Zealand Government is supporting electric vehicles, with a range of initiatives. And globally a shift in consumer spending habits, along with a growing sense of environmental responsibility (especially among younger drivers), is sending electric vehicles mainstream.

That's why we've now done away with the separate policy and incorporated an Electric Vehicle Package into our new Mechanical Breakdown Insurance policy released in May this year.

Providing a policy that covers electric vehicles is a great way of helping our dealer network sell more electric vehicles and enable them to give customers confidence for the road ahead.

Our policy provides useful cover at a reasonable price, plus it covers all makes, models and types - Battery Electric Vehicles (BEV), eg, Nissan Leaf, Range-Extended Electric Vehicles (REEV), eg, BMW i3, Plug-in Hybrid Electric Vehicles (PHEV), eg, Mitsubishi Outlander and Hybrid Electric Vehicles (HEV), eg, Toyota Prius.

Electric vehicles have many great features that set them apart from traditional petrol vehicles, but they also have many features in common. And all of these can break down. So that's why Mechanical Breakdown Insurance is a great protection for electric vehicle owners to have.

Repairer network

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

So we moved quickly in 2017 to create a specific list of electric vehicle repairers. We have more than 4500 repairers on our database and thoroughly assess each repairer in terms of training, safety and tools before recognising them as Autosure Approved Repairers.

Those on our specialist list have taken the time to complete safety and/or knowledge courses on electric vehicles and we're expanding the list as demand increases, so we're confident in our strength to support electric vehicle policyholders from Kaitaia to Invercargill.

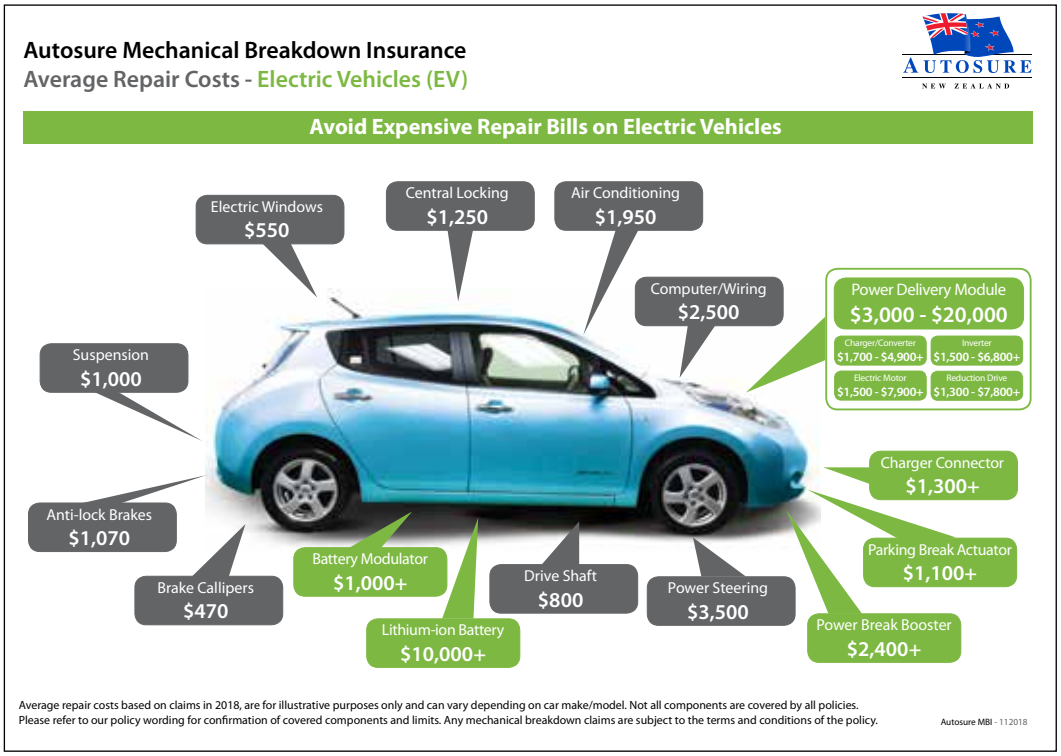
The future

Electric vehicles may look pretty much like any other car from the outside, but it's a different story under the bonnet. However, with proper training and processes repairs can be done safely, efficiently and often with the repairer staying a lot cleaner.

No matter how fast technology is changing, at Autosure our 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.

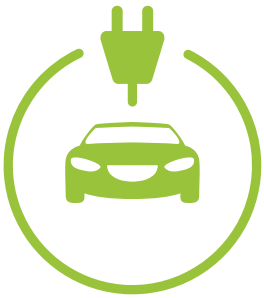
If you would like to find out more about our protection products for electric vehicles, contact us on **0800 267 873**, or talk to your local Autosure account manager who will be happy to help.



AUTOSURE

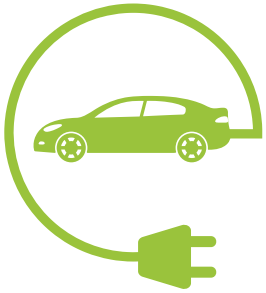
NEW ZEALAND

Electric Vehicles
We've got them covered!



BEV

Battery
Electric Vehicles
e.g. Nissan Leaf



REEV

Range-Extended
Electric Vehicles
e.g. BMW i3

PHEV

Plug-in Hybrid
Electric Vehicles
e.g. Mitsubishi Outlander

HEV

Hybrid
Electric Vehicles
e.g. Toyota Prius

Autosure Mechanical Breakdown Insurance

- **Comprehensive protection** • **At a reasonable price**
- **For all makes, models and types of electric vehicles.**

Confidence for the road ahead

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WE'RE COMMITTING TO EVs

EVtalk checks out how some of the New Zealand companies are doing with their commitment to electrify at least 30% of their vehicle fleets by the end of 2019. Foodstuffs North Island (NZ) is among 30 of the country's employers to agree on the deal.

FleetPartners service driven

Mercury

CustomFleet part of Element Fleet Management

ABB Ltd.
Air New Zealand
BMW
Contact Energy
Fonterra
Foodstuffs North Island
Fuji Xerox
Fujitsu
Giltrap Group
Hyundai New Zealand
ISS Facility Services
Kiwirail
Leaseplan
OCS
Opus
Powerco
Renault New Zealand
SG Fleet
Spark
The Warehouse
Transpower
Turners Auctions
Unison
Vodafone
Waste Management
Watercare
WEL networks
Westpac
Xero

FOODSTUFFS SHOPPING AROUND FOR EVS

While Foodstuffs NZ stores have taken delivery of 28 electric vans and have three electric trucks under construction, it has been struggling to find suitable EVs to replace more than 400 vehicles in its two corporate fleets, in the North Island and South Island.

"The 30% by end of 2019 call was very ambitious," Foodstuffs NZ sustainability programme manager **Mike Sammons** says.

"It doesn't make commercial sense for most companies given the huge price differential between ICE and electric vehicles and the limited charging infrastructure previously available.

