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EV talk

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MORE E-MOBILITY IN POST COVID-19 WORLD

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MORE E-MOBILITY IN POST COVID-19 WORLD

Post COVID-19 won't be the same world – it needs to be cleaner and greener with more e-mobility.

So says Electric Vehicle Council Australia chief executive **Behyad Jafari**, working from home and reflecting on the future during the pandemic.

"Let's not go back to fossil fuels and internal combustion engines (ICE) – we should be moving more to electric instead," he says.

Like many others, Jafari is using the pandemic restrictions to catch up on work, adding it's a time for reflection and a chance to look to the future amid the need to revitalise the economy and jobs.

"We have to ensure the wheels keep turning on these issues," he says, adding the EVC is continuing talks and workshops with governments and agencies – though on-line and through other remote means such as webinars.

It's also a time to get policies sorted so countries like Australia are ready for a brave new (EV) world once the pandemic is over, Jafari believes.

"We're working with governments about what the rebuild should focus on," he says. "E-mobility will be the future."

Jafari believes we cannot go back to our old, polluting ways.

He points to one of the pandemic's benefits – cleaner air and water because of reduced traffic and industry – as an example.

For Australia, bushfires and other disasters – and now COVID-19 – have made people more appreciative of the world around us and the privileges we have, Jafari says.

"A post COVID-19 world won't be the same as before. Lessons learned have to be continued."

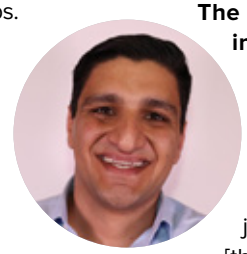
Jafari says doing things the same as before the pandemic need to change – especially around fossil fuels.

"EVs and the environment will be the top of most discussions. In Australia it doesn't have to be the same as before – new policies are needed, governments, fleets and transport operators who were interested before now have to get on with the job."

People are doing things differently now and getting new ideas, he says.

The EVC is putting information packs together to present to governments and agencies to help them prepare for a more electric focused world, including providing incentives and ensuring buildings are "EV ready".

Jafari says the EVC is talking with state governments like that in New South Wales which is considering EV incentives and has assured the EVC it is not looking at taxing EVs in the short term despite some media reports to the contrary.



Behyad Jafari

The EVC aims to foster investment in the EV-related sector, Jafari saying keen private investor interest is already apparent.

"We're helping promote sector investment. A lot of jobs and money is being lost [through the pandemic] so we're looking at how we can help."

Jafari says the EVC is also talking with federal government representatives about what can be done "once the COVID-19 dust settles to get the economy back roaring again".

He notes the general conversation about EVs has moved on from their initial cost to more about EVs' benefits, particularly around the environment.

COVID-19 restrictions for Jafari mean no travelling the way he used to. He would attend conferences and events throughout Australia and New Zealand before, booking up a lot of air travel.

Working from home means he saves considerable time in not travelling between such events – time he can devote more to research, policies, providing information and the like, although he admits missing the face-to-face personal contact with people.

Jafari has no doubt the world will be a changed place once the pandemic is over, although he agrees there may be more global emergencies in the future.

"There's no such thing as going back to our normal lives. EVs are here and we have to use tech far better."

SAVVY SOLAR USER SET TO SAVE $7000 DRIVING ON SUNSHINE

Small business owner Garth James has slashed his monthly fuel bill by 97% through turning to sunshine to power his new Mitsubishi Outlander plug-in hybrid (PHEV).

James expects to save an extra $7000 over a year after he installed SolarEdge's newly launched world-first two-in-one solar inverter and EV charger at his Adelaide office.

Since September, James has travelled 10,000km on just $20 a month, topping up his car battery from the sun between home and business trips as part of a six-month trial by SolarEdge.

"I've gone from spending $600 a month on fuel to basically driving just on sunshine," he says.

"And really anyone can do it with advances in technology like this [combined inverter and charger]. I also have solar panels at work because of my business [Go4Solar and Electrical], but people could do this from home during the day or on weekends."

Distributing power through the two-in-one solar inverter has also returned a feed-in tariff credit of between $40 and $80 a month.

James says a projected saving of $7000 a year on fuel alone would reduce the pay-back period on his car, which as a PHEV was a cheaper option than a full-battery EV model.

"It's even more cost effective for businesses that have company cars that are GST exempt. I don't know why more people aren't making the switch - it just makes sense from a financial and environmental perspective."

SolarEdge Australia managing director **Gavin Merchant** says the company has fielded strong interest in its two-in-one EV charger and solar inverter since its release announcement late last year.

The combined unit charges up to four times faster than typical chargers through a solar boost mode that allows simultaneous charging from grid and solar power from the inbuilt solar inverter.


Garth James


The SolarEdge charger

Merchant says the trial proves motorists can effectively charge their EV from the sun rather than the grid, slashing thousands of dollars from household budgets in the process.

"Surveys show 80% of EV owners charge their cars at home. Homeowners now have the option to install a solar system that directly allows them to charge their EV from the sun for free," he says.

