Number of motor vehicles

This factsheet presents data for the indicators 'Number of motor vehicles, by vehicle type and fuel type' and 'Number of motor vehicle registrations, by vehicle type and fuel type' between 2000 and 2019.

Key facts

In 2019, there were about 4.4 million motor vehicles in New Zealand, the highest ever number. The number of motor vehicles in the country has increased steadily since 2000.

There were 818 light vehicles per 1,000 people in the country in 2019. This is also a record high and is one of the highest ownership rates in the world.

Light electric vehicles represented 2.7% of all monthly light vehicle registrations in December 2020, compared to 0.1% in December 2014. While registration rates for electric vehicles are rising, they made up only 0.45% of the light vehicle fleet in 2019.

Why is the number of motor vehicles relevant to health?

The use of motor vehicles can impact human health through injuries sustained in crashes, and through environmental impacts associated with vehicle use. Vehicles that use fossil fuels (such as petrol and diesel) also produce carbon emissions, which contribute to climate change. In 2021, the New Zealand Climate Change Commission advised that increasing the number of electric vehicles should be a priority area for climate change action in New Zealand.

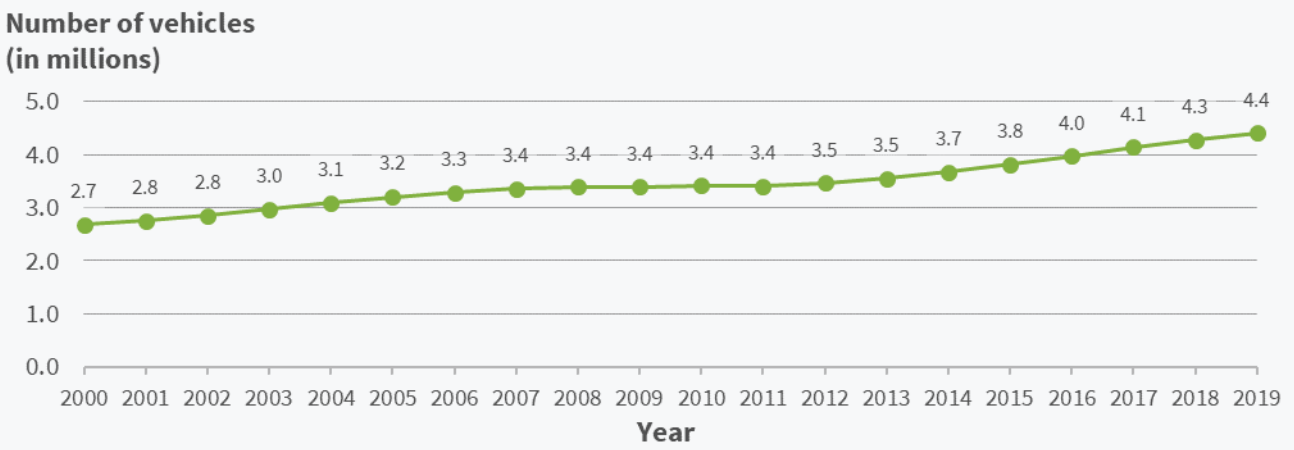
Emissions from the combustion of fossil fuels negatively affect outdoor air quality and human health. In 2015, motor vehicle emissions, largely from diesel vehicles, were the main source of nitrogen dioxide in our air (Ministry for the Environment and Stats NZ 2018), which can impact on respiratory health. Briggs *et al* (2016) estimate that nitrogen dioxide emissions from vehicles caused 65 deaths in 2012 – equivalent to 10% of all traffic-related deaths that year.

Evidence also shows that diesel engine fumes can cause lung cancer (Benbrahim-Tallaa et al 2012). Road traffic noise can also affect health, particularly through high blood pressure resulting from stress associated with road noise (van Kempen and Babisch 2012).

Vehicle numbers continue to rise

There were about 4.4 million motor vehicles in New Zealand in 2019 - the highest ever number (Figure 1). Between 2000 and 2019, the number of motor vehicles in New Zealand increased by 64%, from 2.7 million in 2000 to 4.4 million motor vehicles in 2019, with an average of 90,000 new registered vehicles each year.