"I think EECA were correct in supporting charging infrastructure rather than vehicles, as the market will deliver vehicles, I believe. It's just taking a bit longer than we anticipated as a lot of the promised models from European manufacturers have either not come to market yet or when they have come to market, have proved prohibitively expensive.

"The Japanese manufacturers continue to be reluctant to step into the 100% electric space, so it's China that will probably fill the void in terms of longer range, competitively priced vehicles in the short to medium term."


Mike Sammons

Sammons says corporate light vehicle fleets in the North and South Islands have been waiting for longer range, better priced vehicles to become available.

"To date, we only have one Hyundai Kona for a total fleet size of over 400 vehicles. So, at present, the corporate fleet is at less than 1% electric.

"We haven't been able to make the numbers work this year and have focused on rationalisation of fleets rather than EV transition."

Sammons says Foodstuffs North Island will have shrunk its fleet by 30% by the end of this year. "It's the same model with energy in our buildings - we minimise usage first and only then look at renewables."

Foodstuffs NZ is hoping that with new Chinese EVS on the market next year offering good range (300km) and lower prices, it will provide the opportunity to start a meaningful change.

"I'm confident we will have 20 EVs in the light vehicle fleet by the end of 2020 and we will push for a mostly electric online delivery fleet by end of 2021, but again dependant on new models becoming available," Sammons says.


Mike Sammons, left, and national managing director Steve Anderson at New World Lincoln in Christchurch during the launch last year of Foodstuff's Nissan e-NV200 vans

Working with ChargeNet NZ and EECA, Foodstuffs has 50% of New Zealand's fast chargers (70x 50kW fast chargers available to the public) at stores around the country.

The 28 stores with electric vans also have 21kW dedicated van chargers.

"Another factor for Foodstuffs North Island is the planned move to new premises next year. It didn't make sense to install charging infrastructure on a site you will be vacating soon.

"Our new head office/distribution centre [the Landing Business Park, Auckland Airport], due for completion late 2020) will have at least 10 chargers for anticipated electric fleet vehicles," Sammons says.

"Essentially the infrastructure is either already there or planned for the places the vehicles will be domiciled or visiting, we are just waiting on the business case for the vehicles."

He says it's the price of longer range EVs which is making the transition difficult for Foodstuffs NZ, and probably others too.

The lack of affordable suitable EVs also means Foodstuffs isn't fully engaging staff in the changeover just yet.

"For our corporate people, it's all about visiting stores, so with fast chargers at a lot of those stores we have excellent charging infrastructure already," Sammons says.

"The grocery logistics business is all about six, 11 and 24 tonne trucks. These are sizes of

Continued on page 22

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EV CHAMPIONS HONOURED


Joe Camuso


Kevin Crutchley


Dave and Renata Boot

Joe Camuso of Whangarei is the 2019 EVworld NZ Champion of the Year.

A Vision Whangarei founder, Camuso doesn't miss a chance to promote EVs at the ceremony of the EVworld expo in the ASB Showgrounds in Auckland.

In accepting the award, Camuso says all 15 nominations for the award should have been up on stage.

Starting in 1998 while working in Miami for Florida Power and Light, Camuso says they had three EVs then, but these leased cars were later removed and crushed in a story made famous by the documentary Who Killed the Electric Car?

"I thought that in five years everyone would have an EV," he says.

Camuso says he's done what he can to promote EVs and uptake ever since.

Other award recipients were EV City for the EV Sales and Service award, accepted by owner **Dave Boot** and wife **Renata**. Boot says the award is for his wife, dad Ran, and EV City staff. "We have some real EV champions among us," he adds.

NZ Post received the Fleet Champion of the Year award, **Sam Bridgman** and **Rose Scott** accepting the honour of behalf of the company.

Christchurch City Council gained the Most EV Friendly Town award, accepted by **Kevin Crutchley**.

About 36 entries were submitted, judges **Mike Underhill**, **Stella Stocks**, **Liz Yeaman** and **Rod Oram** commending the work across New Zealand to champion EVs and the decarbonisation of New Zealand's fleet.

The judges recognised those entries that demonstrated strategic impact, innovation and a future focus.

The 2018 EV Champion of the Year Award winner **Martin Kane** says the awards are a great opportunity to consider the vast amount of dedication from local industry and individuals.

"In particular, the EV Champion Award gives the chance to give recognition to the 'volunteer', the person who promotes EVs - not because they are paid for doing so - but simply because they care - be it for the planet, or for New Zealand's energy independence, or for the joy of seeing others excited by a new experience or life-changing realisation."

Finalists for EV Champion of the Year (sponsor EECA) included **Richard Heaps**, **Rob McEwan** and **Sigurd Magnusson**, while Fleet Champion of the Year (sponsor Lease Plan) finalists also featured the Northland Regional Council and Opus.

Among the Most EV Friendly Town (sponsor Custom Fleet) finalists were the Thames-Coromandel District Council and the Wellington City Council.

In the EV Sales & Service Award (sponsor Wellington Institute of Technology & Whitireia Community Polytechnic), EVS Enhanced, Hyundai New Zealand and UBCO were finalists.

TRIBUNAL DECISION CARRIES WARNING FOR EV DEALERS

Continued from page 7

the percentage, they think we are hiding something.

Schmidt says they do their best to educate customers on what the SOH is.

"We tell them it goes up and down, you might have a different reading in winter and summer. You might fast charge the car a few times and it goes up."

Dave Boot of Christchurch's EV City notes that while SOH is an important figure for comparison, it should be only part of the discussion when selling an electric vehicles.

"If you sell based on that rather than a figure, which is a BMS best guess based on input and output data then you are setting your customers up for misery," Boot says.

"Buy one in the Japanese summer and sell it in winter, there is going to be a difference in the state of health," he notes. "That is not to insinuate the Japanese are misrepresenting cars, it is just the way the systems work."

Boot says the sales process for an EV should be around what the customer expects to do with the vehicle, what they actually need - not whether it will mathematically do it based on the statistics Leafspy provides.

"We have refused to sell cars to people who don't have realistic expectations."

He notes an issue for the industry is dealers that lack experience or have not done their research on the vehicles providing misinformation.

"I know dealers who have told customers the SOH will only drop 2%

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FOODSTUFFS SHOPPING AROUND FOR EVS

Continued from page 20

electric trucks we're converting from diesel to electric this year; this will be more challenging but we are hopeful Isuzu will manufacture electric trucks soon, and eventually offer even larger electric trucks."

Doorstep delivery involves smaller vans, and Foodstuffs NZ hopes China will offer a range of these EV types in 2020.

"With China starting to look to export EVs in a meaningful way next year, we are hopeful that we will be able to make the numbers stack up," Sammons says.

He expects rebates proposed for EVs in 2021 under the Government's "clean car" plan should speed the EV transition along post-2020. "So, no big change for the next 9-12 months, then a big shift is my guess."

Sammons believes a combination of Chinese EV supply and support for climate change actions will drive EV adoption rates significantly during the next two to five years.

NEW LEAF ARRIVES

The 2019 Nissan Leaf is on sale from August 16 at 29 dealers nationally.

It's priced at $59,990 plus on-road costs – making it one of the most affordable new EVs on the market.