"Garth is a great example of how households can save thousands in fuel costs and still generate enough excess energy to shave hundreds of dollars from their power bill – savings that could be better put towards a mortgage or a nice family holiday."

The two-in-one charger and inverter are compatible with multiple EVs and integrates with the SolarEdge monitoring platform, allowing users to control and track charging status and set charging schedules to take advantage of off-peak rates, all at the touch of their smart device.

The two-in-one EV charger and solar inverter, created by global smart energy technology company SolarEdge, is the first of its kind to offer dual charging, allowing motorists to simultaneously charge from the grid and stored solar energy, slashing typical EV charging times.

Merchant says the integrated inverter had the potential to advance the EV market, predicted to overtake petrol and diesel new car sales in the next five to 10 years.

Benefits to motorists include faster charging and travel turnaround times, greater flexibility, charging with solar, grid power, or both (solar boost); grid independence; better grid reliability at peak times, with more EV owners charging with solar; and cheaper power bills and reduced carbon emissions.

The inverter was unveiled at the All Energy Australia conference in Melbourne on October 23-24, 2019.

ADELAIDE AIRPORT PLANS ALL-ELECTRIC BUS FLEET

A fully electric bus fleet could be introduced to Adelaide Airport by as early as next year – the first Australian airport to do so.

That coincides with Adelaide Airport's appointment of Australia's leading airport transit business, SkyBus, owned by Kinetic, as the new operator of its airside and landside shuttle buses from April for the next five years following a competitive tender process.

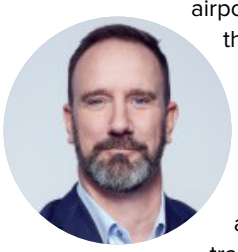
SkyBus connects more than five million passengers with airports annually across Australia and New Zealand with its iconic red vehicles, and provides substantial carpark and airside busing services to Melbourne and Auckland airports.

The next generation vehicles will be supplied by Adelaide's Precision Buses, which brought to market Australia's first operational electric urban bus.

E-buses are expected to replace the existing fleet by early 2021.

"SkyBus has a long and successful track record partnering with major airports across Australasia to deliver market leading transit options and we are excited about Adelaide Airport's appetite for innovation and what will be an exciting future for the airport," Kinetic co-chief executive **Adam Begg** says.

Airport finance and corporate executive general manager **Brenton Cox** says the airport processes more than eight million passengers annually and strives for innovative solutions and continuous improvements in all areas, including bus transport.



Adam Begg

Kinetic has meanwhile welcomed New Zealand bus operator Go Bus to the group, adding the acquisition is a milestone announcement for the company.

Go Bus has 29 depots and more than 1700 vehicles operating from Auckland to Invercargill, the transaction expected to be completed mid-2020.



Adelaide Airport



Kinetic-owned SkyBus has services across Australia and New Zealand

It also helped with trials for the Auckland Transport AT Local EV rideshare service on the North Shore.

The company, which includes tour and charter services division Johnston's Coachlines, joins Kinetic's growing mass transit platform that includes Queensland bus operators Surfside Buslines and Sunbus, Sydney's bus and coach charter company Telford's, and airport transit business Skybus (Australia and New Zealand).

Kinetic's collective brands will move more than 50 million people throughout Australasia every year and will be the "largest mass transit bus operator in the region with 2800 buses, 49 depots and more than 4000 people", the company states, yet given recent global COVID-19 coronavirus developments it is hopeful such numbers will still be realised.

Kinetic is majority owned by Optrust, one of Canada's largest defined benefit pension plans.

EVS ON SUBSCRIPTION

EVs are now available for subscription in Australia through **Blinker.com.au,** in what's described as an Australian first.

The launch will see Australians being able to drive hybrid and electric cars without the added costs that come with purchasing a car outright.

With the subscription service, customers now have access to EVs through a weekly payment, with registration, insurance and maintenance costs taken care of by the dealership.

The company already has dealer partners on board with electric cars available for subscribers, and the Blinker car subscription software integrated on to their websites. So, customers can subscribe to EVs either online or by visiting their nearest dealership.

EVs and car subscription go hand in hand, with both rapidly gaining popularity and signalling the future of the automotive industry, Blinker managing director **Michael Higgins** says.

"In Australia, sales in both hybrid and electric cars have almost doubled year on year, and we're expecting electric cars to grow to become the most in-demand vehicle category for subscription," he says.

"We want to remain on the forefront of this transformational period for the car industry, so it was a natural next step for us to make electric vehicles more accessible for Australian drivers."

EVs have been on the rise as more people move towards a sustainable lifestyle.

Their adoption removes the need for fossil fuels, using batteries for power, ultimately reducing the impact of greenhouse gases and pollution on the environment.

"As a business, we are constantly finding ways to be more responsible and offering electric cars contributes to this while also providing the perfect alternative for consumers who are passionate about sustainability," Higgins says.

"With car subscription, customers typically only cover their weekly payment and the cost of fuel, but with electric vehicles there are no fuel costs to consider, making subscription an even more affordable prospect."