Figure 1: Number of motor vehicles, 2000–2019

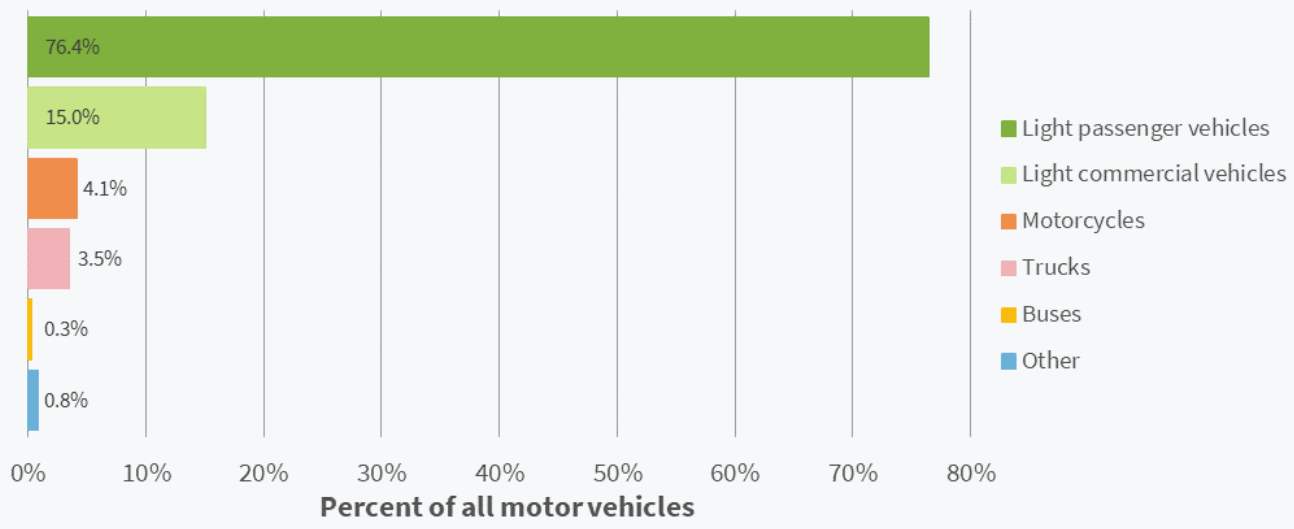


Source: Ministry of Transport 2020

Light vehicles make up three quarters of the total vehicle fleet

In 2019, light passenger vehicles were the most common type of vehicle, with 3.4 million vehicles making up 76.4% of the total vehicle fleet (Figure 2). Light commercial vehicles accounted for a further 15.0% of the fleet (659,000 vehicles). In total, light vehicles of both types made up a combined 91% of the total vehicle fleet. The remainder consisted of 183,000 motorcycles (4.1% of the fleet), 153,000 trucks (3.5%) 12,000 buses (0.3%) and 34,000 vehicles of other classes (0.8%).

