



**On the road
to a better NZ.**



It's time.

INTRODUCTION.

“We’re adding around 100 EVs to our fleet, and installing around 80 chargers throughout the country, some of which will supplement the public charging facilities already available.”

Climate change is a threat to our environment, our economy and our wellbeing. The longer we wait to act, the greater the cost of action: our **2018 Climate Change Impact Report** found that delayed action could cost tens of billions of dollars and cause major disruption to our daily lives.

That said, combating climate change also presents opportunities – for new products, services, technologies and jobs. With transportation accounting for 17% of New Zealand’s greenhouse gas emissions, transitioning to cleaner vehicles represents a great chance to take action.

Westpac is on track to reach its goal of converting 30% of our fleet to electric vehicles (EVs) by the end of 2019, a project that has thrown up challenges and complexities but many rewards.

These vehicles will make their way into the used car market when their leases expire, making them cheaper and more accessible to all Kiwis.

If your organisation is considering transitioning your fleet to EVs, or is in a position to do so in the future, we hope this document helps you on that journey.



HITTING THE ROAD.

“I am writing to let you know about an exciting challenge which Westpac has embarked on, and one which I believe represents an opportunity for corporate New Zealand to combine our forces to make a real difference for our children and grandchildren’s future.”

**David McLean, Westpac New Zealand CEO
letter to customers, October 2016**

In 2016, Westpac joined more than 30 organisations in a pledge to convert 30% of our vehicle fleet to EVs by the end of 2019. Our Commercial Services team had already begun trialling a small number of vehicles and gathering the information we’d need to decide who in the business could use an EV, and what type would best suit their way of working.



From the outset, we utilised data driven insights. Many months of fuel usage, odometer and GPS data were collected and analysed to give us a thorough understanding of when, where and how our fleet was being used.

Decisions on vehicle model and type were based on the employee role type and location, distances travelled and reason for needing a vehicle in the first place. We found that full battery EVs (BEVs) would be suitable for roles like mobile mortgage managers, who make short, frequent trips around our branch network. For other employees, plug-in hybrid electric vehicles (PHEVs) were more appropriate for their travel needs, and some would continue to drive internal combustion engine (ICE) vehicles if they needed to cover long distances in remote areas to visit customers.

We talked to our people at all levels, early and often, and kept the communications flowing. Key contacts in those initial stages were our Asset Finance, Property Services, Finance and Sustainability teams; while our Internal Communications team helped keep all parts of the business informed and engaged.

A GREENER WAY TO DRIVE.

Our analysis suggests that each full electric vehicle will reduce our carbon emissions by four tonnes per year (approx. 200 tonnes in total). A further carbon benefit will occur from the approximately 50 PHEVs, but until we have more data, we're unable to quantify this improvement.

Our transition to EVs is part of a wider Westpac NZ commitment to reduce our emissions by 25% between 2016 and 2020. This is on top of a 51% company-wide reduction in our emissions since 2008.



THE CASE FOR GOING ELECTRIC.

When Bob Dylan went electric, many of his fans were outraged. Within years, he was a music icon.

Electric vehicles might not be quite as controversial, but it's natural for people to worry about technological change, and employers need to be attuned to those concerns.



Range anxiety is most common: fully electric vehicles have reduced range compared to a traditional combustion vehicle, and drivers risk being “caught short” if they don’t plan ahead. Some of our people found the new technology – such as lane assist and adaptive cruise control – daunting, while others were simply reluctant to part with their petrol vehicles.

“Vehicle preferences can be an emotive subject given the amount of time our staff spend using the vehicles,” says Lead Commercial Manager Linda Keating. “Therefore, it was important for us to provide as much context and understanding of the subject as possible.”

Across the business, we challenged preconceptions and changed mind-sets by presenting positive messaging through fact sheets, videos and regular information updates. In conjunction with Hyundai, we ran competitions to win a free trial of an EV. Workers were encouraged to become advocates of the project in their personal and professional networks.

