EV talk

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Fuel forethought: EV buyers don't contribute

Victoria's state motoring club wants the excise collection system for internal combustion cars to be fixed by road charges as electric vehicles sales rise.

RACV general manager **Bryce Prosser** says the lack of road user charging to capture excise from electric vehicles signals a "broken" system allowing people to avoid paying for the roads they use.


Bryce Prosser, RACV

According to VFACTS reported sales data from the Federal Chamber of Automotive Industries, annual private passenger hybrid sales are up 83.5% at the end of July, as are private passenger all-electric/plug-in hybrids up 19.2%.

The biggest increase for electrified drivetrain sales, however, has been in private hybrid SUVs which are up 495% compared with 2018, rocketing from 52 in 2018 to 722 at the end of July.

Private electric/PHEV sales also went through the roof this year, up 476% from just six at the end of July 2018 to 80 by the end of last month.

The results come as Toyota reports hybrid RAV4 sales sold out with a four-month wait as of mid-June 2019. The figures also see the FCAI's merging of reported sales data from all-electric vehicles and plug-in hybrids, where they were once separate.

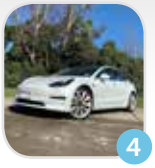
The RACV says spending less on fuel is costing the government excise to keep roads maintained.

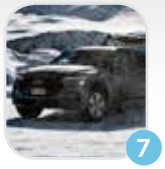
"The current system relying on fuel excise, GST and various federal and state motoring taxes is complex and broken and should be replaced with a fairer, more equitable system," Prosser

Continued on page 2

INSIDE

New EVs land	3
Tesla Model 3 drive	4
Audi e-tron winter test	7 & 8
ITS Australia Summit	10





Billions forecast from EVs and AVs

Australia's economy could get a $92 billion boost from electric and autonomous vehicles by 2050.

That's according to a study by LEK Consulting which shows new technologies and mobility options such as car sharing (Evee, GoGet and Flexicar) and ride sharing/pooling (Uber, Lyft, Ola) are already changing the way Australians travel and use traditional transport modes such as taxis and private cars.

Innovations such as autonomous vehicles (AVs), electric vehicles (EVs) and on-demand transport are likely to bring even more dramatic shifts, it adds.

LEK Consulting says the introduction and adoption of new mobility options could increase Australia's gross domestic product (GDP) by $62 billion to $92b by 2050, a rise of 2%-3% over projected GDP without new mobility.

Forecasts suggest new mobility could boost employment in Australia by 200,000-274,000 fulltime equivalents, or about 1%-2%.

About half of the increase in GDP, or $32b-$44b, is likely to come from improved labour force participation. As it becomes easier to get to work, the labour force participation rate could increase by about 1% by 2050 over and above a scenario without new mobility options.

Lower vehicle accident rates will

Continued on page 2

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EVtalk

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Fuel forethought: EV buyers don't contribute

Continued from page 1

says.

"We need an overhaul of the current system ... Road-user charging that considers how, when and where we travel is more sustainable and fairer," he explains.

Prosser's declaration comes as Australian Competition and Consumer Commission chairman **Rod Sims** said recently the buyers of electric cars and hybrids were short-changing the system designed to recover 41 cents per litre of fuel spent.



Doubling effective range has virtually halved cost-per-kWh

"People who buy electric cars are travelling on roads without cost, and that's really not fair," he said.

The Australian government's progress on developing road user charging infrastructure has drawn on modelling from 22 countries whose electric vehicle market is growing.

As the department of infrastructure, transport, cities and regional development designs a system that draws revenue from electric vehicle uptake to make up for the lost excise on fossil fuel sales, the latest research report shows sales are "set to grow rapidly".

The latest BITRE data, which the department acknowledges only has roughly 10 years' worth of data to draw on, predicts the percentage of Australian annual EV sales to jump from roughly 2% in 2019 to more than 20% by 2029.

