

Market Update

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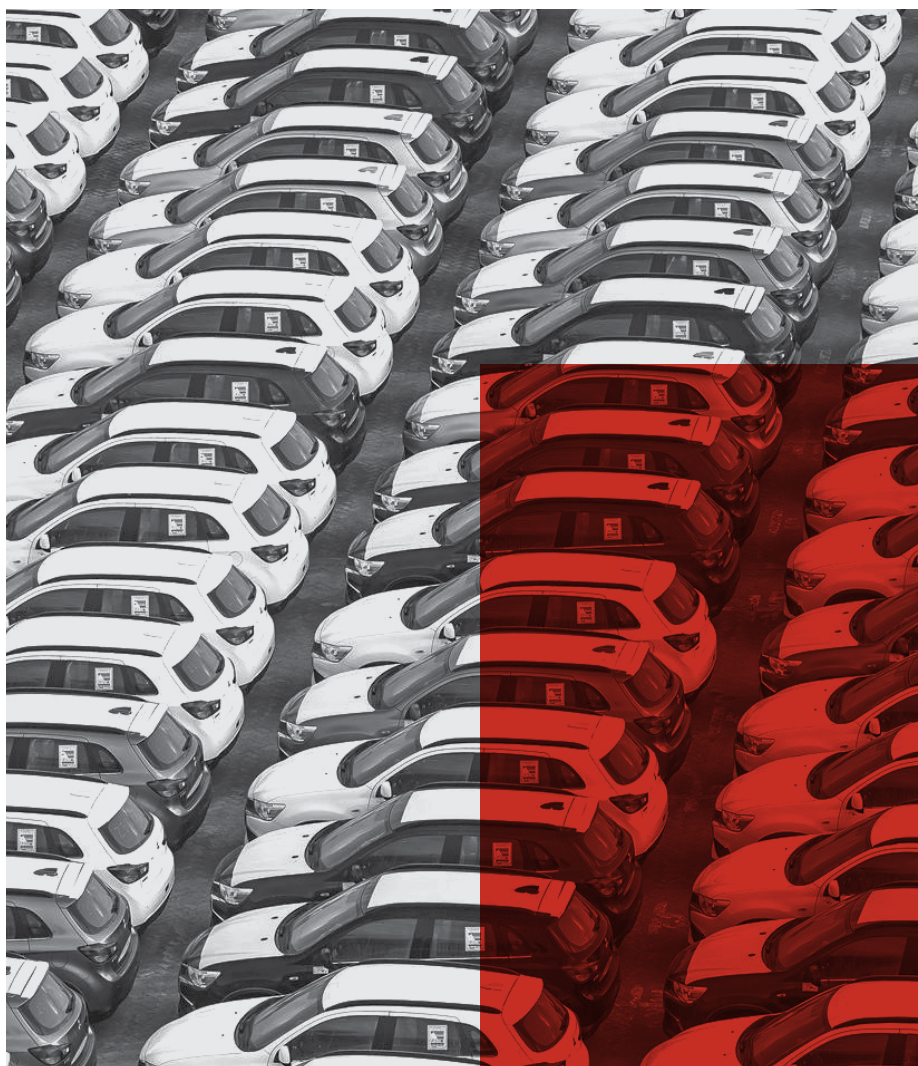
We predict 2021 will be a record year for NZ new vehicle registrations

NZ registrations are up YTD 58%

New car sales continue to be very strong. We anticipate that we should beat the previous record of 162,000 NZ new registrations set in 2018.

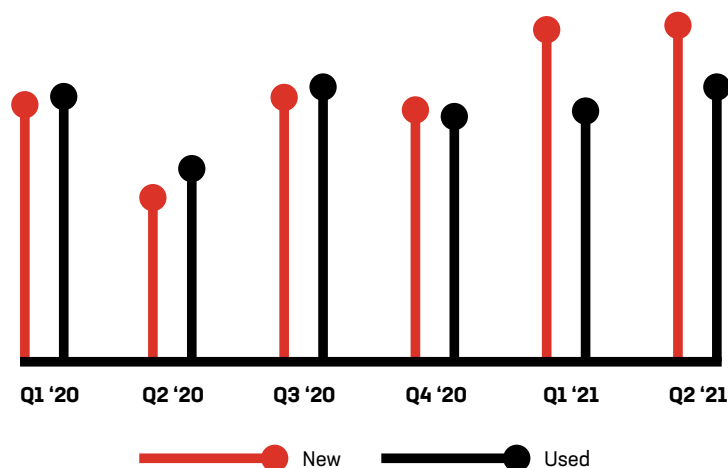
This means that as we continue to wrestle ourselves from the constraints of COVID-19 not only do we have demand now being met, but we also have some potential false demand in dealers stocking up prior to the 2022 Clean Car legislation. Adding to that we have a good supply of 4-year-old NZ new car volume from the previous record year of 2018. That tips the balance of supply and demand and is expected to begin to soften the overheated used car market.