"As the pioneer of electric vehicles globally, the new fully electric Nissan Leaf represents the future of New Zealand motoring," Nissan New Zealand managing director **John Manley** says.

"We are expecting to see a spike in the sale of new EVs in New Zealand and Nissan is best placed to look after electric vehicle buyers long after they've made their purchase.

"The new Nissan Leaf is technologically advanced, contemporary in its design, it enjoys strong driving range and is extremely fun to drive. It's quite the package."

The new Leaf incorporates all the mod cons under Nissan Intelligent Mobility and includes an eight-inch touchscreen display, seven-inch advanced drive assist display, satellite navigation, a heated steering wheel, heated front and rear leather-accented seats and space for five.

John Manley

Its e-Pedal allows drivers to start, accelerate, decelerate, stop and hold the car by using the accelerator pedal alone without needing to use the brakes.

The Leaf also comes with a maximum five-star safety rating by the Australasian New Car Assessment Program (ANCAP).

It has six SRS airbags, ISOFIX and three top tether child restraint anchor points and much more.

The new Leaf is a mobile power source, thanks to its Nissan Energy Share bi-directional charging capabilities, meaning that, in future, Nissan Leaf customers here will be able to use the vehicle to share energy stored in its battery with their home, business or community.

"Bi-directional charging is potentially the next big advancement in transforming your EV into a more integrated part of your energy system," Manley says.

"The good news is the Nissan Leaf sold in New Zealand is bi-directionally capable from factory and is therefore future-proofed for the next big step within the wider EV ecosystem."

It includes Apple CarPlay and Android Auto – a first for a Nissan passenger vehicle in New Zealand. The 40kWh battery outputs 110kW of power and 320Nm of torque and has more than 270km driving range.

It can be charged within 24 hours using a standard home wall socket, 7.5 hours if the household has a Wallbox home charger installed. You can also plug it into a Chademo rapid charger and get from alert to 80% charge in around 60 minutes, depending on charging conditions.

Six colours include Arctic White, Ivory Pearl with black roof, Sangria Red, Pearl Black, Platinum and Gun Metallic. ■

TECHNOLOGY'S ROLE IN THE ROAD TO ZERO

Continued from page 17

consultation, we will be referencing the strategies put in place by these countries over the past 10-15 years. We will be encouraging trials of new solutions too with advances in AI, 5G and GPS creating exciting possibilities.

Summary from the ITSNZ AGM

A larger membership, an increase in activities and value for members and a healthy bottom line were reported at the AGM in August as ITS New Zealand enters its 15th year.

It's two years since the new membership structure was implemented and the impact of this consistent support has been dramatic. Driven by a business plan and supported by increased admin capacity and improvements in governance, we're now able to deliver and demonstrate the values for members.

T-Tech, our major conference, continues to grow - it's now more twice the size of the annual ITS summits it replaced, and the calibre of events throughout the year continues to increase.

Being connected to a global network of ITS communities is also a key value and as an example our investment in the ITS World Congress this year creates cost-effective promotional opportunities to promote New Zealand innovation, expertise and investment opportunities to a massive global audience at an exciting time when transport innovations and disruptions are rapidly emerging.

The AGM also saw two key long-time directors step down from the board of directors.

HMI Technologies and Ohmio Automotion founder **Mohammed Hikmet** and **Deryk Whyte** of DWG Consulting have made immense personal and financial contributions to ITS NZ over the past 10 years.

They leave ITS NZ in very good shape. Both were recognised with ITS NZ Lifetime Membership. ■

NZ POST EARNS ACCOLADES

NZ Post's win as 2019 EVworld NZ Fleet Champion of the Year is "great" for the sustainability work it does.

"We're trying to do things new and differently to make a change," NZ Post sustainability head **Dawn Baggaley** says.

She says the award will help promote pride in what NZ Post does – "it's very powerful".

The company's 450 small Paxster delivery vehicles make it the largest EV fleet in the country, with EVs a key part of NZ Post's goal to become carbon neutral from 2030.

"About 38% of our emissions are from the ground fleet," Baggaley says.

She says NZ Post now has five electric vans – four LDV EV80s and a Nissan e-NV200 – being trialled in different runs in areas such as Auckland, Palmerston North, Wellington, Christchurch and Dunedin, with the help of the Government's low emission vehicles contestable fund.

Three smaller Renault Kangoo vans are also in use and an application for funding has been made for more.

Seven Hyundai Ioniqs and four Konas have also been purchased, and Baggaley says the data for those will be reviewed.

The fleet has grown to 193 vans and cars with the aim of being 100% electric by 2025.

Baggaley has driven an Ioniq and aims to have her own EV. She's among those Wellington residents without off-street parking so will be among the 14 roads to trial street charging.

NZ Post also trialled three-wheeled electric delivery vehicles in the Taranaki region in 2015, and a few of them are still left after the focus shifted to Paxters.

Continued on page 28

Dawn Baggaley

Sam Bridgman and Rose Scott with the award in front of the LDV EV80 van at NZ Post's EVworld stand

POWER DEALS FOR EV USERS

Company	Energy Deals	Where	Cost to charge LEAF*
Mercury	**Plug-in Vehicle Fuel Package** 20% discount on your energy bill from 9pm – 7am, available on multiple properties, guaranteed discount for 2 years from signing up to offer, 12% PPD is included in these calculations.	Auckland Wellington Christchurch	$5.75 $5.82 $5.63
Meridian	**Electric Car Plan:** Super-low night rates from 9pm until 7am daily. Available for your entire home's electricity needs. Rates are fixed for 3 years. Plus get a year's worth of free EV charging on us! (bill credit of up to $300)	Auckland Wellington Christchurch	$4.91 $4.15 $2.82
Contact Energy	**Everyday Bonus Fixed:** Excellent night rates, no fixed term, check if the matching day-time kWh rate will affect your overall bill.	Auckland Wellington Christchurch	$5.57 $4.60 $3.28
Ecotricity	**Low Solar:** Low Usage plan for EVs & can buy back solar energy, no fixed term	Auckland Wellington Christchurch	$7.76 $5.34 $5.32
Electric Kiwi	**One Plan with Hour of Power:** 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.	Auckland Wellington Christchurch	$6.82 $6.86 $6.71
Flick Electric	**Wholesale rates plus their Flick Fee:** No fixed term, EV rate in Wellington. Calculated using an average spot price of 5.7c per kWh.	Auckland Wellington Christchurch	$5.80 # $5.75 # $3.46 #
Genesis Energy	**Classic plan:** Excellent night rates, no fixed term, 10% PPD has been included, check if the matching daytime kWh rate will affect your overall bill.	Auckland Wellington Christchurch	$6.81 $4.23 $3.73
Paua to the People	**Cheap As Plan with EV night rates:** No fixed term. Calculated using an average spot price of 5.7c per kWh	Wellington	$4.42 #

*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 and could increase your overall bill. Flick Electric in Christchurch has higher daytime rates in Winter due to variable pricing from the lines company. The rates we have used above are calculated each month using a low user cost, overnight rates, includes 10% charging loss, 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. 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 current or future prices.