That means the government needs to find revenue from the decline of petrol and diesel fuel sales, which contributes around 40 cents of every dollar in excise, according to the tax office.

Modelling of electric vehicle costs out to 2030 are used to allow policy-makers to make changes based on the effect electric vehicles will have on subsidies, tax and charges.

The report says the rate of EV uptake is influenced by future petrol prices but even more significantly by outright EV costs. Namely, oil price increases won't encourage EV uptake as much as the base EV retail price.

Australian EV market share is predicted to hit 8% by 2025 and 27% by 2030, which, based on recent VFACTS yearly figures, could equate to roughly 300,000 sales.

The report uses "steep raw uptake curve" data from the likes of Norway, Belgium, Finland, Germany, Korea and the Netherlands compared with medium-uptake curves in Australia, New Zealand, China and the UK, and flat-uptake curves from India, Japan, Spain, France and the USA - all based on a raw logistic model of 65% passenger sales saturation.

This means the countries are groups based on how quickly or slowly they reach 65% market saturation by 2040.

"Australia starts later and then rises more slowly," the report says.

"These differences [in start time and steepness] are spread across the 22 countries, which group roughly into [these] three categories."

The report also cites the tumbling cost of battery production as a result of mega-factory production processes and the falling cost per kWh, and therefore vehicle range, as a continued trend out to 2030.

The report says the cost of battery packs has remained essentially the same from 2017 to 2025, but the virtual double of kWh range effectively halves the battery cost-per-kWh.

A separate report into the economics of transport fuel excise was also published last month. ■

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Leaf and Model 3 land

The long-awaited Tesla Model 3 RHD has started arriving in Australia and New Zealand, while the new Nissan Leaf has also landed in both countries.

Interest in the Model 3 has been considerable since Tesla launched reservations and LHD models were revealed in Australian and New Zealand Tesla showrooms in August last year.

Delays in launching the RHD version have followed problems in ramping up Model 3 production, which is now on track.

The first RHD Model 3s were launched in the United Kingdom then in May Tesla opened orders for it in Australia and New Zealand.

While Tesla won't specify the number of orders, interest in Australia particularly is known to be considerable – some waiting three years for the Model 3 to arrive.

Customers, including Tesla Motors Club members, started tracking their cars in shipments from Tesla in California, the first boat-load reported to have arrived in New Zealand on August 12-13 and in Sydney on August 16 aboard the container ship Cap Capricorn.

The Model 3 here is available in Standard Range Plus, Long Range and Performance, the price starting from A$66,000 plus on-road costs.

An "affordable" basic model is reported to be coming later.

The Model 3 is expected to help grow Tesla in Australia and New Zealand markets, as it was the main driver of EV sales in the US.

Globally, it's said to be the top selling EV, even surpassing the Nissan Leaf in some countries.

The 2019 40kWh Nissan Leaf, cheaper at A$49,990 before on-road costs, has also prompted considerable interest in Australia and New Zealand.

Nissan Australia has partnered with Jet Charge to provide discounted charging, including at Chargefox ultra-fast charging stations nationally.

One big advantage with the new Leaf is its ability to put power back into the home or business.

This bi-directional charging, also known as vehicle-to-home or vehicle-to-grid (V2G) is expected to become available in 2020. It allows Leaf owners to charge their car using cheaper off-peak power and then supply their home or business when electricity costs increase or in an emergency.

The new Nissan Leaf is available through about 90 Nissan dealerships in Australia and 29 in New Zealand, with a spike in sales expected in both countries.



Tesla Model 3 RHD



Nissan Leaf

Blackburn Nissan in Melbourne's eastern suburbs tells *EVtalk* the Leaf is selling very well just three weeks after going on sale.

Assistant sales manager **Shef Niazmand** says, having delivered a Leaf on August 16, customers know exactly what they're looking at - which is why he's had more than 25 enquiries since March.

"Our Leaf customers are directly comparing with the BMW i3, Hyundai Kona and Renault Zoe; they're very informed and know what they want," he says.