- NZ's love affair with SUV's is still strong accounting for nearly half of all new NZ new car registrations YTD.
- Utes make up 22% of YTD registrations. We anticipate some Ute buyers will shift to SUVs for non-essential lifestyle vehicles post the changes in January and that there will be strong sales until year end to beat the Clean Car fees.
- Hatchbacks make up 15% while light vans at 5% are the next most prolific.
- Saloon cars make up less than 2.5% of all new vehicle registrations.
- Battery Electric (BEV) YTD registrations are up 80% on the second half of 2020 and PHEV's are up 60%. The EV market is up nearly 30% overall over the same period. This shows the market was already moving towards more fuel-efficient options and this will be strengthened further with the introduction of the Clean Car Programme.



Q2 has resulted in another record quarter for new passenger car registrations. With used imports also returning to pre-COVID-19 levels we expect 2021 to be a strong volume year for NZ.

NZ Vehicle Registrations





Top 10 models

Ford Ranger (5,137) and **Toyota Hilux** (4777) make up the top two selling vehicles of 2021, YTD.

Mitsubishi Triton (3,001) at number three and

Nissan Navara (1,869) at number 6 keeps utes and the biggest sellers in the top 10.

Mitsubishi's ASX (2,661) and **Kia's Stonic** (1,752) have been buoyed by rental sales of 459 and 275 respectively.

Mitsubishi Outlander (2,796), **Toyota Rva 4** (2,661), **Mazda CX-5** (1,855) and the **Suzuki Swift** (1,673) round out the top 10 sellers this year so far.



The top 20 makes YTD are below:

MAKE	Q1 '20	Q2 '20	Q3 '20	Q4 '20	Q1 '21	Q2 '21
Toyota	5,280	3,611	5,880	5,976	6,762	6,768
Mitsubishi	2,745	1,540	2,831	3,191	4,796	5,428
Ford	3,402	1,618	3,583	3,720	3,812	3,917
Kia	2,057	1,397	2,255	2,260	3,456	3,125
Mazda	2,139	1,311	2,367	2,278	3,041	2,562
Nissan	1,927	959	1,453	1,846	2,096	2,350
Suzuki	1,485	1,127	1,711	1,617	2,005	2,265
Hyundai	1,605	1,045	1,786	1,615	1,940	2,048
Volkswagen	1,068	714	1,219	803	1,519	1,750
Honda	1,079	565	1,028	555	1,192	959
Mercedes-Benz	859	530	863	737	760	825
Isuzu	597	511	589	682	979	1,204
Subaru	756	438	678	557	862	836
MG	239	144	360	655	808	783
BMW	427	284	457	424	525	566
LDV	183	195	396	362	625	808
Audi	367	277	445	407	486	491
Ssangyong	305	224	378	422	455	312
Land Rover	299	151	350	271	430	437
Jeep	259	100	239	194	399	427
Others	5,595	4,065	4,828	3,508	4,863	4,893
New	32,673	20,806	33,696	32,080	41,811	42,754
Used	33,353	23,987	34,005	30,669	31,087	34,404

Clean Car Programme 2022

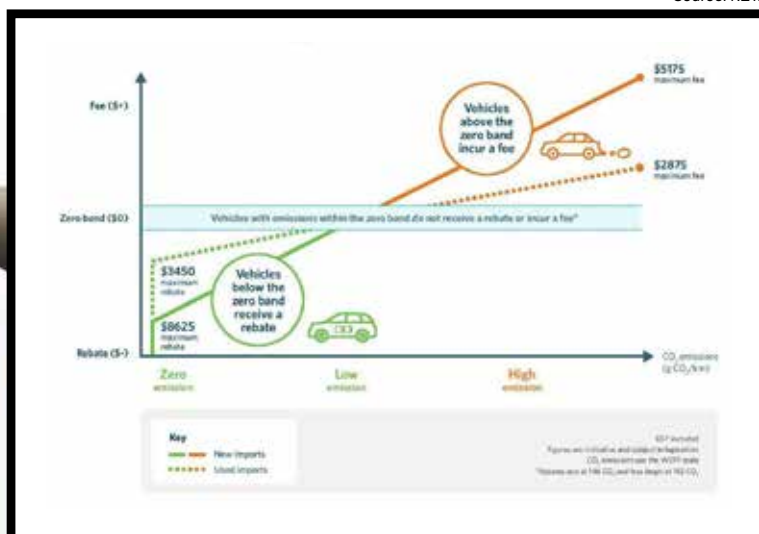
Petrol and diesel fuel used by cars, SUV's and trucks emit an estimated 30% of the long-lived gasses that pollute our atmosphere. The Clean Car Programme is being introduced to reduce the emissions from light transport. We discuss below the background and some of the likely impact.