NZ'S MOST COMPLETE EV? WE TRY THE AUDI E-TRON

I guess you could call it the electric vehicle equivalent of a 21-gun salute. We are at the Clyde Dam in Central Otago and to mark the launch of Audi's first full-electric vehicle they have released the sluice gates - sending millions of litres of water per second cascading being the lined-up e-trons.

Don't worry though, they are not wasted kW falling - this was a planned test brought forward.

Still, it is a grand gesture that underlines how important the e-tron to the Audi brand. New Zealand is one of the first markets in the world to get the e-tron, according to Audi e-tron product manager for Asia, Pacific, Middle East and India, **Dr Brendan Koelher**, who attended the Queenstown launch event.

The car has had limited launches in Europe and North America, but we sit ahead of Japan, China, Australia and pretty much everywhere else.

Why?

"New Zealand is very much at the forefront of our plans as a company, as very simply the demand is there," Koehler says.

"The e-tron will be the first in an all-out EV offensive," Koehler commented.

Still to come are the e-tron Sportback, e-tron GT and a future seven vehicles to make up 10 full BEVs on the range by 2025.

As has long been reported, Audi has pre-sold its first 100 e-trons. So what can customers expect when they finally get the chance to get behind the wheel.

As mentioned in our previous coverage of the e-tron, Audi and its dealers are investing significantly in infrastructure, with DC first chargers at its dealerships, including the first two 175kW chargers in the country. They have also trained 40 technicians and 45 sales staff on the vehicle.

Two models are on offer, at $148,500 for the 55 Quattro model, and $157,000 for the advanced model.

The differences between the standard and advanced models are relatively minor. The Advanced gains 20-inch wheels over 19-inch units, extra rear side airbags, 360-degree camera, a heads-up display, upgraded front armrest and higher quality leather. S-Line, Luxury and the aforementioned technology and comfort packages can only be added to the Advanced.

The e-tron weighs in at around 2600kg, is powered by front and rear electric motors with a combined power output of 300kW under boost, 260kW normally, and 664Nm under boost, 561Nm otherwise. The battery is a 95kW actively-cooled unit with 84kW hours of available charge. Type-two charging is at up to 11kW, while DC is at up to 150kW.

Audi has worked hard to ensure battery cooling allows for maximum charge rates - when you use the 175kW the battery is still running at 50kW when it hits 100%.

Range on the WLTP cycle for the vehicle is over 400km, and it is this figure Audi is pushing.

A unique piece of technology launched with the e-tron is a brake-by-wire system. The brake pedal is connected to a hydraulic cylinder for feedback but feeds data to a computer-controlled master cylinder - allowing software to favour regeneration over braking and fine-tune how much energy it recoups. The system is seamless and you would never know it was there in brake pedal feel.

The other first for us is the use of video cameras as rear-vision mirrors. This is so new it has an exemption to comply with the NZ Transport Agency.

While reducing drag, in the real world it does take some getting used to looking at the rearview in a screen slightly below where you would expect it too. It's easy to adjust to on the passenger side - harder on the driver's side.

The e-tron counter's Tesla's massive screen with the brand's virtual cockpit system. The driver gets a screen in front of them, one atop the centre console where you would typically expect one, and a screen below this. The infotainment system included an embedded sim for the Audi Connect system, allowing for live services and 3D Google mapping.

On top of the assist systems is the central driver assistance controller, which continuously computes an exact model of the environment.

The front seats are large and comfortable, while the rear seats are very spacious – more so than the Mercedes-Benz EQC. Even with the optional panoramic sunroof, headroom is excellent. Knee space for the centre rear passenger is right due to the position of the climate controls.

The boot, at 660 litres with the seats up, is proper Kiwi-family size.

The e-tron uses a unique gear shifter. Nudge it into drive and the car moves silently away – drivetrain noise is lower than any other EV we have driven.

Now, the e-tron will go relatively quick if you want to – it will do the 0-100km/h

Continued on page 28

HOME CHARGING LAUNCH FROM EVNEX

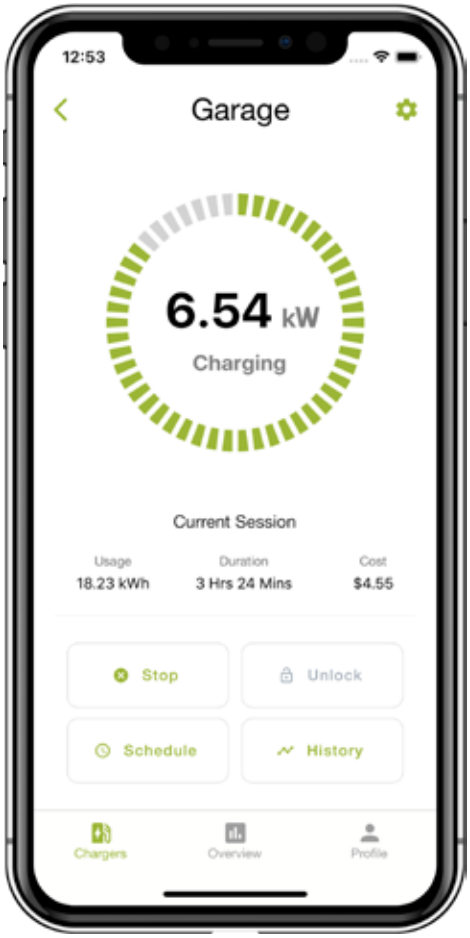
Christchurch-based Evnex, which designs intelligent charging solutions for EVs, is launching its R-Series charge point and free mobile app for the home.

The product is one of the most cost effective 7kW charge points on the market, giving customers the confidence of a future-proof solution and vastly improved charging speed and safety over portable leads that use a 10A home socket, the company says.

Evnex describes the project as one of the first New Zealand-made intelligent charging solutions designed for the home.

"As our service evolves, our mobile app will help reward customers who charge at the most cost-effective times, while reducing fossil fuel consumption and minimising impact on the grid."

The company's vision is for a future where EVs are powered entirely from renewable energy.



Evenex's app

The Evnex team

Evnex was founded in 2014 by **Ed Harvey**, a Canterbury University-trained electronics engineer who had converted his Honda Accord to electric some years earlier and considered EVs had an important part to play in New Zealand's transport future.

The company has recently moved to larger premises leased in Brougham Street in Christchurch to provide more space and to house a growing team.

As EV range and battery size has increased over the last couple of years, it's become clear that the charging requirements of a national fleet of EVs could cause significantly increased load on our electricity infrastructure, Evnex says.

"Although New Zealand has an excellent supply of renewable electricity generation, this increased load has the potential to offset some of the benefits of driving an EV, most notably, an increased reliance on non-renewable electricity sources."

Many earlier EV adopters are aware of these issues, but the later majority is likely to be less so, comparing the charging of their EV to filling up at the pump, in which case the time of the day has no effect on the environmental or financial impact, the company says.

In looking at these issues, Evnex realised there was a market need for a faster home charging product that made it easy for drivers to understand and reduce the costs and environmental impact of running their vehicle, while being cost competitive with portable charging leads that are common in NZ.