"We currently have two cars in stock, one in the showroom and one for test drives. In fact, I have four test drive appointments this week, so the level of interest is very high and it's selling very well," Niazmand explains.

He praises Nissan Australia for providing dealers with a multitude of information and fully preparing sales teams to be fluent in speaking about EVs with well-researched customers.

"They [Nissan] gave us training to directly compare and know what features of the Leaf make it such a great vehicle and what our customers will want to know when scrutinising against other electric vehicles on sale," Niazmand says.

"The competition is increasing with the arrival of the Model 3 which is probably the direct competitor if a customer keeps looking beyond the Leaf," he adds.

"One of the big selling points is the 400-litre boot which was the result of mounting the spare tyre underneath the car."

Niazmand says customers are impressed with being able to charge the Leaf for "less than $700 per year" and are equally pleased to spend "only $200 on a service compared to the $900 to service a BMW i3".

The Leaf is retailing for $55,000-$56,000 drive-away from Blackburn Nissan.

Both the Leaf and the Model 3 come with top five-star safety ratings from the Australasian New Car Assessment Program (ANCAP).

The new Leaf marks a return to Australia after sales there and in New Zealand failed to fire when the first generation Nissan Leaf was introduced new in 2012, mainly attributed to what is described as "early adopters' syndrome" which included "range anxiety" because of the lack of charging infrastructure at the time.

Interestingly, sales of second-hand Leafs imported from Japan and the United Kingdom took off in New Zealand where the Leaf is now the most popular used EV.

That's no doubt encouraged familiarity with the brand.

Nissan is expecting big things this time around with the new Leaf's longer range at around 270km and double the battery power of the first generation version.

Its bi-directional charging ability is also likely to promote interest. ■



Short, yet brilliant, first Model 3 drive

The Tesla Model 3 has arrived in Australia, 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 $91,200 (VIC).

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, 4 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, 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/hr 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 city suburban traffic.

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 a short motorway run 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.

With Tesla building up to prepare for delivery, it will not be long before 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.



Boot space oddity

The new Hyundai Kona Electric is the electric car I want right now because it ticks all the boxes, but doesn't try to lure your cognitive self into a realm of fantasy and potential potentials – which I hate.

When considering an electric vehicle, which I properly am able to do, with all the range-analysis, price consideration and pub test criteria the typical buyer needs to process, having any hint of compromise makes you think twice.

The week spent with the Kona Electric, thanks to Hyundai Australia, on top of the day spent driving it on the official media launch, and the early exposure on a whirlwind trip to Auckland in December last year, it's fair to say this small SUV has come under plenty of vetting.



Interior space is on a need-to-take basis

In New Zealand, travelling with a then four-month-old including capsule, bottle bags, nappy bag, backpacks, a baby capsule, four adults and a slab, every inch of available cabin space was fully utilised, including for the intake of oxygen to survive the journey. Impressive how much we crammed in for a 20-minute trip around picturesque Waiheke Island for a lunch akin to a Bond film pre-emptive last-supper with Scaramanga, aka the man with the Golden Gun.

On the launch, with two cases of day-trip luggage for yours truly and a fellow automotive journalist peer, it had no problem swallowing what was expected of it, including a navigator on the windscreen, phones, coffee cups, notepads and laptops, bottles of water and various bits and bobs as the convoy fired across the Adelaide hills, Barossa and returned to the airport. Peachy.

But then. The fog of fantasy lifts and the sobriety of having to perform (what should be) the most basic of transit tasks like moving a child, in a car seat, with pram, with the essential food, nappy and toy bags, and the Postman Pat theme song on repeat while whirring down the freeway amid morons hogging the right lane at five below the limit, motivated by just five broken hours' sleep, simply to visit the in-laws for a three-hour Sunday lunch. The Kona Electric Highlander feels claustrophobic.

The 400-plus range is so good compared with the Ioniq driven last Christmas, it's barely given a second thought, which I didn't.