Earlier this year EECA commissioned a report titled "Review and analysis of electric vehicle supply and demand constraints" from Resource Economics Limited.

The key constraints identified by the report are:

- EV Supply is expected to be an issue until 2025 due to production limits and global demand, the range of models available, and the volumes available for import to NZ.
- Public demand may be stunted by range anxiety, purchase price & battery replacement concerns.
- The report states that many of the constraints will be addressed by 2030 by massive Global investment in EV's, increased efficiencies and economies of scale, falling battery costs and better technology, a dramatic increase in the range of models available and more readily sourced used EV stock.

Source: NZTA



What is the Clean Car Programme?

In June, the Government announced the Clean Car Discount Scheme. This comes into effect from 1 July and will run until 31 December 2021. Effectively it provides a rebate to any purchaser of a newly registered Electric Vehicle (EV) or Plug-in Electric Vehicle (PHEV). The rebate is available for light vehicles under \$80,000 retail price and with 3 or more safety stars. There is \$300m set aside to fund this.

From 1 January 2022, the Government will introduce the Clean Car Standard. This will continue to provide the rebate on EV's and PHEV's but will add charges on high carbon emitting vehicles.

It is expected that the charges will cover the cost of the rebates, i.e. the scheme is expected to be self-funding.

Below are some examples of what will be charged, or refunded, post 1 January 2022:

Hyundai Kona - \$8,625 rebate
Toyota Prius - \$5,750 rebate

Kia Seltos \$0
Mazda CX-5 \$0

Kia Sportage +\$1,230 taxation
Ford Ranger +\$2,780 taxation

There is a middle ground of between 146g/km and 192g/km CO2 emission where there is no charge.

Under 146g = rebate, over 192g = fee.

What are the likely impacts?

Globally there is a huge drive by Governments to introduce EVs and Clean Car type schemes. Every OEM is working towards electrification and the demands from their markets are considerably higher than our tiny Pacific nation.

The big issue in the next few years will be EV supply to NZ, both for new and used vehicles. That will ensure that the market remains buoyant and any future impact on prices is a gradual one.

'Global Demand for EVs was already pushing supply boundaries long before our local incentives were announced'.

In Q2 of 2021, despite the much-documented global pressures on supply, we have had a record first half year for NZ new registrations, and we expect the rest of the year to be very strong. We expect a push at the end of the year as both dealers and consumers rush to beat the impending fee scheme.

Utes are our highest volume of new registrations and are the big losers in the scheme. We should expect to see a surge in demand for new and used stock until 2022. We anticipate a potential shortage of good used supply as buyers delay replacement in the short to medium term. The options for Ute buyers are to wait for electric versions, find an alternative (e.g. SUV) or pay the fee.

The speed of development is challenging from not only a supply perspective, but also from an asset risk perspective. If you thought smartphones disrupted the mobile phone market and that the pace of change was hard to keep up with then the next 5, 10 and 15 years for EVs should see huge shifts in every aspect of performance, technology, and infrastructure.



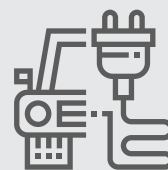
'OEMs with a desirable EV range will clearly benefit. Hyundai's base level IONIQ 5 will receive the full \$8625 rebate'

NZ is a fleet of 5 million, relatively old, vehicles and it will take some time and real commitment to deliver on the EV promise. Historically around 50% of our registrations have been used imports and this is a further challenge that will not be easily met. Whether we have done enough or have tried to fly too high too soon remains to be seen.

This is a new journey for us and was likely to need a kick start from government somewhere along the line. Our vehicle choices will (have to) change dramatically over the next 10 years. MIA figures show our 2021 YTD engine mix sits at 52% Petrol, 38% Diesel as opposed to only

7% Hybrid, 2% Electric and less than 1% Plug in Hybrid. We certainly have a long way to go.

It will be a complex balancing act where the market forces will ebb and flow. It is worth noting that the (current) Government is controlling the levers. They are at liberty to review the scheme and adjust as necessary. The rebates and fees can be adjusted, and the CO2 bands can change. Either way this will see the regulators maintaining some 'false' control of the market.



“The principal challenge facing EV adoption remains that of developing a user-friendly charging infrastructure”

Nick Auld - RedBook



The Road To Electrification

New Zealand's Climate Change Commission has recommended that by 2035 most vehicles for everyday use coming into Aotearoa should be electric.

Global sales of electric cars are accelerating at a phenomenal rate. Since 2016 global uptake has steadily increased but this is still less than 5% of all vehicle sales. New Zealand's uptake over the same period has been steady but with the Clean Car Programme coming into effect from 1 July 2021 we are already seeing this change accelerate.