Paul, left, and Michael Higgins

Brothers Michael and **Paul Higgins** launched HelloCars in 2015 as Australia's first online-only car dealership, buying and selling second-hand cars.

In early 2019, HelloCars launched its subscription service, demand not only coming from consumers but from fellow dealerships which wanted to offer their own subscription service.

Through Sydney-based Blinker, the award-winning car subscription platform developed in-house for HelloCars, subscription is available to car dealerships as a complete end-to-end solution for subscribing and managing a vehicle fleet. ■

EV RENTAL ADVICE FOR COVID-19

Increased flexibility around cancellation and rescheduling policies to accommodate customers will be provided by Australian electric car rental service Evee during the COVID-19 pandemic.

The Sydney-based EV carshare company says its focusing efforts to continue supporting the community through this difficult time.

"In the context of the COVID-19, many international visitors are uncertain about making travel plans, or are forced to cancel their bookings due to travel bans," Evee says.

"We are providing increased flexibility around our cancellation and reschedule policies to help our customers with their travel decisions. This currently applies to bookings starting before April 30 2020. We will then reassess the situation."

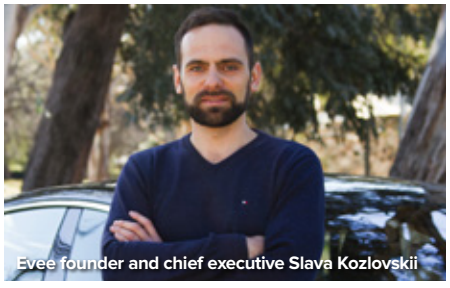
Evee says it's also closely following health authorities' advice and updating its team and community as that comes to hand.

"The car rental process does not contravene the preventative guidelines provided by the Australian health authorities," the company adds while offering advice on reducing virus transmission risk.

For owners, these include ensuring the car's interior is well sanitised, particularly the touch screen, steering wheel, driving and indicator stalks, door handles, window openers and the rear-view mirror.

"Provide complimentary tissues, hand sanitiser and wipes where available to remain in the vehicle for renters and owners to use before and after rentals."

Evee suggests the vehicle's touch screen should be on "clean mode" before every hand over, and it encourages owners to stay 1.5 metres away from renters where possible.


Evee founder and chief executive Slava Kozlovskii

For renters, advice includes wiping frequently touched surfaces after every use, disposing of used tissues and wipes as soon as possible and wiping all surfaces again immediately.

Evee advises any customers concerned about their symptoms to call their doctor, notify Evee as soon as possible and to follow health protocols. ■

EVtalk

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SUPPORT FOR DEALER CUSTOMERS FROM CARSALES

All fixed and variable advertising fees for April will be waived by carsales to support Australia's car, bike, boat, truck, RV and machinery dealers.

The company says the move will contribute to reducing dealers' short-term operating costs and help them through this challenging period.

A provider of electric vehicles as well, carsales has informed its dealer customers of the initiative.

The fee-free period will comprise all of April 2020 and, carsales will also allow its customers to defer payment of their March advertising costs by 30 days.

"Australian businesses big and small are facing significant challenges and restrictions during this period," carsales chief executive **Cameron McIntyre** says.

"We are committed to supporting our dealer customers – our fee waiver and payment deferral will substantially assist dealers in maintaining an active presence in the marketplace during this challenging period.

"Customer service remains a priority and carsales' consumer and dealers support teams are on hand to assist. Our team is also creating updates and advice specifically created to assist both consumers and industry.

In addition to waiving all charges in April, carsales will encourage dealers to use new services such as video ads that provides dealers with the opportunity to create a virtual showroom experience for consumers.

It will also provide dealers with enhanced customer insights during the period and its Employee Assistance Program services will also be extended to its dealer customers during this difficult period. The program includes counselling and a range of personal assistance services.



Cameron McIntyre

"In this challenging period, our thoughts are with our dealer partners and their teams both here in Australia and in all of our international markets," McIntyre says.

The fee-free period will comprise all of April 2020 and, carsales will also allow its customers to defer payment of their March advertising costs by 30 days.

"This is a very serious situation for the wider region but we're approaching it with clear heads and in the knowledge that the Australian economy and business fundamentals, while acutely challenged, will begin to recover at some stage over the coming months," he says.

"Customer service remains a priority and carsales' consumer and dealers support teams are on hand to assist. Our team is also creating updates and advice specifically created to assist both consumers and industry.

"Carsales has implemented these measures to support our customers, given they are key stakeholders of our business and have supported us over the last 20 years," McIntyre says.

"We have a strong balance sheet and prudent gearing, which positions us well to provide this support and deal with this challenging environment." ■

CLEANING YOUR STEERING WHEEL IS IMPORTANT

Your steering wheel, charging cable handles and other most touched parts of your EV and charging infrastructure should be sanitised both before and after use.

That's the advice doing the rounds in the COVID-19 pandemic environment, presuming your EV isn't just parked up for any lockdown situation and you use public charging stations – ensuring you wipe the most handled bits of the latter too.

Cleaning suggestions include using a fresh cloth or disposable wipes each time to avoid cross contamination, using an appropriate cleaning solution for the surface to be disinfected and closely following the instructions.