A core focus of the business has always been sustainability.

"Sustainability is massive for us," Evnex chief executive officer Ed Harvey says.

"We believe many of our customers will appreciate the effort that we've put into designing a product that reflects their values. Not only is our product designed and made in NZ, but we've entirely cut out single use plastic packaging, and every charge point sold supports permanent native reforestation in NZ through the purchase of carbon credits."

About 120 of its units were recently ordered for installation in Auckland.

Evnex employs a Christchurch team of designers, engineers, and energy market experts passionate about EVs and building quality NZ made products.

It's privately owned and has been supported by leading NZ investment groups over a number of capital raising rounds.

Launching its new charging solution on August 12, Evnex is also offering special pricing for a limited time.

Visit **www.evnex.com** for more information.

YOUR BASIC EV GUIDE TO CHARGING

Continuing our series aiming to make electric vehicles (EVs) simple to understand for first-time buyers.

Charging your EV is easy.

Just think of it as like charging your smartphone.

Most EV owners charge at home overnight by simply plugging in a cable - usually provided with the car - to a standard wall socket and having the car charge while they sleep.

As one owner says: "I can charge in less than three minutes. I flick the switch before I go to sleep and it's done when I wake up."

It pays to check the provided cable or any that you buy meet New Zealand standards (it should also come with a signed certificate of compliance). And, particularly if your home is old, have the wiring checked by an electrician to ensure it can handle the extra load.

A typical New Zealand home is wired for about 15kW of power and most homes have alternating current (AC) mains supply suitable for Type 1 and Type 2 charging, the latter standard for most new EVs here. Type 1 is usually single phase whereas Type 2 can be single, two-phase or three-phase.

Don't use an extension cable for charging and don't adapt an overseas charging cable yourself. Consider getting surge protection too.

Wall-mounted smart chargers are becoming increasingly available for the home.

These allow faster charging, can provide charging control through your smartphone or a touch panel and provide relevant information, may reduce costs through off-peak selection, and can even work in conjunction with solar power and battery storage.

Check out the cost and whether it's worth it for you.

Many wall or pedestal chargers are designed for businesses too, coming with remote software updates, the ability to charge more than one EV at once, provide information on energy use and much more.

Apartment buildings are starting to install EV chargers and some places like Wellington are also trialling street charging for those who don't have off-street parking.

EV drivers may also be able to charge up at work – especially if their company is switching its vehicle fleet to electric.

Free or paid public charging is available in many areas now, including shopping centres, camping grounds and at key destinations or accommodation sites.

Ed Harvey with EVnex's just released home and fleet charger

ABB's Debbie van der Schyff with its new wallbox at EVworld NZ

Types of charging in New Zealand include the recommended European style Type 2 outlets (which includes Type 1 as well) whereby EV drivers mainly use their own leads, Tesla superchargers (restricted to Tesla owners), and Chademo DC fast charging – the latter two common overseas.

All DC fast charge stations have tethered cables.

A nationwide pay EV charging network to enable to people to get around the entire country in an EV is supplied by ChargeNet NZ, which recently opened nine more.

Check when buying an EV what the charging type is.

Charging times vary from many hours (like overnight) to an hour or two with charging times coming down and likely to soon be the equivalent of topping up with fossil fuel.

Vehicle to home and grid technology is the next big thing

A general guideline on charging an EV is the equivalant of 30c/litre of fossil fuel on average.

Some EV owners combine charging when out and about with stopping for a break or to do shopping (hence charger installations at a growing number of supermarkets and shopping centres).

Many varieties of chargers are becoming available. You can check out offerings from suppliers in this magazine, including Evnex, YHI (New Zealand), ABB, Jackson Industries, TransNet NZ, Schneider Electric, ChargeSmart, Singer Electrical, and Paul O'Connor's OEM cables.

EV battery sizes are increasing in many cases, such as the new Nissan Leaf arriving in dealerships from August 16 with a 40kWh battery compared with a 24kWh battery in earlier models (a 64kWh battery version is also available overseas).

Many new EVs have greater driving range with fewer and less time-consuming charging stops.

Charging will change over time. Tests are already being done on solar power integrated into EVs with solar panels covering much of the trial car's surface.

Bi-directional charging is also becoming available, new models like the latest Nissan Leaf able to return power to the home or business, especially useful in emergencies. Trials are being held on various vehicle-to-home (V2H), vehicle-to-grid (V2G) and vehicle-to-everything (V2X) technologies.

With public charging while out and about, there's also an etiquette involved.

The Better NZ Trust, which promotes EVs, has a code of behaviour which suggests being polite when sharing public chargers, not parking illegally to do so, drivers returning to vehicles when charging is completed so as not to hold up others, only unplugging other EVs if you have permission or when it has finished charging, and to be "nice to ICE" and leave polite notes if a fossil fuel car is blocking charger access.

If you are unsure about any charging aspect, contact the relevant people featured in this magazine for further information. ■

TRIBUNAL DECISION CARRIES WARNING FOR EV DEALERS

Continued from page 22

a year, and that is absolute rubbish."

"We had a dealer turn up here last month to get the battery tested for the customer, he turned up, lifted the bonnet and disconnected the battery. He took the positive and negative terminals off the 12-volt battery and told us he had the car ready for us.

"Some dealers should stay away from electric vehicles. Not because we are greedy, but because a bad EV experience by a customer is likely to be off-putting to their friends and family."

Boot is not suggesting Schmidt is in this camp, however.

"I think that is more a case of the dealer and the customer not getting along and not having a proper conversation about what SOH means." ■

NZ POST EARNS ACCOLADES

Continued from page 24

Couriers working for NZ Post drive their own vehicles, so the company is working with owner/operators to support their move to electric.

"Lots of new EVs are coming out," Baggaley adds.

Asked about possibly using drones, she says that's also being considered with much depending on technological development in that field.

"There's been real growth in online shopping," Baggaley says, pointing to a need for 'last mile' city delivery to suit.

NZ Post is also investigating changes in truck power, including electric drive trains, hydrogen and biofuels.

And it was third in New Zealand to get a science-based target appraisal to reduce emissions by about 30% below 2005 levels before 2030, to help keep global warming below the 1.5 degree threshold.

"We're focusing on what we can do," Baggaley says, adding the airline industry is working on what it can achieve in emission reductions as well for moving freight.

She says NZ Post will also look to encouraging its staff to switch to low and zero emissions transport.

"The challenge in New Zealand when we're tech takers is in showing that if more businesses have plans like ours it would show the need for a certain number of EVs."

That would, in turn, encourage more EV manufacturers globally to look at New Zealand and see a demand here, Baggaley believes.

"It's important to show people that EVs work and to encourage others into them." ■

NZ'S MOST COMPLETE EV? WE TRY THE AUDI E-TRON

Continued from page 25

sprint in 5.7 seconds – but it isn't "Tesla quick", as some enthusiasts have pointed out to me.

Koehler acknowledged over lunch that they can and have run the e-tron faster, but were not willing to face the overheating and reliability compromises such performance brings.