Figure 2: Vehicle types as a proportion of the combined vehicle fleet, 2019

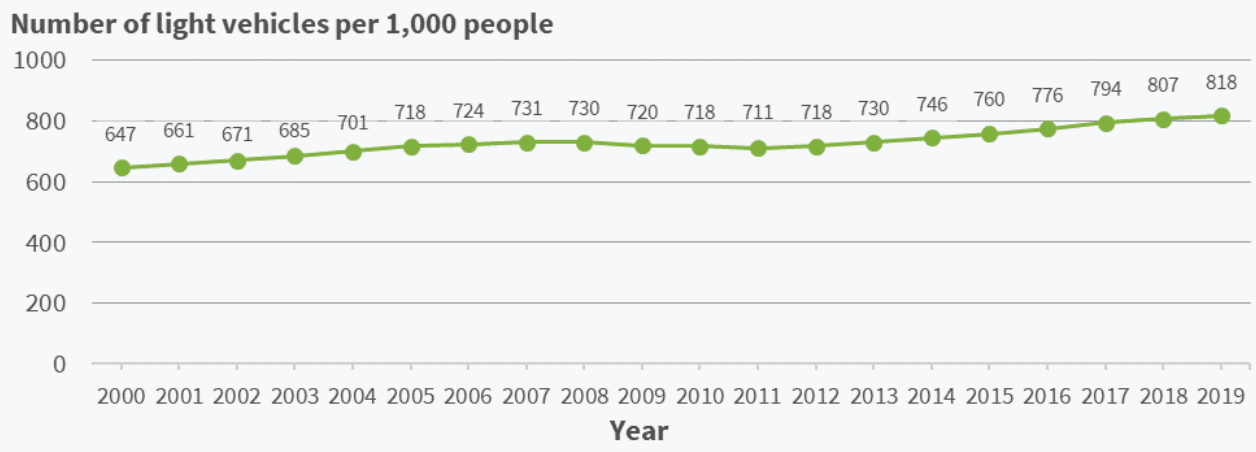


Note: Values may not add up to 100% due to rounding. 'Other' vehicles include mobile machines, special-purpose vehicles, tractors and agricultural equipment.
Source: Ministry of Transport 2020

Car ownership per capita continues to increase

Between 2000 and 2019, the number of light vehicles per capita increased from 647 to 818 vehicles per 1,000 people (Figure 3). This rate represents one of the highest levels of car ownership in the world (Ministry of Transport 2020).

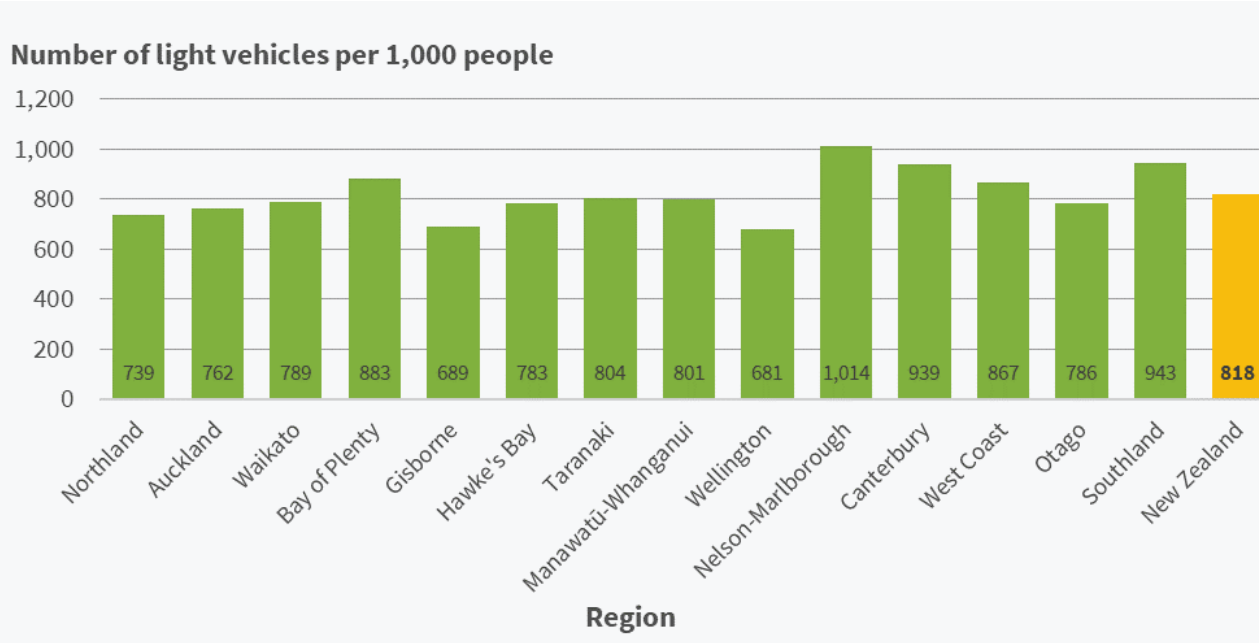
Figure 3: Light motor vehicle ownership per capita, 2001–2019



Source: Ministry of Transport 2020

Light vehicle ownership rates varied across the country (Figure 4). The region with the highest ownership rate was Nelson-Marlborough (1,014 light vehicles per 1,000 people) and the region with the lowest ownership rates was Wellington (681 light vehicles per 1,000 people).