Wear disposable gloves or at least wash your hands thoroughly before and after, even if wearing gloves.

Hot, soapy water is best for many surfaces (other than electrical, including EV charging stations), or use a spray solution containing at least 60% alcohol, a 0.5% hydrogen peroxide bleach or standard household bleach which has more than 0.1% sodium hypochlorite. Use a household cleaner if there's nothing else – but check whether any of these are suitable for the surface intended and to see whether they say they are anti-viral.

For the more organically minded, vinegar (5% acetic acid) is known to kill viruses and can be diluted slightly with hot water for best results.

Coronaviruses may survive on many surfaces for anything from a couple of hours to about a week – the latter especially so for hard plastics and steel.

But health experts say the COVID-19 virus is easy to kill on surfaces with proper disinfection.

Key suggestions include wiping frequently touched (by others) surfaces with soap and hot water then using a diluted bleach, vinegar or other similar cleaner, wearing disposable gloves, correctly washing hands often, and cleaning smartphones or other devices with a dry cloth like the ones used on prescription glasses.



Cleaning your steering wheel is important

And remember to wash your hands properly – again.

ESSENTIAL WORKERS' GET SERVICE PRIORITY AT MITSUBISHI MOTORS DEALERSHIPS

Mitsubishi Motors Australia dealership service centres are prioritising the service and repair of vehicles owned by healthcare and other workers who are involved in providing essential services to the nation.



John Signoriello

The company says it fully supports the government's efforts to protect communities and save lives during the COVID-19 pandemic.

A provider of the popular Mitsubishi Outlander plug-in hybrid (PHEV), the company says essential workers should identify themselves when booking so that dealership staff can fulfil this commitment.

In some dealerships, workshops are also able to offer vehicle collection and drop-off from home or work, if essential workers cannot get to the dealership service area.

Mitsubishi Motors Australia anticipates this will help essential workers to keep their vehicles safe on the roads and support them to maximise downtime between shifts.

"This is a once in a generation event, and we appreciate everything these critical workers are doing to protect our communities. Service and repair work is essential to keeping them safe on the road as they take on this huge task," Mitsubishi Motors Australia chief executive officer **John Signoriello** says.

"In the past few weeks, my colleagues who have family members working in healthcare or government response roles have told me they are working long shifts to manage the demands on their services.

"They are working terrifically hard. If we can do something to offer some peace-of-mind, and maximise their downtime between shifts – we should, and we will."



Paul Wakeling Mitsubishi in Campbelltown, NSW

Signoriello is meanwhile relocating from Adelaide to Tokyo to become global head of sales and marketing as part of a senior management reshuffle across the Japanese auto giant and its alliance partner Nissan.

Mitsubishi Motors Australia aftersales deputy director **Shaun Westcott** becomes chief executive of the Australian subsidiary.

The changes at the Renault-Nissan-Mitsubishi Alliance follow the **Carlos Ghosn** era.



COX AUTOMOTIVE LAUNCHES COVID-19 DEALER ASSISTANCE PROGRAM

Recognising that the next couple of months are going to be tough for the motor vehicle industry, Cox Automotive Retail Solutions is launching a COVID-19 dealer assistance programme.

The Cox Automotive Retail Solutions business in Australia comprises Dealer Solutions, Digipurple and Kelley Blue Book. The company has looked across its product portfolio to offer dealers assistance to reduce costs and help sell cars.

"We mean it when we say we are here to help. We will continue to work hard to help the industry get through this impact and we are still working on other ways we can help so stay tuned. We value your partnership and we will stand with you to get through this stronger," Cox Automotive Retail Solutions chief executive officer **Michael Sommerton** says.

"If you don't have a Dealer Solutions modular website and would like to access these tools, you can switch to us and we will waive all setup costs and get your new website live asap," he says.

For the months of April and May 2020, Cox Automotive Retail Solutions, together with Autotrader will also provide the following assistance packages to help dealers through this time.

All dealer data distribution charges will be discounted by 25%. This will apply to the April and May invoices automatically.

Digital advertising agency, Digipurple will help dealers communicate and engage with customers with campaigns designed to drive contactless online and phone interactions.

"We have several dealer groups who have already changed their strategy to new campaigns designed around contactless home delivery for service and sales. As well, Dealers are also promoting the new increased ABN tax deduction and other tax benefits," says Sommerton.

Digipurple will be offering:

- 50% discount across all creative fees.
- No cost on any COVID-19 updates on your website.
- 50% off on all campaign management fees.
- All campaign set up fees will be removed.

"We've partnered with Autotrader to bring you 50% off on all listings fees for two months during the April and May 2020. To access this assistance option, please contact your Autotrader account manager.

Full time consulting on the best direct communication and engagement with customers online and over the phone is available.

"We highly recommend continuing digital campaigns to communicate with customers and mitigate service and sales losses," Sommerton says.

"Our professional photography services still continue to visit dealerships taking extra sanitising and social distancing precautions.

If our photographers are unable to visit your dealership and services are suspended we will offer our Mobile Photographer app for free," he says.