On the launch drive we did test the e-tron's overall performance, but in different ways. We took it on a typical Kiwi back-country road, which it handled easily. There is enough ground clearance to get off smooth payment, a lot further than a Model X. A beach or decent access track should be handled with ease. Traction and stability was fine, although we were driving on winter tyres.

We then towed a 1.6-tonne trailer with it. Again this was done with little fuss thanks to the torque of a large diesel on offer, though with the motors calling for over 50kWh per 100km during the towing, range is restricted. You can easily pull your boat to the local ramp with the e-tron, but to the bach will mean a little more planning.

On the road itself, again on winter tyres, the e-tron is a dream to drive. Responsiveness in all drive modes is excellent. You can set the car between Efficiency and Dynamic modes, though to be honest it is best left in Auto to decide itself.

The car is pretty good at assessing your needs and delivering the performance required. Its ability to regenerate based on its own assessment or your steering wheel paddle input is impressive - although Audi points out coasting is more efficient.

Thirdly, Audi got us on to the snow at the Southern Hemisphere Proving Grounds for a taste of their annual Audi Ice Experience. This is where the e-tron impressed in a way no conventionally powered vehicle could. The two motors can apportion power and torque instantly - to the point that in one move we saw the vehicle shift entirely to front wheel drive during a sharp spin turn.

The regeneration system had an unusual side effect during the slalom. No need to break between cones, just lift off and let the regeneration do it for you!

Yes, the e-tron comes with a stiff price-tag, but it is not out of the range for this kind of vehicle - and you do not feel you are paying that much of a premium for the battery. It is an all-round great luxury SUV.

For now though, I will say the e-tron is likely the most complete EV on the market. ■

EV REGISTRATIONS RISE – BUT ARE PEOPLE WAITING FOR REBATES?

Electric vehicle registrations climbed to 15,421 in July – up 550 on June.

That's still a steady increase, although below the 638 and 567 rises respectively for the previous two months, Ministry of Transport registration figures show.

However, the latest figure is close to the 16,000 EV target for this year, the aim to double the numbers each year to reach 64,000 EVs by 2021.

Used light pure EVs like the popular **Nissan Leaf** (319) again led the charge, the category rising 335 from June's 8523 to July's 8858.

New light pure EVs followed on 2710 for July – up 75 on June's 2625.

The Nissan Leaf remains top of the pops

And new light plug-in hybrids (PHEVs) reached 2466 registrations, an increase of 60 on June's 2406.

Used light PHEVs totalled 1245 in July, up 68 on June's 1177.

Two more heavy EVs were added to the fleet for the month, bringing that category to 142 in July.

Auckland continues to lead the country in EV uptake with 7057 registrations, followed by Canterbury on 2236 and Wellington on 1987.

Submissions on the "clean car standard" close on August 20, many submitters likely to urge the Government to get a wriggle on introducing feebates which reward buyers of low and zero emission vehicles while penalising gas guzzlers.

A growing number of Kiwis are keeping an eye on EVs and July saw a 9% increase in EVs being added to watchlists compared with June, Trade Me Motors head **Alan Clark** says.

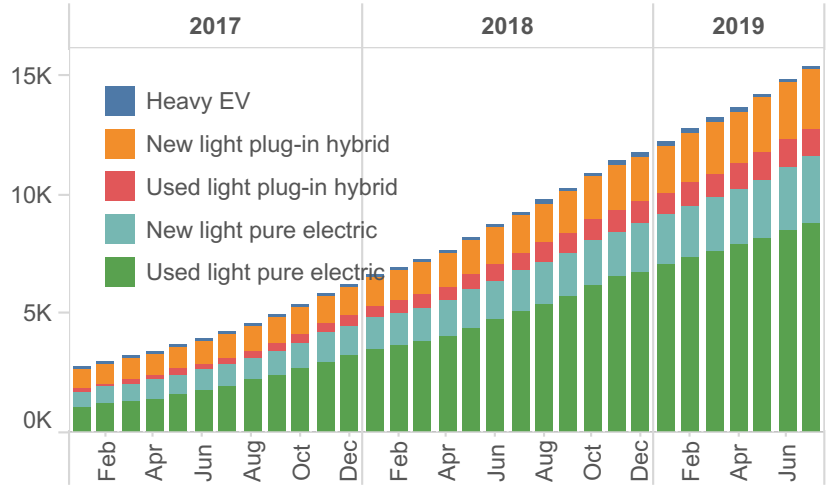
Alan Clark

"That's up 38% on July 2018."

July 2019 saw a 21% rise in the number of EVs listed onsite compared with June.

The top five EV models onsite in July included the **Nissan Leaf**, **Nissan e-NV200**, **Kia Niro**, **BMW i3** and the **Volkswagen e-Golf**.

EV fleet size



	2013	2014	2015	2016	2017	2018	2019
Jan	194	235	595	1,117	2,758	6,630	12,200
Feb	194	246	625	1,153	2,986	6,918	12,725
Mar	202	286	683	1,226	3,193	7,255	13,186
Apr	202	329	716	1,319	3,377	7,632	13,659
May	204	367	745	1,405	3,661	8,200	14,229
Jun	207	391	796	1,599	3,969	8,707	14,867
Jul	208	418	844	1,751	4,258	9,249	15,421
Aug	210	442	873	1,875	4,593	9,759	
Sep	213	467	917	1,989	4,926	10,255	
Oct	221	494	957	2,153	5,361	10,891	
Nov	226	527	1,002	2,374	5,840	11,380	
Dec	230	554	1,056	2,555	6,216	11,752	

AUDI E-TRON LEAPS INTO CONTENTION

The **Audi e-tron** electric has jumped into the latest sales charts with 28 recorded for July and the same in year-to-date (YTD) based on MIA and NZTA data.

Hyundai is well up in the tables too, recording 19 sales for the **Kona Electric** in July and 10 for the **Ioniq**. YTD sales figures put the **Kona** well ahead of the pack on 235, followed by the Ioniq on 117.

Next up on YTD sales is the **Volkswagen e-Golf** on 89 with the **Tesla Model X** at 57, **Jaguar's I-Pace** at 54 and the **Kia Niro** on 53.

The Nissan Leaf is the most popular second-hand EV model, but is the new Leaf about to run it over?

No change in the PHEV brigade with the **Mitsubishi Outlander** way ahead on 24 for the past month and 260 YTD.

Next up is the **Toyota Prius hybrid** on 59 for the year so far, the **Mini Countryman hybrid** close behind with 58.

The **Audi A3** sold 16 for the month and 32 YTD, while the **Hyundai Ioniq PHEV** came in at 11 and 38 respectively.

Electrics now comprise 0.81% of the national fleet and PHEVs 0.59%, overtaken by petrol hybrids on 3.33%. But all are still way behind petrol power on 51.27% and diesel at 43.97%, although the ratio is expected to alter dramatically within the next few years.

In used EVs, the **Nissan Leaf** remains top by a country mile with 320 – nothing else even close.

The **Mitsubishi Outlander** leads the used PHEVs section too with 45. It's followed by the **Toyota Prius** on 14 and **BMW i3** on 13.