Figure 4: Light motor vehicle ownership per capita, by region, 2019

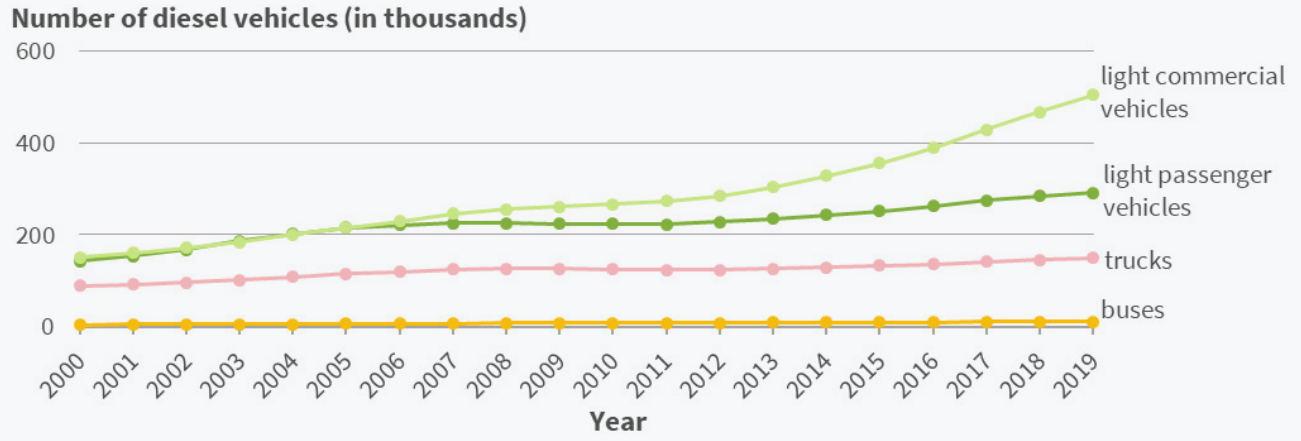


Source: Ministry of Transport 2020

Diesel vehicle numbers are still increasing

The number of diesel vehicles has increased steadily since 2000, particularly within the light commercial vehicle fleet (Figure 5).

Figure 5: Number of diesel vehicles, by vehicle type, 2000–19

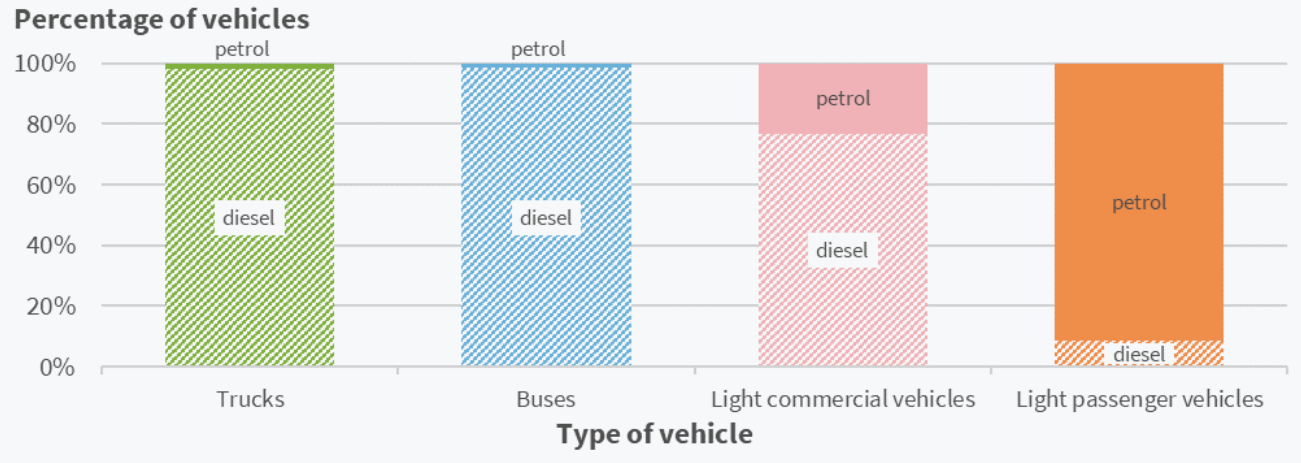


Source: Ministry of Transport 2020

In 2019, 20% of the total light vehicle fleet were diesel-powered, due to 76.6% of light commercial vehicles and 8.7% of light passenger vehicles being diesel-powered (Figure 6). The truck and bus fleet almost entirely consists of diesel vehicles, with petrol vehicles representing just 1.9% and 1.6% (respectively) of each vehicle type.