Dealer Solutions Photography is offering free access to the Mobile Photographer app and free access to the new car image library. It will be extended for used cars very soon.

Kelley Blue Book is offering free access to MarketLens during April 2020 as well as Lead Driver free for 30 days.

"Our Lead Driver product does exactly as the name suggests – it allows customers visiting your website to obtain a valuation for their car using Kelley Blue Book data. It is a valuable way for dealers to collect customer data for leads," Sommerton says.

Online deposits in partnership with PayPal will be free for 30 days.

"Our partnership with PayPal allows for online deposits to be taken directly on your website. Dealers can use this function to help drive online sales," Sommerton says.

"We've partnered with Autotrader to bring you 50% off on all listings fees for two months during the April and May 2020. To access this assistance option, please contact your Autotrader account manager.

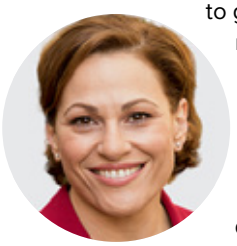
"This will provide you with an ongoing presence on Autotrader and CarsGuide, along with free placement on Facebook Marketplace, providing access to chat, SMS, phone, email and walk-in enquiry. With all of our listings capped, if your inventory takes longer to sell, there is no charge beyond the cap," he says.

QUEENSLANDERS GET NEW RENEWABLE ENERGY

Queenslanders now own their first new renewable energy generation in 20 years.

Publicly owned generator CleanCo is building a wind farm near Warwick as part of a precinct supplying up to nearly 700,000 homes.

Works are expected to start later this year, construction scheduled to run from mid-2021 to 2024, with the precinct generating its first power from mid-2022.



Jackie Trad

CleanCo's publicly owned wind farm will be part of the 1026MW MacIntyre Wind Farm Precinct on the Southern Downs, deputy premier and treasurer **Jackie Trad** says.

"For the next few months, the entire focus of the Queensland Government is on protecting Queenslanders' health, jobs and businesses," she says.

"But when we move into the recovery phase, we need shovel-ready projects that will support more jobs in more industries, especially in regional Queensland.

"This is what CleanCo is all about - building, owning and operating a wind farm of 18 turbines with the capacity to generate up to 100MW of new renewable energy," Trad adds.

CleanCo will also buy another 400MW of new renewable energy from Acciona.

"CleanCo's involvement in the MacIntyre Precinct has nearly doubled the size and capacity of the wind farm.

Queenslanders are set to benefit from the addition of more than one gigawatt of new renewable energy to our electricity network—the equivalent to powering almost 700,000 homes," Trad adds.

Energy minister **Dr Anthony Lynham** says the project will mean jobs and business opportunities across the Southern Downs and Darling Downs.

"As one of the largest onshore wind farms in the southern hemisphere, the MacIntyre Precinct will have far reaching and long lasting social and economic benefits locally, and for the whole state," he says.

"The local spend on the Downs is forecast to be more than $500 million during construction."

The 1026MW wind farm project is expected to be progressively connected to the statewide energy grid from 2022, with 64km of new powerlines connecting the wind farm to Queensland's electricity network at Millmerran.

Acciona Australia Energy managing director **Brett Wickham** says a Community Enhancement Program will be established to deliver added value to the local community.

"The project is scheduled to begin construction in mid-2021, with a gradual start-up in phases to ensure connection to the grid with full technical guarantees for the state's electricity system," he says.

"The entire MacIntyre complex will be operational in 2024."

EMOJIS PROMOTE EVS

EV and charging station emojis on every smartphone and instant messenger is what a Polish organisation developing the electromobility market proposes.

The Polish Alternative Fuels Association (PSPA) has submitted pictograms to the Unicode Consortium - an organisation responsible for standardising signage - to promote global zero-emission mobility.

Emojis are used daily by billions of people, the PSPA team says.

"Simple pictograms help to quickly convey content or emotions. We like to put them in Messenger or WhatsApp messages, as well as in text messages, emails, and social media posts.

"Most platforms such as Apple, Google, Microsoft, Facebook, and Samsung use emojis. They are divided into various categories of symbols, such as facial expressions, objects, places, animals, vehicles, and activities."

"The new pictograms will enable us to easily emphasise our support for zero-emission technologies in transport," European Association for Electromobility (AVERE) vice-president and PSPA managing director **Maciej Mazur** says.

"They will also express our social responsibility and concern for the natural environment."

Innovative technologies can help fight climate change, provided that people use them on an appropriate scale, the PSPA adds.

"To do so, they need to be popularised and promoted, which is the aim behind our initiative of submitting to Unicode the emojis of an electric vehicle and charging station."

PSPA operations director **Łukasz Witkowski** says if the emojis make it through the verification process they will become available to more than 3.5 billion smartphone users and more than 4.5 billion Internet users worldwide.

"Once they have been positively verified, the new emojis can be expected to become available along with the introduction of Unicode 14.0.

"So, the ideograms denoting an electric vehicle and charging station are likely to be part of the Unicode repository and become available to users in the second half of 2021."