It will be interesting to see how the new Nissan Leaf goes in sales in the next round of figures, the long awaited all-electric due in dealers from August 16 for an under $60,000 price tag, plus on-road costs.

The Tesla Model 3 is reported to have a big waiting list here, due out shortly too.

And more EVs are coming, especially in the pure electric field.

So keep an eye on the next round of sales stats – change is coming.

Meanwhile, Genuine Vehicle Group managing director **Hayden Johnston** says July was a solid month for EV enquiries and his team sold more than 60 plug-ins along with many hybrids and small engine vehicles that would be liable for a rebate under the Government's proposed Clean Car plan through its discount or feebate scheme.

Johnston says when the feebate idea was first announced two customers cancelled EV deals on the basis they would wait until 2021. "But that was the last we have heard about it."

Johnston says August is already tracking better than July, a weakening New Zealand dollar putting pressure on purchasers of higher value Japanese import EVs to make decisions before prices start rising.

Hayden Johnston

Hyundai's Kona Electric leads the EV field year-to-date with 235 sales

USED IMPORTS JULY 2019

MAKE	MODEL	JULY'19	YTD'19
BEV - BATTERY ELECTRIC VEHICLE			
NISSAN	LEAF	320	1992
NISSAN	E-NV200	5	14
TESLA	MODEL S	3	6
SMART	FORTWO	2	11
BMW	I3	1	15
KIA	NIRO	1	1
	OTHER	2	34
Total		**334**	**2073**
PLUG IN HYBRID			
MITSUBISHI	OUTLANDER	45	223
TOYOTA	PRIUS	14	81
BMW	I3	13	45
BMW	330E	2	8
BMW	530E	1	2
	OTHER	3	21
Total		**78**	**380**

NEW MAKES AND MODELS 2019

MAKE AND MODEL	JUL '19	TOTAL 2019
ELECTRIC		
AUDI E-TRON	28	28
HYUNDAI KONA	19	235
HYUNDAI IONIQ	10	117
KIA NIRO	9	53
BMW I	5	23
JAGUAR I-PACE	5	54
VOLKSWAGEN GOLF	4	89
TESLA MODEL 3	3	3
TESLA MODEL X	2	57
TESLA MODEL S	1	38
LDV EV80	1	8
FUSO ECANTER	1	1
NISSAN LEAF	0	2
RENAULT ZOE	0	2
FACTORY BUILT YUTONG	0	1
RENAULT KANGOO	0	1
FACTORY BUILT EV10	0	1
Total (Autobase)	**88**	**713**
PLUG-IN HYBRID		
MITSUBISHI OUTLANDER	24	260
AUDI A3	16	32
HYUNDAI IONIQ	11	38
TOYOTA PRIUS	9	59
LAND ROVER RANGE ROVER SPORT	1	12
MINI COUNTRYMAN	1	58
PORSCHE CAYENNE	1	17
VOLVO XC90	1	8
BMW I3	0	21
VOLVO XC60	0	10
KIA NIRO	0	7
BMW 2 SERIES	0	4
LAND ROVER RANGE ROVER	0	3
PORSCHE PANAMERA	0	3
BMW 3 SERIES	0	1
BMW 5 SERIES	0	1
BMW I	0	1
MERCEDES-BENZ GLE	0	1
Total (Autobase)	**64**	**536**

PLUGGED IN!

Stay connected to the EV community with useful links below.

EECA	NZ government's EV information website **https://www.electricvehicles.govt.nz/**
Drive Electric	Advocacy group for the EV industry **https://driveelectric.org.nz/**
EV Association of Aotearoa	EV owners association **https://www.evaa.co.nz**
Charge Net	Nationwide EV charging network **https://charge.net.nz/**
Electric Heaven	NZ electric car guide **http://www.electricheaven.nz/**
NZ EV Podcast	Monthly podcast about EVs **https://www.podcasts.nz/nz-ev-podcast/**
Flip the Fleet	EV Community data sharing project **https://flipthefleet.org/**
NZ Electric Bikes Review	Independent electric bike reviews **https://electricbikesnz.com/**

EV OWNERS FACEBOOK GROUPS – ONLINE CHAT GROUP FOR THE NZ EV COMMUNITY

Nationwide	
NZ EV Owners	**https://www.facebook.com/groupsNZEVOwners**
Regional	
Auckland EV Owners	**https://www.facebook.com/groups/291373964545996/**
Wellington EV Owners	**https://www.facebook.com/groups/WellyEV/**
Waikato EV Owners	**https://www.facebook.com/groups/WaikatoEV/**
Dunedin EV Group	**https://www.facebook.com/groups/403816650002889/**
Christchurch EV Group	**https://www.facebook.com/groups/ChristchurchEVGroup/**
EV Owners - Manawatu	**https://www.facebook.com/groups/1847252468838484/**
Nelson Tasman EV Owners	**https://www.facebook.com/groups/365895557107117/**
Northland EV Group	**https://www.facebook.com/groups/northlandEVgroup/**
Bay of Plenty EV Owners	**https://www.facebook.com/groups/BayOfPlentyEVOwners/**
Central Otago Lakes EV Owners	**https://www.facebook.com/groups/521978908249518/**
Naki EV Owners Group	**https://www.facebook.com/groups/375210949597565/**
South Canterbury EV Owners	**https://www.facebook.com/groups/southcanterburyev/**
INVER-ELECTRIC-CARGILL	**https://www.facebook.com/groups/250609535293325/**

EV CHARGING LOCATIONS

bought to you by AUTOHUB FORWARD TOGETHER your leading logistics team for Japanese and UK used EVs