Days of pinching Tesla electrons are over

And the raw acceleration is so gut-wrenchingly accessible, you start finding excuses to take it a for a fang, and you don't say that very often about an electric car. Hang on, I don't think anybody would think that about their electric car unless it was a Tesla.

Turning 30 during my time with the Kona Electric gave me a chance to really take stock of what this car means in the bigger picture of the automotive game plan, while also being able to show an old petrol-headed mate of mine – who I've known since primary school – just how incredibly enjoyable something so efficient can be.

He's currently looking for something cheap, second-hand and with a V8. Then I got a few minutes to take a blast up the winery driveway on the day a bunch of friends and family came out to acknowledge my being a third of the way to the grave.

Remembering the nausea once felt losing my electric-car virginity to Model S in Ludicrous mode, it was my turn to ensure the Kona could win over Paul.

Needless to say, the roller-coaster sprint then hard regenerative braking application to save slamming the Kona's

Continued on page 6

Boot space oddity

Continued from page 5

suspension against the small but sharp speed humps installed by the winery, convinced him electric cars are awesome.

But anybody near six-foot will find the cramped Kona's interior enough to consider a slightly more commodious Leaf, or when they see the pigeon-hole boot might make them wait for the Kia Niro.

The problem is, as a now sensible, grown-up adult person with responsibilities and practicalities to consider in my quest for the electric car slipper which fits best, the Kona Electric has an aesthetic lure hard to ignore. It's in absolute contradiction to my starting argument.

It's undeniably the best-looking electric car on sale, overriding the mantle I previously gave to Jaguar's I-Pace, it's bloody quick, much to the surprise of M-badges and Mustang drivers, and it's so properly equipped (including heated and cooled seats – like it should be in Australia!) it's easy to ignore the price. Initially.

Maximising that 339-litre boot space would have me sold.

Considering the $60k pricetag and tiny boot, the fact Toyota is still fluffing around with hybrids, Tesla has kicked the Model 3 can down the road for so long, and the Nissan Leaf has been overhyped for the last year, with Hyundai doing as well as it is right now, in a slowing market – is it a missed opportunity?

Nah. I'd still have one. Second-hand. ■

Billions forecast from EVs and AVs

Continued from page 2

also be a key economic benefit, improving GDP by $30b-$46b by 2050. Improved labour productivity and lower insurance costs will account for 87%-89% of this GDP increase.

Other findings in the LEK analysis include the growth of EVs could see the internal combustion engine (ICE) fall to as little as 17% of Australia's car market by 2050, compared with 99% in 2017.

Robot taxis could account for 25%-45% of AVs by 2050, the largest part of the AV sector

"New mobility innovations promise a range of social and environmental advantages, making travel simpler and cheaper, reducing pollution, and cutting road accidents," report author and LEK partner **Mark Streeting** says.

"The analysis suggests there could be measurable economic benefits for Australia from consumers adopting new mobility trends and technologies."

An example is electric car share business Evee, expanding throughout Australia now that the hurdle of "prohibitively" high insurance premiums for the EVs has been overcome.

And its range of EV options will soon increase with the arrival of the first Tesla Model 3 RHD EVs in Australia in August and September.

Evee says that with the costs of car ownership skyrocketing, people are turning to hiring/car-sharing solutions to fulfil their transport needs.

Dealing solely in EVs, including the Tesla range, Evee allows people to reduce their carbon footprint while using the latest in automotive technology.



EVs, like those used by car sharing service Evee, should help Australia's economy

The only platform that offers EVs to rent on your doorstep, Evee connects community-conscious car owners with eco-conscious drivers.

Nowhere else can you rent a Tesla tomorrow and set off on a 5000km journey across the country as one couple has recently done, Evee founder **Slava Kozlovskii** says.

Launching in 2016, Evee's growth was restrained by the hurdle of prohibitively high insurance premiums, he says.