EV emoji



EV charging station emoji



HOW ROADS WILL LOOK BY 2050

In 30 years a lot of new technology will be on our roads, improving daily commutes and the environment too.

Car leasing service Leasing Options has pulled all technologies being developed today into one scene to show how roads may look by 2050, using London's iconic Piccadilly Circus as an example.

Companies are creating new modes of transportation to get commuters from mass-transit stations to their final destinations.

Electric micro-vehicles will be kept at "last-kilometre stations" (1) and will protect users from the elements, not require a driving licence to operate.

VeloMetro is working on this technology and has already publicly launched a pilot fleet serving student and staff at the University of British Columbia.

Its Veemo is the first one-way sharing network of three-wheeled, electric-assisted vehicles in the world, and the company hopes to expand to the Vancouver urban core soon.

Large delivery companies such as Amazon and UPS are already working on delivering packages via drones (2), expected to dramatically reduce trucks on the road. Amazon has set-up Prime Air, a service that delivers packages up to 2.2kg in 30 minutes or less.

Companies like Zipline deliver vaccines and other medical supplies by air using more plane-like drones.

A shift from private to shared autonomous vehicles (AVs) could reduce parking demands by 50%, but to do this shared vehicles (3) will require special parking facilities with electric charging stations and vehicle cleaning services, the Victoria Transport Policy Institute says.

AVs are unlikely to return home, owners expected to want their vehicle nearby, again resulting in somewhere to house them.

Sensors (4) will be in everything, everywhere.

They'll be embedded in vehicles, buildings, traffic lights and roads, which will provide real-time traffic flow and usage patterns, preventing accidents. Analysts predict there'll be more than 21 billion things connected by sensors by 2050.

Transportation will go from fixed routes and timed schedules, to one where the number of trains, buses, ferries and more available will depend on user demand due to connected devices and Big Data (5).

That could improve operational efficiency and reduce waiting times and crowding at peak times. Trials of the new on-demand system including Arrivaclick from one of the UK's leading bus companies Arriva in Leicester, Liverpool and Watford. Pickmeup in Oxford from Oxford Bus Company and Slide in Bristol are among others.

These services allow customers to tell the companies where they want to be picked up via an app. Riders then pick customers up from 'virtual bus stops' the intelligent software works out the best way to take riders and other passengers to chosen destinations.

Companies are testing solar panel roads (6) to generate energy for power grids or to charge EVs while driving.

They will also likely power road-side signs, speed cameras and streetlights.

Some experts believe if roads are converted from tarmac to solar panels enough sunlight could be absorbed to power entire cities.

Israeli start-up Electreon specialises in enabling EVs to be charged while on the road. Its goal is to initially electrify urban bus and shuttle routes to clean Israel's city air and reduce the country's dependence on oil.

Self-repairing or "self-healing" roads (7) are being studied by researchers at Cambridge, Bath and Cardiff Universities. A material can be applied to roads, eliminating potholes and cracks. Today's roads have a 20-40-year lifespan but this new technology could see that doubled to 80 years.

Epion Asphalt has healing technologies extending pavement service life by 50-100%.

EV use could reduce carbon pollution by 550 million tonnes annually by 2050. That's the equivalent to the emissions from 100 million of today's passenger cars, says a study from the US-based Natural Resource Defense Council and the Electric Power Research Institute.

As a result, EV charging points (8) will be more widespread.

HYBRIDS AND EVS CLIMB WHILE FOSSIL FUELS FALL



It's more of the same in the March VFACTS figures with electric vehicles (EVs) and hybrids continuing to set the pace while petrol and diesel vehicle sales generally dive.

The trend has been continuing for some time with EV, plug-in hybrid (PHEV) and hybrid sales still soaring at the expense of internal combustion engine (ICE) vehicles in vehicle sales figures released by the Federal Chamber of Automotive Industries (FCAI).

Hybrids take the lead in numbers among the two sectors, recording more than 1000 in most segments and just under in one.

"The Australian new vehicle market has now seen a downturn each month for the past 24 months," FCAI chief executive **Tony Weber** says.

Weber doesn't mention the EV, PHEV and hybrid results but the FCAI blames coronavirus (COVID-19) concerns, bushfires, droughts, floods, political and financial uncertainty and more for the adverse impacts on consumer confidence contributing to the difficult Australian market.

He says that despite the difficult conditions numerous automotive dealerships around Australia remained open to maintain support for customers, particularly first responder and essential

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NEW VEHICLE SALES BY BUYER TYPE AND FUEL TYPE MARCH 2020

	Month		YTD		Variance +/- Vol. & %			
Total Market	2019	2018	2019	2018	MTH	YTD	MTH	YTD
ELECTRIC								
Passenger Private	44	23	124	101	21	23	91.3%	22.8%
Passenger Non-Private	51	29	181	66	22	115	75.9%	174.2%
SUV Private	112	69	236	127	43	109	62.3%	85.8%
SUV Non-Private	86	355	196	425	-269	-229	-75.8%	-53.9%
Light Commercial Non-Private	0	2	10	5	-2	5	-100.0%	100.0%
Sub Total	293	478	747	724	-185	23	-38.7%	3.2%
HYBRID								
Passenger Private	1,001	576	2,848	1,677	425	1,171	73.8%	69.8%
Passenger Non-Private	1,455	829	3,907	2,746	626	1,161	75.5%	42.3%
SUV Private	1,284	74	3,725	213	1,210	3,512	>999%	>999%
SUV Non-Private	909	62	2,498	173	847	2,325	>999%	>999%
Sub Total	4,649	1,541	12,978	4,809	3,108	8,169	201.7%	169.9%
TOTAL	4,942	2,019	13,725	5,533	2,923	8,192	144.8%	148.1%