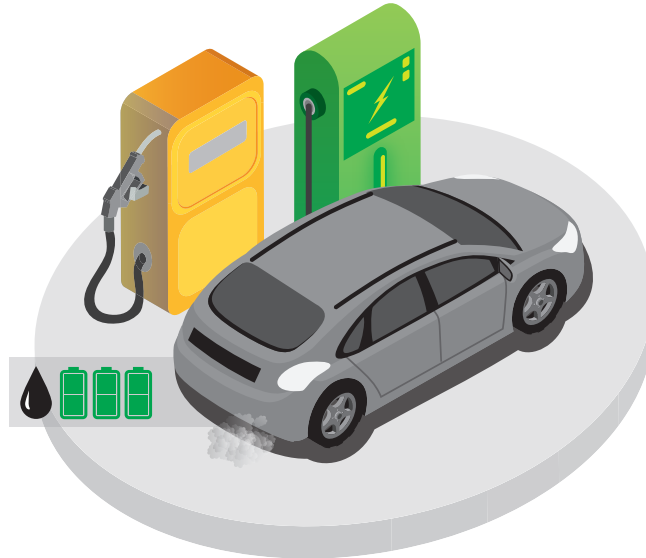
As Linda recalls: “once we got people behind the wheel, we found they were able to answer many of their own questions and put aside their doubts”.

A QUICK GUIDE TO ELECTRIC VEHICLE TYPES.

Hybrids are not included in the New Zealand Government's definition of an Electric Vehicle as they are unable to run purely under electric power. Therefore, Westpac New Zealand had to select a vehicle that is either PHEV or BEV.

Plug-in Hybrid Electric Vehicles (PHEVs) use a combination of battery and petrol to run the car. PHEVs use the battery first, then switch to petrol when the battery has no charge left.

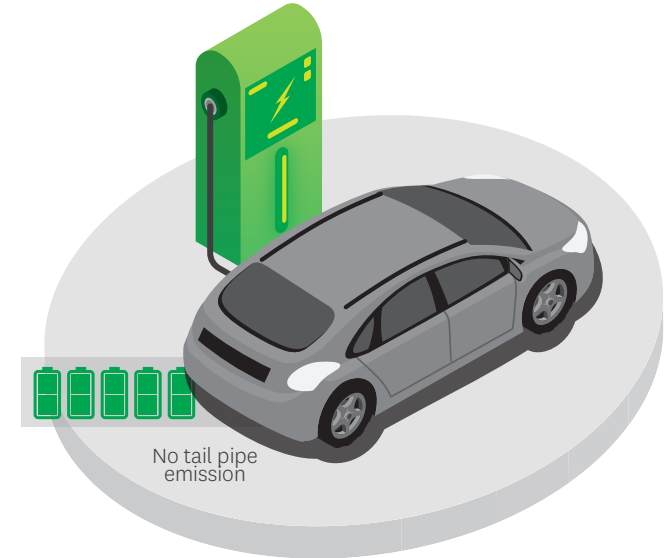
Hyundai Ioniq Range: 63+km on top of petrol reserves



PLUG-IN HYBRID [PHEV]*

Battery Electric Vehicles (BEVs) run exclusively on electricity through batteries that are charged by plugging the vehicle into an outlet or charging station.

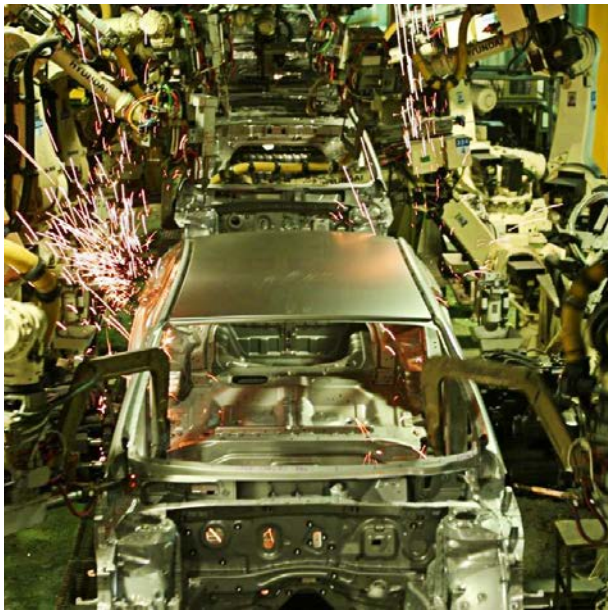
Hyundai Ioniq Range: 200km+



No tail pipe emission

BATTERY ELECTRIC [BEV]

CHOOSING THE RIGHT CARS.