Having now solved the puzzle of how to insure high value cars at an acceptable price, Evee is ready to expand big time, reshaping the face of the Australian car rental market, he adds.

"We have worked hard to achieve a solution that works for everyone. EV owners can recoup the considerable cost of these high value vehicles when not in use," Kozlovskii says.

"While for users it is both a transport solution for the eco-conscious, and a chance to experience the future of automotive transport now."

Evee operates in Sydney, Melbourne, Brisbane, the Gold Coast and Canberra. ■

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Snow business in Audi's 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, New Zealand 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 behind 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 is to the Audi brand. We took the chance to try the model at the local New Zealand launch - they are getting it ahead of us, and a lot of the rest of the world, according to Audi e-tron product manager for Asia, Pacific, Middle East and India, **Dr Brendan Koelher**, who attended the Queenstown launch event.

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

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.

In New Zealand, two models are on offer, at A$140,500 for the 55 Quattro model, and A$148,600 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. Specifications when it makes Australia could be slightly different, however.



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

Continued on page 8

Snow business in Audi's e-tron

Continued from page 7

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.

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 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 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 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 pavement, a lot further than a Model X. A beach or decent access track should be handled with ease. Traction and stability were fine, though 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 equivalent 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 - though 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 brake 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. ■

‘Shaping future transport’ summit theme

Future transport is the focus of the seventh Australian Intelligent Transport Systems Summit 2019 in Melbourne on August 28 and 29.

The summit includes discussion around electric vehicles and charging, connectivity, mobility as a service (MaaS), autonomous vehicles (AVs), vehicle-to-everything (V2X) communication and more.

At least 500 Australian and international ITS and aligned industry professionals from the emerging transport technology sector will attend the summit, which includes an expo and technical tours, such as a visit to a world-first transport technology ecosystem based on Melbourne streets (featuring an AV) and the West Gate tunnel project.

Hosted by ITS Australia, the conference theme is Shaping future transport, with about 18 key national and international speakers sharing insights, experiences, case studies and project updates from around the globe.

They include Lexus Australia chief executive officer **Scott Thompson**, Econolite Group US senior vice-president **Kirk Steudle**, NNG Hungary advanced automotive technology director **Andras Csepinszky**, Ernst & Young global government transport leader **Tony Canavan** and Arup NZ energy and advisory services leader **Elizabeth Halsted**.



Dean Zabrieszach



The Australian ITS Summit is shaping up

The conference will be opened by ITS Australia president and HMI Technologies chief executive officer and conference moderator **Dean Zabrieszach**. Minister of population, cities and urban infrastructure **Alan Tudge** will address the audience shortly after the opening.

An assessment of key road operator actions to support EVs will be provided by Austroads connected and automated vehicles programme manager **John Wall**, and use of Australia’s first ultra-rapid EV charging stations will be explained by Chargefox chief executive officer **Martin Andrews**.

The summit at the Melbourne Convention and Exhibition Centre will also feature an industry trade exhibition involving more than 20 exhibitors showcasing the latest transport technology being developed and deployed.

The next major event on the ITS calendar is the 26th ITS World Congress 2019 in Singapore on October 21-25.

Brisbane will host the 17th Intelligent Transport Systems Asia Pacific Forum in May 2020.

Contact **admin@its-australia.com.au** for more information. ■

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Hybrids hit the high notes

Hybrids continue to do well in Australian vehicle sales, especially in SUVs - like the Toyota RAV4.

Hybrids keeping rising to new levels.

That's shown in the latest VFACTs national figures for July 2019, with the popularity of hybrids in Australia continuing to soar.

Electric and plug-in hybrid (PHEV) vehicles are also on the rise in most new vehicle sales sectors, but not as fast as hybrids.

Petrol power and diesel, on the other hand, are declining in nearly all categories.

The biggest rises for both hybrid and electric/PHEV are in the SUV market.

Here hybrids are up 670 on June to 722 in July in the private sector and up 382 on the previous month to 457 in July (509.3%) in the non-private category.