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services vehicles.
"In addition, we need to ensure those who physically attend their workplace can travel safely. The motor vehicle is a safe form of transport during the pandemic, allowing occupants to preserve their personal distance from other commuters.
In March, both EVs/PHEVs and hybrids are well up in most categories.
Hybrids take the lead in numbers among the two sectors, recording more than 1000 in most segments and just under in one.
For the private passenger category, hybrids reach 1001 up 73.8% compared with March 2019 (576), then get to 1455 (up 75.5% or 626) in the monthly comparisons for the non-private passenger market.

The biggest rises for hybrids come in the SUV private and non-private areas – jumping more than 999% in monthly and year-to-date (YTD) comparisons. They reached 1284 in the private SUV sector – up 1210 from 74 in the monthly comparisons and got to 909 in the non-private sector – up 847 in March 2020 from 62 in March 2019.
That also saw YTD totals rocket to 3725 and 2498 in the respective categories – both well over 999% increases.
Electric/PHEV vehicles continue to make good ground too.
These rose to 44 (up 91.3%) in March 2020 in the private passenger market and 51 (up 75.9%) in the non-private category.

"The Australian new vehicle market has now seen a downturn each month for the past 24 months," FCAI chief executive Tony Weber says.

Adoption for this segment in the SUV categories was much lower, reaching 112 (62.3% up on March 2019) in the private market and dropping to 86 (down 75.8%) in the non-private SUV sector.
However, both EV/PHEV and hybrid market sectors continue to make ground on their fossil fuel counterparts.

NEW VEHICLE SALES BY BUYER TYPE AND FUEL TYPE					FEBRUARY 2020			
	Month		YTD		Variance +/- Vol. & %			
Total Market	2019	2018	2019	2018	MTH	YTD	MTH	YTD
ELECTRIC								
Passenger Private	46	56	80	78	-10	2	-17.9%	2.6%
Passenger Non-Private	57	11	130	37	46	93	418.2%	251.4%
SUV Private	73	42	124	58	31	66	73.8%	113.8%
SUV Non-Private	71	41	110	70	30	40	73.2%	57.1%
Light Commercial Non-Private	6	1	10	3	5	7	500.0%	233.3%
Sub Total	253	151	454	246	102	208	67.5%	84.6%
HYBRID								
Passenger Private	994	498	1,847	1,101	496	746	99.6%	67.8%
Passenger Non-Private	1,381	863	2,452	1,917	518	535	60.0%	27.9%
SUV Private	1,539	85	2,441	139	1,454	2,302	>999%	>999%
SUV Non-Private	1,015	57	1,589	111	958	1,478	>999%	>999%
Sub Total	4,929	1,503	8,329	3,268	3,426	5,061	227.9%	154.9%
TOTAL	5,182	1,654	8,783	3,514	3,528	5,269	213.3%	149.9%

MEVO CAR SHARE SEEKS ESSENTIAL STATUS

Wellington-based car share Mevo wants to be considered an essential service during the COVID-19 lockdown.

Mevo chief executive **Erik Zydervelt** is asking cabinet ministers and the NZ Transport Agency to change its non-essential service restrictions, especially as taxis and rideshares like Uber are allowed to continue, including similar services globally.

"While we agree with 99% of what the government has done during the pandemic, this is one area that just doesn't qualify," he says.

"Currently, with ride-hailing and taxis, people are forced to be close to a driver who has been exposed to dozens of others, and sitting less than two metres apart puts everyone involved at risk.

"With Mevo there's no need to be close to anyone else – we're keeping people safe through the service being completely automated and having medical grade UVC sterilisation and cleaning before a customer takes a car."

Zydervelt says for those reasons Mevo is actually safer and should be allowed to continue operating rather than just working with essential health service customers.

Clients use an app to select the vehicle they want – including plug-in hybrids (PHEVs) – from specific Wellington parking areas then returning them to an approved site, so avoiding contact with anyone else.



Erik Zydervelt

Zydervelt says many customers sold their vehicles to use Mevo.

It makes more financial sense to completely shut down, but Mevo has a moral obligation to keep its members safe, he adds.

Zydervelt says if restrictions are placed on car share businesses such as Mevo then all others – including taxis and Uber – should have the same restrictions.

If New Zealand reverts to a level three alert then Mevo could quickly resume while maintaining its high hygiene standards, he says.

He says some "heart-breaking" stories came from customers when they learned Mevo wouldn't be classed an essential service.