The light commercial fleet has displayed a notable increase in the proportion of diesel vehicles – up from 43.4% in 2000. In the same period, the proportion of diesels in the truck and bus fleets increased by 5.1% and 7.3% respectively, while the proportion of diesel-powered light passenger vehicles increased by 2.0%.

Figure 6: Percentage of diesel and petrol vehicles, by vehicle type, 2019



Source: Ministry of Transport 2020

Electric Vehicles in New Zealand

Electric vehicles (EVs) are charged externally from a power source. There are two types of electric vehicles in New Zealand.

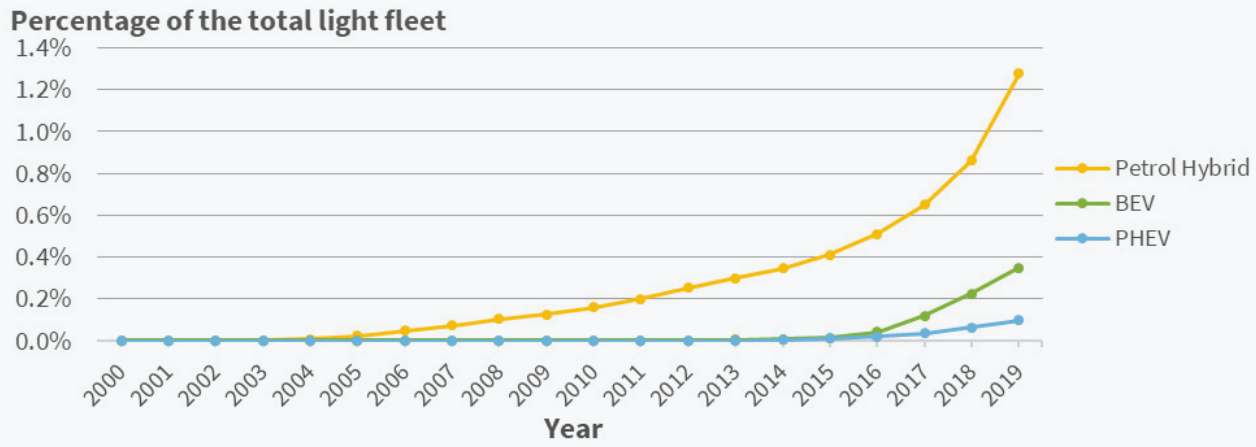
- **Battery electric vehicles (BEVs)** are purely electric vehicles, powered solely by batteries.
- **Plug-in hybrid electric vehicles (PHEVs)** use a combination of batteries and a conventional fuel-burning engine.

Petrol hybrid vehicles are not rechargeable from external electrical power sources and are not counted as 'electric vehicles' in the statistics used to produce this factsheet.

Electric and petrol hybrid vehicles are a growing minority

While the light vehicle fleet remains dominated by vehicles powered exclusively by fossil fuels, electric vehicles (both BEV and PHEV) and petrol hybrids have grown as a proportion of the fleet, particularly since around 2015–16 (Figure 7). Nevertheless, as of 2019, petrol hybrids represented 1.28% of the fleet, while battery and plug-in hybrid electric vehicles made up only 0.45% of the fleet between them.

Figure 7: Electric vehicles and petrol hybrid vehicles as a percentage of the light vehicle fleet, 2000–2019