In 2018, hybrids comprised just 52 for July in the private sector and 75 in the non-private SUV field.

Year-to-date (YTD) figures for hybrids are also well up in the SUV market.

The SUV private hybrid category reached 2431 YTD this year, up 495.8% on the 408 recorded YTD in 2018.

In the non-private sector, hybrid SUV sales were recorded at 1725 YTD, up 186.1% on the 603 in 2018.

Continuing in the SUV categories, electric/PHEV sales got to 80 in the private area in July 2019 compared with just six for July 2018 and 432 YTD against 75 YTD 2018 – up 476% YTD.

The non-private SUV sector saw a rise in July to 61 compared with 23 in July 2018 (165.2%) while YTD figures in that category went from 225 in 2018 to 663 in 2019 – up 194.7%.

In private passenger sales, hybrids topped 624 for July compared with 246 in July 2018 (153.7%) and made 4018 sales YTD this year against 2190 YTD 2018 – up 83.5%.

It is a similar story for non-private passenger sales. Hybrids there climbed from 516 in July 2018 to 1291 in July 2019 – up 150.2%. YTD figures in the same category show a 66% rise from 4409 in 2018 to 7319 in 2019.

By comparison, electric/PHEV vehicle sales in the private passenger category barely lifted in July to 23, compared with 22 in July 2018. And YTD was marginally better, reaching 186 or 19.2% more than the 156 YTD in 2018.

However, hybrid sales in the non-private passenger arena rocketed to 1291 – up 150.2% on the 40 sold in July 2018. And YTD comparisons were good too, hybrids up 66% from 4409 in 2018 to 7319 this year.

In the private passenger sector, hybrids totalled 624 in July 2019 compared with 246 for July 2018 – up 153.7%. On YTD figures, hybrids also scored well, climbing from 2190 in 2018 to 4018 this year - an 83.5% increase.

Light commercial non-private vehicle sales in the electric/PHEV field staggered from one in July 2018 to three in July 2019, and from six YTD in 2018 to 10 so far this year.

Month and YTD declines in petrol and diesel vehicle sales were shown in both passenger categories and the light commercial non-private sector, while a drop in diesels was also recorded in SUVs and light commercial private.

The Federal Chamber of Automotive Industries (FCAI), in releasing the new vehicle sales figures for July 2019, says the downward trend in vehicle sales continues, with a 2.8% overall decrease from July 2018. YTD, the industry reported a drop of 7.7%.



Sales of petrol and diesel vehicles are generally diving in comparison to EVs and hybrids.

While the figures represent a slight slowing of the downward sales trend, the market remains sluggish, FCAI chief executive T**ony Weber** says.

"The July sales figures continue to illustrate the tough market conditions facing the Australian automotive industry, and the sensitive nature of the economy over the past 12 months."

Weber blames tight financial lending, drought, increasing Luxury Car Tax impositions and the federal election for the decline in sales.

NEW VEHICLE SALES BY BUYER TYPE AND FUEL TYPE — JULY 2019

	Month		YTD		Variance +/- Vol. & %			
Total Market	2019	2018	2019	2018	MTH	YTD	MTH	YTD
ELECTRIC								
Passenger Private	23	22	186	156	1	30	4.5%	19.2%
Passenger Non-Private	126	40	279	300	86	-21	215.0%	-7.0%
SUV Private	80	6	432	75	74	357	>999%	476.0%
SUV Non-Private	61	23	663	225	38	438	165.2%	194.7%
Light Commercial Non-Private	3	1	10	6	2	4	200.0%	66.7%
Sub Total	293	92	1,570	762	201	808	218.5%	106.0%
HYBRID								
Passenger Private	624	246	4,018	2,190	378	1,828	153.7%	83.5%
Passenger Non-Private	1,291	516	7,319	4,409	775	2,910	150.2%	66.0%
SUV Private	722	52	2,431	408	670	2,023	>999%	495.8%
SUV Non-Private	457	75	1,725	603	382	1,122	509.3%	186.1%
Sub Total	3,094	889	15,493	7,610	2,205	7,883	248.0%	103.6%
TOTAL	3,387	981	17,063	8,372	2,406	8,691	71.0%	103.8%

Most Kiwis thinking electric

About 74% of New Zealanders would consider buying an electric vehicle, a Trade Me survey shows.