"A number of people were relying on us so they could do grocery trips for elderly parents, for instance."

"Some now especially those in the plus-65 high risk group don't feel safe going out to do that and being forced to sit close to a driver who is outside their bubble."

Zydervelt says Mevo was having "exceptional growth" until the restrictions applied and will continue to look at providing the service in Auckland while also introducing 100 battery electric vehicles (BEVs).

Other car share services like zero-emission vehicle company Zilch, which says its cars are only available to essential services and businesses during the lockdown, may also benefit if restrictions are lifted for Mevo.

STEEP IMPROVEMENTS TO AUCKLAND AIR QUALITY - NIWA

The COVID-19 pandemic may have some benefits – Auckland's air quality has dramatically improved since the lockdown.

In less than a week, a steep drop in nitrogen oxide has occurred, particularly in suburban Auckland, NIWA scientists say.



Dr Ian Longley

Such vehicle exhaust pollutants exacerbate asthma and are linked to numerous health impacts, NIWA air quality scientist **Dr Ian Longley** says.

"At the Takapuna monitoring site, close to the Northern Motorway, nitrogen oxide levels at the end of last week were about a third lower than that normally seen during the morning rush hour," he says.

"For the remaining daylight hours they were reduced by up to 80%."

Longley says large fluctuations in air quality can occur between one day and the next due to changes in the weather, with quality generally worse in winter and better in summer.

"This means it can be misleading to compare today's air quality to yesterday's or a few months ago."

To account for this, Longley has compared hourly data to average air quality in the last fortnight of March for the previous five years.

"In Henderson and Glen Eden, monitors reported nitrogen oxides falling effectively to zero on Thursday and Friday afternoons," he says.

"On Queen Street, historically one of the most polluted locations in the country for traffic pollutants, the improvement was smaller but still dramatic with nitrogen oxide falling to half its usual level through most of Thursday."

Longley says reductions in levels of airborne particulate matter have been more modest – for example a 20% drop in fine particles (PM2.5) at Takapuna during daylight hours. This probably reflects that a significant proportion of particles in Auckland's air come from natural sources, especially sea salt.

"Whether these reductions in air pollution are entirely due to the lockdown or are merely reflecting fluctuations in the weather is not yet clear, but will become more obvious over the next couple of weeks."

Routine automated air quality monitoring is done by regional councils.

Longley intends studying data for Wellington and Christchurch shortly.

Meanwhile, any reduction in greenhouse gas emissions will take longer to register.

NIWA researchers monitoring emissions such as carbon dioxide at Baring Head near Wellington say while they expect to see a decrease in observed CO2 levels, most of those changes will be in the northern hemisphere where emissions are concentrated.

KIWI RACING DUO IN COVID-19 LOCKDOWN



Mitch Evans – the two brothers have both won races



Simon Evans


Mitch in action

Electric racing brothers **Mitch** and **Simon Evans** are in covid-19 lockdown on opposite sides of the world.

Mitch (Formula E Panasonic Jaguar Racing) is in self-isolation on Formula E Porsche driver **Andre Lotterer's** property in France, where he has been for the past one-and-a-half weeks after the ABB FIA Formula E current electric racing series was suspended for two months.

Meanwhile, Simon (Jaguar I-Pace eTrophy support race series, Team Asia New Zealand driver) is in lockdown in Auckland where he lives.

The Rome ePrix was to have been held on Saturday April 4 but has been postponed and racing is not expected to resume until May at the earliest.

The brothers are likely to catch up again in Berlin around June 21.

Supported by the Giltrap Group where he works, Simon usually returns home between races except if they are close together in Europe.

He's helping fill in his lockdown time here with PlayStation games – which may include racing.



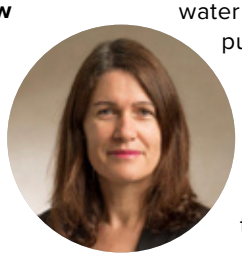
Simon in the Jaguar I-Pace

STATE OF EMERGENCY DECLARED – WHAT'S IT MEAN?

State of emergency declared – what's it mean?

A state of national emergency has been declared across New Zealand to curtail the spread of covid-19.

This allows the Civil Defence emergency management director **Sarah Stuart-Black**, along with national controller **David Coetzee** and local controllers, to direct and coordinate personnel, material and other resources, and provides access to other extra-ordinary powers.


Sarah Stuart-Black

They can, as needed, regulate land, water and air traffic; close roads and public places, exclude people or vehicles from any place, evacuate any premises and conserve fuel, food and other essential supplies.

"Failure of anyone to play their part will put the lives of others at risk, and there will be no tolerance for that," prime minister **Jacinda Ardern** says.

"We do not expect to use the full extent of these measures but, as with everything we have done in response to covid-19, we plan, we prepare, we have in place everything we need to get through.

"For now, I ask that New Zealanders do their part. Stay home, break the chain, save lives."

Police and the military will work together with assistance ready as required.

Ardern says if people don't comply police will remind them of their obligations and can escalate the situation if required, including arresting and detaining people.

EV Charging Infrastructure