Production of electric vehicles is rapidly expanding. At the end of 2018, there were an estimated five million EVs worldwide - an increase of 150% over two years - and the International Energy Agency predicts there will be 130 million by 2030. Not surprisingly, all the big car manufacturers have jumped on the EV bandwagon.

Westpac NZ Head of Commercial Services, Rob Halsall cast the net wide. “We spoke to a range of manufacturers, to determine which models would be the appropriate fit for our business needs,” he says. “We arranged drive days with the manufacturers to allow our staff to have an actual driving experience and understand the technology involved.”

At the testing phase, people familiarised themselves with the vehicle, drove them and were surveyed on the experience. From this, Commercial Services obtained valuable information on what was important. Driver comfort came up a lot, especially for workers who spend a lot of time on the road. Some were concerned that the quietness of the engine posed a safety risk for pedestrians. Many test-drivers were surprised to find their EV offered an almost identical on-road experience to their petrol car.

DRIVER NOTES:

“My job involves visiting clients at their home and workplace outside normal business hours. I cover about 500 kilometres a week, so on average I would charge my car every two days. I drive a Hyundai Ioniq and it is a great car. I don't think there is any real difference at all between driving a petrol vehicle and an EV, except that it's quiet, so when you're driving on quieter streets you have to be very aware of pedestrians. My advice to a company considering transitioning to EVs would be to ensure they supply enough charging infrastructure. Your EV is like your mobile phone – if the battery is dead, there's nothing you can do.”

John Logan, Mobile Mortgage Manager

Our decision to pick the Hyundai Ioniq for our transition came down to three key factors: size, cost, and availability in both PHEV and BEV options. Rob Halsall recalls Hyundai being great to work with.

“Their operations team was great at tracking and reporting throughout deliveries, while their dealer network nationally was very supportive and their account manager attended our launch day at Takutai Square in Auckland to answer questions directly, and helped us issue joint communications.”





THE PROCUREMENT PROCESS.

The expiry profile of our current fleet has to some extent dictated the pace of our transition. Instead of adopting a “one expiry at a time” replacement strategy, we allowed some leases to expire and waited until we had a critical mass of vehicles to enable a bulk order with the vehicle manufacturers. Replacing Internal Combustion Engine cars (ICE) with EVs one or two at a time would’ve meant looking for constant approvals and buy-in from stakeholders. It would have made internal collaboration much more challenging and time-consuming. Commercial Services identified other advantages to buying in bulk. If you can make a big commitment to a manufacturer, it’s obviously more cost-effective than ordering small numbers at a time and enables them to plan their lead-time and order fulfilment more effectively. It also allowed us to create a buzz around the project by hosting big “reveals”.

We unveiled our new EVs at an event in May 2018, which really got our people on board and helped them understand what was going on. There was substantial media interest too, which gave the public a chance to see the work we were doing.

THE NORWAY EXPERIENCE.

Small, sparsely populated and prone to weather extremes, Norway is well-placed to teach New Zealand a few things about transitioning to EVs.

Its government has stimulated the industry by removing taxes on EVs and investing in the right charging infrastructure. It also got the public on board by exempting EV drivers from tolls and offering them free parking.

“We’ve learned a lot from talking to Norway’s industry body about their successful transition,” Linda says.

“They told stories about people queueing in blizzards to charge their cars. If they can do it, we can do it too.”



POWERING THE PROJECT.

There's no use having a shiny new fleet of vehicles if you don't have tools to keep them on the road. For Westpac, this meant installing battery chargers throughout the length of the country.

"Being early adopters threw up challenges around charging infrastructure – more so than we had initially thought," says National Facilities and Operations Manager Colin Trenwith.

"There was a huge amount to consider; such as the specific charger type required, technology smarts and getting the necessary permission to put them in."

Installing EV battery chargers isn't quite as simple as connecting them to the existing power supply, especially in older buildings with multiple tenants.