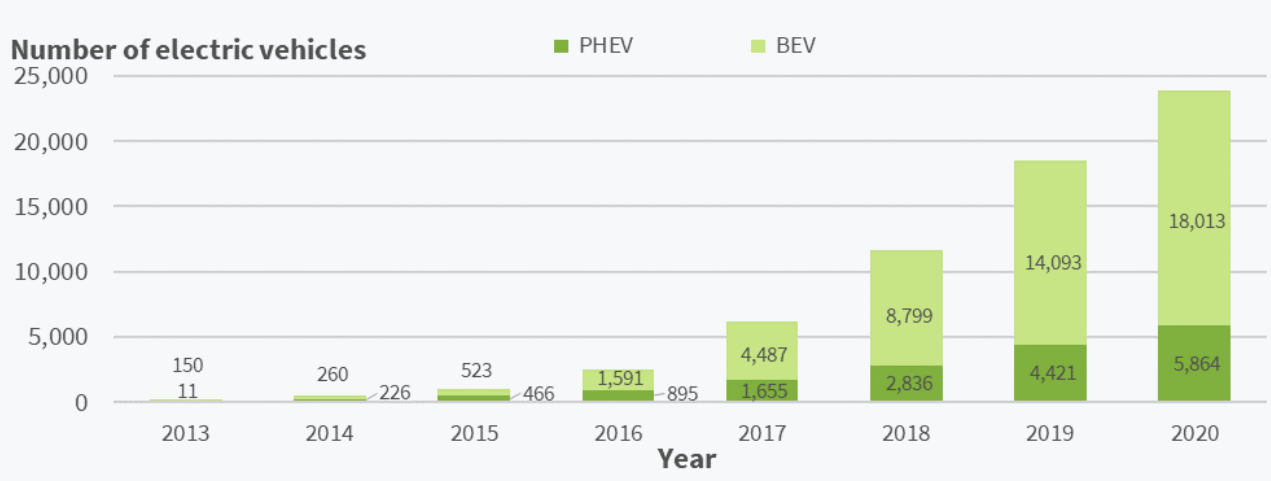


Source: Ministry of Transport 2020

The number of electric vehicles is increasing

The electric vehicle fleet in New Zealand is almost exclusively composed of light passenger vehicles. In 2020, there were almost 24,000 electric vehicles, up from only 161 in 2013 (Figure 8). Around 75% of the light electric vehicle fleet is made up of pure electric BEVs; the rest of the fleet consists of plug-in hybrid vehicles.

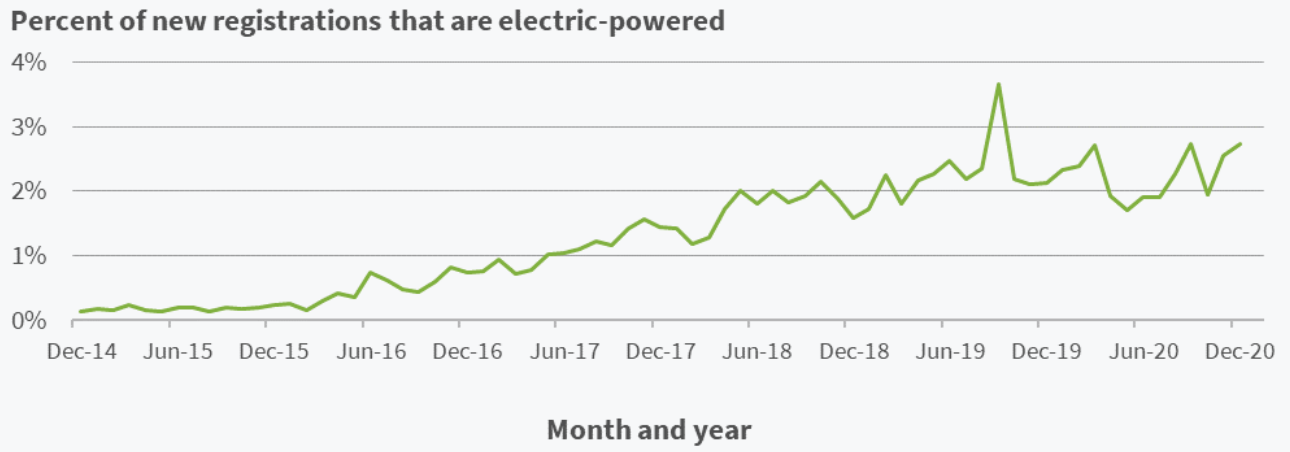
Figure 8: Number of light electric vehicles, 2013–2020



Source: Ministry of Transport 2020

Light electric vehicles are gradually forming a larger percentage of new light vehicle registrations (Figure 9). In December 2020, light electric vehicles accounted for 2.7% of all light vehicle registrations in that month, compared to 0.1% in December 2014.