Fast / Super Charger Locations – North Island

Pukenui	Houhora Fishing Club, 4126 Far Nth Rd
Coopers Beach	Four Square, 9 Coopers Dr
Kaitaia	Te Ahu, 28 South Rd
Kaitaia	Pak'nSave, 111 North Rd
Kerikeri	1 Butler Rd
Opononi	Four Square, 29 SH12
Kaikohe	Library Carpark, 14 Marino Pl
Kawakawa	4 State Highway 1
Tikipunga	Paramount Plaza, 1 Wanaka St
Whangarei	11 Alexander St
Raumanga	McDonalds, 130 Tauroa St
Dargaville	Totara St Park, 113 Totara St
Kaiwaka	1 Kaiwaka-Mangawhai Rd
Warkworth	New World, 6 Percy St
Warkworth	BP, 67 Auckland Rd (SH1)
Orewa	New World, 11 Moana Ave
Silverdale	17 Hibiscus Coast Hwy
Albany	The Warehouse, 186 Don McKinnon Dr
Rosedale	McDonalds, 14 Constellation Dr
Kumeu	New World, 110 Main Rd
Henderson	Pak'n'Save, 224 Lincoln Rd
Akld CBD	Vector, 21 Hobson St
Beach Rd	Z Station, 150 Beach Rd
K Road	Tesla, 501 Karangahape Rd
Newmarket	1 Gillies Ave
Greenlane	McDonald's, 320 Gt Sth Rd
Pakuranga	BP, 322 Pakuranga Rd
Botany Downs	Z Station, 550 Te Irirangi Dr
Akld Airport	Shopping Ctr, George Bolt Mem. Dr
Akld Airport	Z Skyway, George Bolt Mem. Dr
Takanini	30 Walters Rd
Takanini	Pak'nSave, 345 Great South Road
Coromandel	44 Woolams Rd
Whitianga	4 Lee St
Tairua	Carpark, 6 Tokoroa Rd
Pukekohe	King Street Carpark, 56 King St
Pukekohe	Counties Power, 14 Glasgow Rd (Bus hrs)
Waiuku	Kitchener Rd Carpark
Thames	505 Mackay Street
Whangamata	100 Hetherington Road
Hampton Downs	Gate 1, Motorsport Park
Te Kauwhata	16 Wayside Rd
Waihi	New World 35 Kenny St
Huntly	Countdown, 18 Tumate Mahuta Dr
Morrinsville	New World, 79/89-97 Thames St
Te Rapa	WEL Networks, 114 Maui St
Rototuna	Countdown, 160 Peachgrove Rd
Matamata	New World, 45 Waharoa Rd
Hamilton	Tesla, The Base, Te Rapa Rd
Hamilton	Countdown, 551 Anglesea St
Claudelands	Coutdown, 160 Peachgrove Rd
Hamilton	Caro St Carpark, 7 Caro St
Hamilton	Countdown, 4 Bridge St
Ruakura	Waikato Innov. Pk, 9 Melody Ln
Raglan	43 Bow St
Mt Maunganui	Bayfair, 19 Girven Road
Mt Maunganui	New World, 1 Tweed St (25 kWh)
Cambridge	73 Queen Street
Pirongia	Four Square, 270 Crozier St
Te Awamutu	10 Scout Lane
Whakatane	i-Site, 30 Quay St
Opotiki	i-Site, 70 Bridge St
Te Kaha	Te Kaha Bch Res, 3 Hotel Rd
Te Araroa	22 Rata St (25 kWh)
Rotorua	1134 Haupapa St
Tokoroa	New World, 72 Bridge St
Matawai	6522 Matawai Rd
Tolaga Bay	43 Cook St (25kWh charger)
Te Kuiti	New World, 39 Rora St
Murupara	Pine Drive Car Park, Pine Dr
Taupo	Firestation, 1 Kaimanawa St
Taupo	Tesla, 1 Kaimanawa St
Gisborne	21 Gladstone Rd
Morere	Hot Pools, 3968 SH2 (25 kWh)
Rangitaiki	Lodge Café, 3281 SH5
Turangi	1 Pihanga Rd
New Plymouth	66 Courtenay St
Opunake	Business Centre, 23 Napier St
Wairoa	75 Queen St
Putorino	5466 State Highway 2
National Park	Four Square, 4354 SH4
Ohakune	New World, 30 Ayr St
Taihape	New World, 12 Huia St
Te Haroto	Mc Vicar Rd, 4237 SH5
Waiouru	Cnr SH1 & Hassett Dr
Hawera	Pak'nSave, 54 Princes St
Napier	206 Dickens St
Hastings	100 Queen St W
Mangaweka	Papa Cliff Café, 2 Koraenui St
Whanganui	Pak'nSave, 167 Glasgow St
Waipukurau	34 Russell St
Dannevirke	24B Gordon St
Woodville	i-SITE, 43 Vogel St
Palmerston Nth	i-SITE, 126 The Square
Palmerston Nth	Tesla, 365 Ferguson St
Levin	New World, 21 Bath St
Otaki	New World, 155-163 Main Hwy
Paraparaumu	Kapiti Pak'nSave, 132 Rimu Rd
Raumati	15 Raumati Rd, Paraparaumu
Paekakariki	7D Wellington Rd Paekakariki
Masterton	Queen Elizabeth Park, 3 Dixon St
Porirua	2 Serlby Pl
Featherston	SuperValue , 42 Fitzherbert St
Upper Hutt	24 Queen St
Lower Hutt	Dowse Art Museum, 1 Stevens Gr
Wellington	Grey St Parking
Petone	Z Station, 60 Hutt Rd
Te Aro	Z Station, 174 Vivian St
Te Aro	Barnett St Carpark, 11 Barnett St
Te Aro	Inglewood Parking, 68 Inglewood Pl

Fast / Super Charger Locations – South Island

Takaka	16 Willow St
Havelock	Four Square, 68 Main Rd
Motueka	New World, 271 High St
Karamea	Four Square, 103 Bridge St
Nelson	i-SITE, 81 Trafalgar St
Nelson	New World, 73 Vanguard St
Richmond	Library, 11 Mcglashen Ave
Spring Creek	2226 SH1, Blenheim 7202
Blenheim	Pak'nSave, Springlands
Ward	Flaxbourne Café, 7326 SH 1
Westport	New World, 244 Palmerston St
Reefton	Four Square (25 kWh) 47 Broadway
Greymouth	13 Tarapuhi Street
Kaikoura	51 West End
Kaikoura	New World, 124 Beach Road
Hokitika	New World, 116 Revell St
Culverden	27A Mountain View Rd
Amberley	Countdown, 123 Carters Rd
Rangiora	Pak'nSave, 2 Southbrook Rd,
Northwood	New World, 2 Mounter Ave
Harewood	Raeward Fresh, 800 Harewood Rd
Addington	Z Station, 40 Moorhouse Ave
Halswell	New World, 9 Nicholls Rd
Christchurch	Tesla, The George Hotel, 50 Park Tce
Rolleston	New World, 90 Rolleston Dr
Lincoln	New World, 77 Gerald St
Little River	4235A Christchurch Akaroa Rd
Rakaia	41 Bridge St
Ashburton	109 West St
Tekapo	Lake Tekapo Tavern, SH8
Fairlie	Opp. 53 Main St
Geraldine	Cox St Carpark, 14 Geraldine-Fairlie Hwy
Temuka	New World, 185 King St
Twizel	Events Ctr, 61 McKenzie Dr
Timaru	26A North St
Omarama	2 Sutherland Rd
Omarama	Tesla, Hot Tubs, 29 Omarama Ave
Kurow	Wynyard St
Wanaka	42 Ardmore St
Queenstown	Tesla, Remarkables Park Town
Frankton	Pak'nSave, 302 Hawthorn Dr
Cromwell	i-Site, 2 The Mall
Waimate	125 Queen Street
Oamaru	Eden St Carpark, 3 Eden St
Ranfurly	31 Charlemont St E
Alexandra	9 Thompson St, Bridge Hill
Hampden	33 Lincoln St
Nth Dunedin	University of Otago, 71 St David St
Dunedin	Filleul St Carpark, 193 Moray Pl
Mosgiel	New World, 10 Hartstonge Ave
Milton	Four Square, 207 Union St
Roxborough	22 Jedburgh St
Lumsden	Four Square, 14 Diana St
Lawrence	Four Square, 19 Ross Pl
Winton	New World, 293 Great North Rd
Gore	New World, 8 Irk St
Balclutha	23 Charlotte St