Supply, price parity with internal combustion engines (ICE) vehicles, charging infrastructure and range anxiety are the key issues to address.

Supply

While supply is an issue now, this will steadily be addressed with most major manufacturers committing to predominantly EV production by 2030.

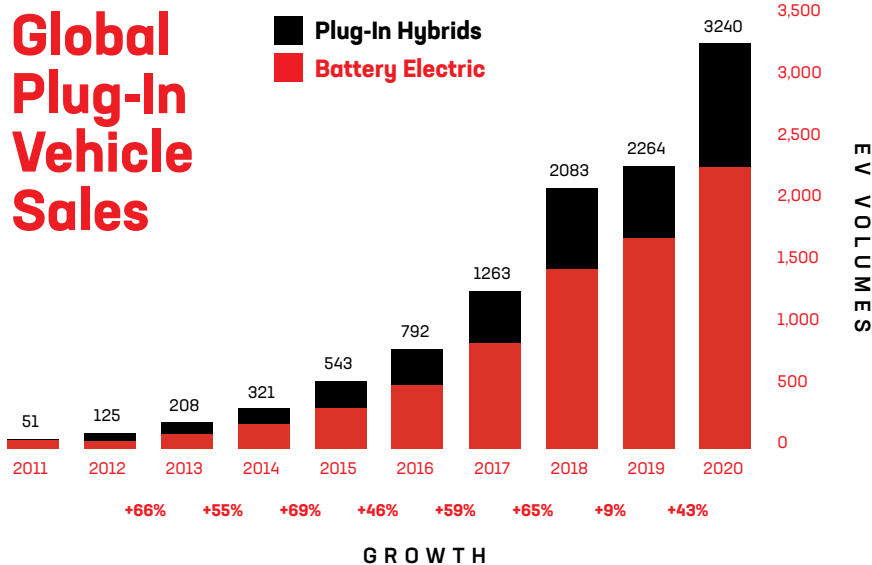
The consensus is that by 2025 20-25% of global new car sales will be electric, by 2030 this will have risen to 35-45% and by 2040 the estimated figures vary between 70 and 95%.

Price Parity

The price difference between an ICE vehicle and an EV is still prohibitive for some, but things are changing rapidly:

- Battery costs have decreased 90% compared to a decade ago
- Batteries have both longer lives & more power.
- Government subsidies, or feebate schemes, will bridge some of the gap, both globally and of course locally.
- Production is dramatically ramping up and new disruptive brands are taking advantage of the rapidly changing environment.

Global Plug-In Vehicle Sales





Range anxiety is becoming yesterday's news

As batteries improve and more drivers experience EV's for themselves, range anxiety becomes less of an issue.

A Nissan survey in Europe found EV drivers tend to travel more Kms than ICE drivers per annum. It is clearly possible to have sufficient range in an EV for everyday use.

Average range of under \$100k EV's in NZ = 313Kms.

Daily kms travelled by average driver in NZ - 40km per day.

Charging stations are available at +/- 75km intervals on NZ state highways.

Battery news

Not bored of electric centric news yet? While battery technology is rapidly developing, and costs are coming down, the core issue is ramping up production. Tesla acknowledged from day one its need to ramp up infrastructure for charging to enable mass adoption.

All lithium-ion battery manufacturers are ramping up production. Here is the maths: 1GWh of battery production will provide 10,000, 100KWh batteries. SK Innovation (which supplies Ford, Hyundai and VW) has back orders of 1000GWh of batteries and with production currently around 40GWh per annum they are looking to expand to 85GWh in 2023 and then to over 500GWh by 2030. Nissan's supplier, Envision, is looking at growing from 9GWh to 35 GWh by 2030 and Tesla's main supplier, CATL in China, has 69GWh right now and has a further 77.5GWh already under construction. Freyr (43KWh), Northvolt (50GWh) and Cellforce (100MWh) are all investing in production facilities.

Interestingly, an article in Physics Today debunks the theory of an impending crisis in Lithium supply. By 2030 the demand for lithium is anticipated to surge by at least 5 times and we are behind already. It suggests, however, that it is not Lithium that is in short supply as a commodity, but the resources and facilities to meet demand.

Its not just cars...

In NZ we have already started to push slowly forward with other electric transport solutions.



There are some exciting looking EV uses on the horizon, like the Rivian R1T.



Electric boat prototypes are being designed for use in Amsterdam's canals.



There are more and more electric motorbikes and moped solutions in the market with more coming. This beauty is the FTN Motion Streetdog, developed by a Wellington based start-up who are building electric motorbikes and mopeds!



Electric planes are starting to become a reality with the Alpha Electro, pictured below, being the first FAA approved electric airplane.



An electric jet pack by CopterPack was recently tested.



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