Figure 9: Percentage of monthly light vehicle registrations that are electric vehicles, December 2014 – December 2020

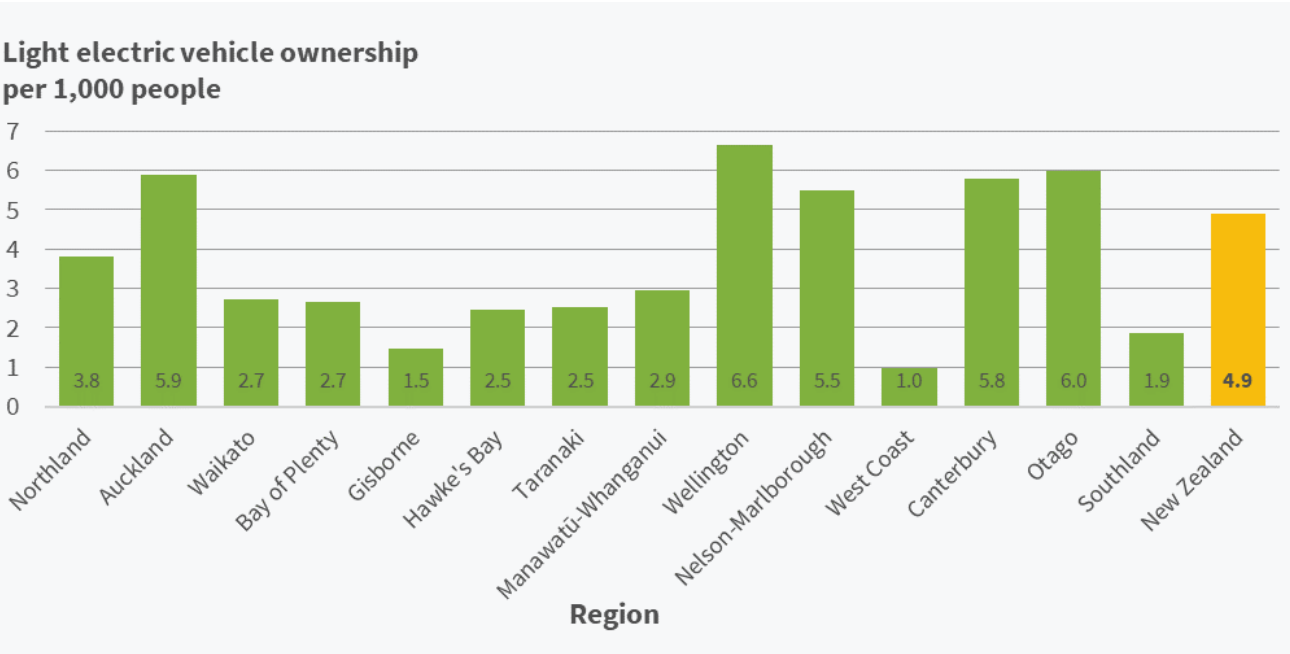


Source: Ministry of Transport 2020

Electric vehicle ownership per capita was highest in more urbanised regions

In 2020, there were 4.9 light electric vehicles per 1,000 people in New Zealand (Figure 10). Ownership per capita was markedly higher in major urban centres, with the Wellington region having the highest light electric vehicle ownership rates of all - despite having the lowest rate of light vehicle ownership per capita overall (see Figure 4 above). Meanwhile, the West Coast region had the lowest electric vehicle ownership rate, of just one electric vehicle per 1,000 people.

Figure 10: Light electric vehicles per 1,000 people, by region, 2020



Source: Ministry of Transport 2020

Data for this indicator

Data for these indicators comes from the Ministry of Transport's Annual vehicle fleet statistics and the monthly electric vehicle registrations. Data for each year is a snapshot taken at the end of the month of December.

The following categories of vehicles are used:

- Light vehicles, which includes:
  - Light passenger vehicles (passenger vehicles weighing up to 3,500 kg)
  - Light commercial vehicles (the following if under 3,500 kg: goods vans, trucks, utilities, buses, and motor caravans)
- Trucks (the following if over 3,500 kg: goods vans, trucks, utility vehicles, and motor caravans)
- Buses (those over 3,500 kg, including minibuses)
- Motorcycles (including mopeds and quadbikes/ATVs)

Data on electric vehicle numbers and registrations comes from the Ministry of Transport's monthly electric vehicle registrations and covers two forms of light electric vehicles:

- Plug-in hybrid electric vehicle (PHEV), and
- Battery electric vehicle (BEV).

For additional information, see the metadata link below.

References

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Further information

For descriptive information about the data **Metadata Sheet**

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