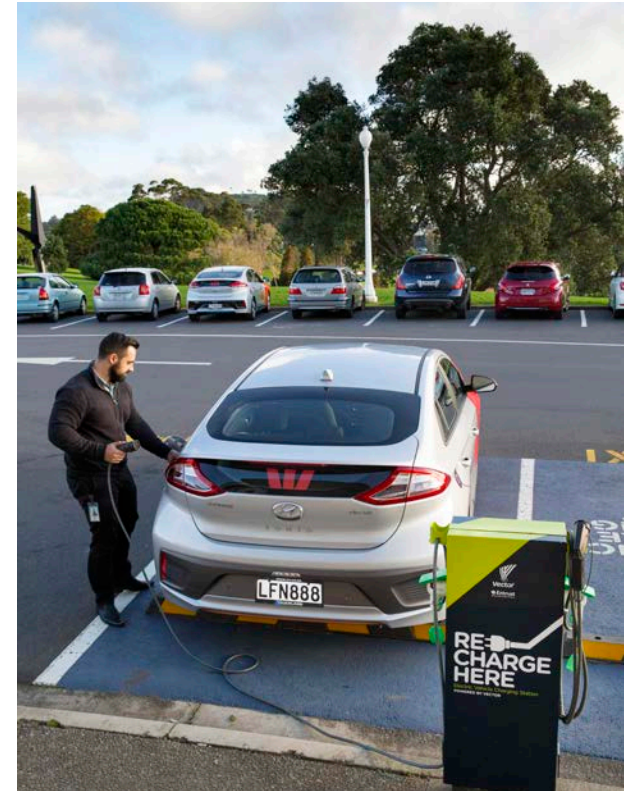
"It's easy to temporarily turn off the power to a site when you're the main tenant and when your landlord is supportive of what you're trying to do," Colin Trenwith says.

"But our experience with external stakeholders was mixed. It's very location-dependent."

He highlights the experience of our Hamilton office as a case study in planning and communication.

"We needed to install a low voltage connection to a local transformer to accommodate the additional load on the building. This required a brief power cut, which impacted dozens of residential and commercial customers in the area, and therefore had to be carefully communicated and coordinated."

Our EV drivers use a mix of Westpac and public charging infrastructure. Demand for these plug-in points often exceeds supply, and queues are inevitable. Reducing waiting times remains a key focus of our transition strategy.



DRIVER NOTES:

“The car was a beautiful, smooth drive and had a level of power I really didn’t expect from an electric car. Once I got used to planning each day, I cracked it. I opted to charge from the ChargeNet stations dotted around Wellington. You simply download an app on your phone, load a credit card, pull up to a station, activate via the app, plug in using one of their two charging cables, and wait. Roughly speaking the car would get around 80% charge in 40mins. So fast! The only downside to this was that living in Upper Hutt, there is only one station so quite often I would pull up to find the spaces taken and have to wait.”

**Joy Hewitt, Business Development Manager,
Winner of Hyundai 30-Day EV Trial Competition.**



HOW TO MAKE THE NUMBERS WORK.

Electric vehicles generally cost more than petrol cars, but are much cheaper to run. Industry body Drive Electric estimates that the cost of charging an EV is equivalent to paying 30c per litre for petrol. There are maintenance savings too – a fully electric EV has only around 20 moving parts, compared to roughly 2,000 for a petrol vehicle.

The higher up-front cost does pose an immediate problem. A question we asked ourselves from the outset was: “How are we going to manage adding more expensive vehicles with no extra budget?” We looked at the fleet profile holistically to see where we could make savings.

The project gave us an opportunity to look at which vehicles didn’t need replacing and which could be replaced with lower-cost, more efficient petrol vehicles. It took a considerable amount of analysis, but a benefit from this initiative is that we’ve actually managed to reduce the overall cost of the fleet.



WESTPAC NZ: WE'RE HERE TO HELP.

There will always be an element of risk in transitioning to EVs, no matter how large or small your organisation and when you decide to do it.

The technology is constantly evolving, and what's considered cutting edge today might be dated by the time a vehicle's lease expires. Battery quality is constantly improving, which heightens the risk of charging infrastructure becoming obsolete. Increased global competition in the market is driving down the price of new vehicles, which in turn affects the residual value of the current EV fleet.

Despite the long hours and effort required, Linda Keating looks back on the project with pride.

"We didn't have a playbook and we've learned a lot over the past couple of years," she says.

"It would have been nice to have a how-to guide when we started out - but at the same time we are very proud to be leading the way."

If you think it's time, we're here to help you "go electric".

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Talk to us today.
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