More than 1300 Kiwis participated in the survey which looked at their perceptions of EVs, Trade Me Motors head **Alan Clark** says.

"We were keen to see how much EVs had come on to the radar of petrolhead New Zealand," he says.

"We were stunned to find out that nearly three-in-four New Zealanders would consider an EV for their next vehicle."

Clark says Kiwis have recently warmed up to EVs.

"Just last year we asked Kiwi motorists the same question and only half of respondents said they'd look at an EV for their next vehicle. That is a huge shift in mindset in just 12 months."

Clark says more New Zealanders are likely to make the switch in the near future with climate change top of mind for many people, a range of new models on the market, rising fuel costs and the government's proposed new plan to subsidise EVs.

But Clark says the initial outlay for an EV is the biggest deterrent for New Zealanders, with 69% claiming purchase cost as the top reason why they haven't already switched.

The average cost for an EV on Trade Me in June was about NZ$25,000, while the average petrol/diesel car was just $16,000.

Other concerns included range (54%) and battery life (46%).

Clark says that despite the leaps and bounds EVs have made, Kiwis are still more likely to buy a petrol vehicle than any other.

"While three-quarters of respondents said they would consider an EV, when the rubber hits the road, they are most likely to buy a petrol vehicle next.

"Cost is, of course, a motivating factor to New Zealand consumers. While you can pick up a used EV onsite for around NZ$13,000, they don't fit into everyone's budget.

Of the 95,000 vehicles for sale on Trade Me, 1000 of those are electric.

Clark believes the concerns will be overcome by time and technology advancement.

"It will be interesting to see how the Government's proposed subsidy on electric vehicles will impact buying habits. Our survey suggests there's certainly an appetite."


Alan Clark

Trade Me has seen a 34% jump in the number of EVs being added to Kiwis' watchlists compared to last year.

"The number of EVs for sale onsite has also increased, rising 17% on June last year."

Clark says this had been driven by an increase in the number of dealers who are importing and supporting used EVs to offer New Zealanders a wider range.

The survey shows those with a longer commute are more likely to consider an EV.

"Respondents who have a total daily commute of 60 minutes or longer are more likely to think about joining the EV revolution with 80% saying they'd consider it. On the other hand, of those who have a daily commute of 20 minutes or less, 71% would think about an EV for their next vehicle."

Clark says an increasing number of EV chargers around New Zealand and a rise in the amount of used models at a lower price will encourage EV uptake.

Kiwi racer Brendon Hartley goes electric

Racing driver **Brendon Hartley** will join fellow Kiwi **Mitch Evans** in the ABB FIA Formula E championship in the sixth season starting in November.

"Very happy to be joining Geox Dragon team for FIA Formula E season 6," he tweeted.


Brendon Hartley

"I met the team last week and have started testing this week. Good feelings."

Hartley has long been supported by the Giltrap Group.

He was tipped for the Porsche team in the all-electric race series and reports say he remains contracted to them although Porsche selected another driver with electric racing experience.

Hartley says Formula E racing is "completely different from anything I've done before", adding an electric drivetrain provides instant power while the tracks and style of racing are different.

A second driver has yet to be announced for Geox Dragon which finished last in the season gone.

"I am very pleased to have Brendon pilot one of our two entries in season six of the ABB FIA Formula E championship," team owner **Jay Penske** says.

"Brendon is a real racer. He has a unique combination of experience, intellect, and racecraft that will allow him to maximise the potential of the new Penske EV-4 powertrain.

"Most importantly, he shares our hunger, and our determination to take the fight to the incredible field of major manufacturers this season."

