

# Electric Vehicles in New Zealand



## What are the benefits of electric vehicles in New Zealand?

New Zealand is well positioned to benefit from electric vehicles (EVs) and Plug-In Hybrid Electric Vehicles (PHEVs) because:

- ▶ we have high levels of renewable electricity generation (currently 80%), with more than enough additional generation capacity consented to meet future demand
- ▶ driving an EV in New Zealand results in 80% fewer CO<sub>2</sub> emissions than driving an internal combustion vehicle
- ▶ 95% of daily travel demand is for distances less than 120 kilometres (75 miles), which is within range of most electric vehicle/PHEV batteries (~150 kilometres (95 miles) per charge)
- ▶ we do not need major investment in charging infrastructure - domestic power supply is 230 V making it suitable for charging EVs at home
- ▶ we accept vehicles built to recognised standards from any of the four major standard setting jurisdictions (Europe, Australia, Japan and the United States).
- ▶ 85% homes have off-street parking
- ▶ the cost to run an electric vehicle/PHEV is much lower than petrol vehicles. It is equivalent to buying petrol at NZ30 cents per litre (household prices for electricity) compared with over NZ\$2 (\$1.3 USD/ ¥160 JPY) per litre for petrol
- ▶ An increased use of renewable energy for transport would increase our energy security and improve our balance of payments. Currently NZ\$9b (\$6b USD/ ¥748b JPY) spent annually on imported oil.

Transport accounts for almost 20% of New Zealand's greenhouse gas emissions. Of this amount, 89% is from road transport, with the majority from the light passenger and light commercial vehicle fleet (81%). Emissions from the transport sector are currently 60% above 1990 levels and are projected to be 75% above 1990 levels by 2020.

Because the bulk of New Zealand's electricity supply is from renewable sources, electric vehicles offer a very real opportunity to reduce New Zealand's greenhouse gas emissions. Ministry of Transport modelling indicates that doubling the uptake rate of electric/hybrid vehicles over the next 25 years (compared to business-as-usual baseline) could result in emissions reductions of 7% in the transport sector by 2040.

## How many EVs are there in New Zealand?

In a fleet of 3.1 million light vehicles, EVs accounted for 1,015 vehicles at end January 2016. The two most popular EVs by quite some margin are the Mitsubishi Outlander and Nissan Leaf. The next most popular, the BMW I3 and the Mitsubishi i-MIEV, have both sold less than 60 units.

EVs are imported both as new vehicles and as used vehicles, primarily from Japan. Most of the Nissan Leafs imported have been as used vehicles (239). For conventional vehicles, imports of new and used vehicles are roughly equal in volume, but around 70 percent of EVs imported since 2005 have been imported as new vehicles (592 out of the 852 imported).

### Make and model of post-2005 EVs imported (as at January 2016)

Vehicle make	Model	Imported New	Imported used	Total
Mitsubishi	Outlander	342	4	346
Nissan	Leaf	86	309	395
BMW	i 3	58	5	63
Mitsubishi	i-MIEV	32	3	35
Audi	A3	31		31
Holden	Volt	24	2	26
Tesla	Model S	23	2	25
Souzhou	Eagle	9		9
Porsche	Cayenne	9		9
Hyundai	Getz*	3		3

\*The Hyundai Getz are aftermarket conversions and not produced by Hyundai

### Promoting EVs in New Zealand

In preparation for EVs, the New Zealand Government is investigating the role that it could play in encouraging the uptake of electric vehicles. There are some barriers to uptake that can only be addressed by Government such as regulatory or policy issues. Government also has a role to play in coordinating across industry, so there is an efficient transition to EV technology, and providing verified information. The aim of this work is to support and accelerate the market-driven uptake of EVs.

Officials have been working with industry and local government to help shape an EV package. The New Zealand Government will make an announcement on the package in due course.