Hartley will also be racing for Toyota in the World Endurance Championship.

Mitch Evans will continue driving for the Panasonic Jaguar Racing team, while brother **Simon** is expected back in the support series Jaguar I-Pace eTrophy events.

The 2019-20 Formula E season starts in Saudi Arabia on November 22.

Feebate debate at EVworld NZ

Feedback from the "cutting edge" of the EV industry is wanted on the Government's Clean Car proposals, which includes a feebate scheme, associated transport minister **Julie Anne Genter** told about 200 delegates at the EVworld NZ conference in Auckland on August 1.

The scheme comprises 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.

Explaining the proposals, Genter didn't reveal anything new, calling for submissions before they close on August 20.

She wants to see the feebate system whereby low to zero emission vehicles receive a discount and polluting vehicles pay a fee introduced as soon as possible after consultation.

Arriving at the ASB Showgrounds from Auckland Airport in a Tesla, Genter says New Zealand is being offered less fuel-efficient vehicles of some models; so the country needs an emissions standard in place.

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.

Genter sees an opportunity for solar and micro-generation combined with battery storage to help power EVs and she indicates the Government's fleet is also moving to low emission vehicles.

She stayed for a while to hear keynote speaker **Jakob Lagercrantz** of the Swedish National 2030-Sekretariatet (a "coalition of the willing" providing independent advice on all transport) describe his country's similar feebate system called Bonus Malus after a year in force.

Calling it a Robin Hood system where "the dirty guys pay for the clean guys", Lagercrantz says a feebate scheme needs to be combined with road taxes.



Jakob Lagercrantz

Under Sweden's scheme, about 100 EVs a month brought into Sweden were being exported to Norway, something Lagercrantz says needs to be worked on.

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.

Lagercrantz lives on a farm 400km from Stockholm and drives a Tesla, generating about 12,000kW a year from solar panels on his barn roof

He urges New Zealand to set a national policy, adding that while in the land of the Lord of the Rings it shouldn't just be "one policy to bind them all" but take into account a fuel policy, taxes and more.

The EVworld NZ expo and conference from August 1-3 attracted about 4300 people to the ASB Showgrounds. ■

Auckland set for world's first all-electric tug

New Zealand's Ports of Auckland has signed a contract with Dutch company Damen Shipyards to buy the world's first full-size, fully electric port tug.

The new tug, a Damen RSD-E Tug 2513, will have a 70-tonne bollard pull, the same as the port's strongest diesel tug Hauraki, also built by Damen. It will be delivered in 2021.

Ports of Auckland chief executive **Tony Gibson** says it is part of the goal of being zero emission by 2040.

"We set this goal because we recognise that urgent action is needed on climate change, and we wanted to be part of the solution. However, setting that goal created a tough challenge. We have a lot of heavy equipment, like tugs, and in 2016 there were no zero emission options."

Ports of Auckland engineering and general wharf operations general manager **Allan D'Souza** says a lot of persistence was needed.

"When we first looked into buying an electric tug in 2016, there was nothing on the market.

"We talked to several manufacturers about building a battery powered tug. They told us we were dreaming. Hybrid tugs were possible, they said, but not battery. No way.

Gibson praised D'Souza and the team for pushing through with the idea.

"Luckily for us Allan doesn't give up. He and marine technical superintendent **Rob Willighagen** kept talking to manufacturers, kept suggesting ways to solve problems, and they found a partner willing to take on the challenge - Damen Shipyards.

"I would like to acknowledge Damen for their work on this project since 2016. They have invested a significant amount of time and money to develop this innovative vessel. In the fight against climate change, partnerships are important, and Damen have been a great partner," he says.



Gibson says it was important a new electric tug should be able to carry out normal port operations, just like its existing diesel tugs.

"Our new e-tug will be able to do three to four shipping moves on a full charge, or around three to four hours work. A fast charge will take about two hours. This is just what we need. ■

EV Charging Infrastructure

