


 Moving from ICE powered vehicles to EVs:
How Australian consumers are driving change

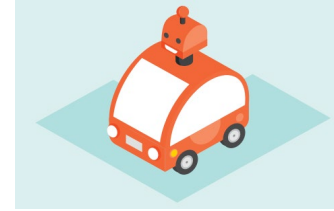
 Roads Australia webinar | 15-16 September 2020

■ The NTC's reform objectives



Safety

Promote the safe movement of people, freight and services.



Future Technologies

Remove barriers to innovation and enable the safe use of new and emerging technologies



Productivity

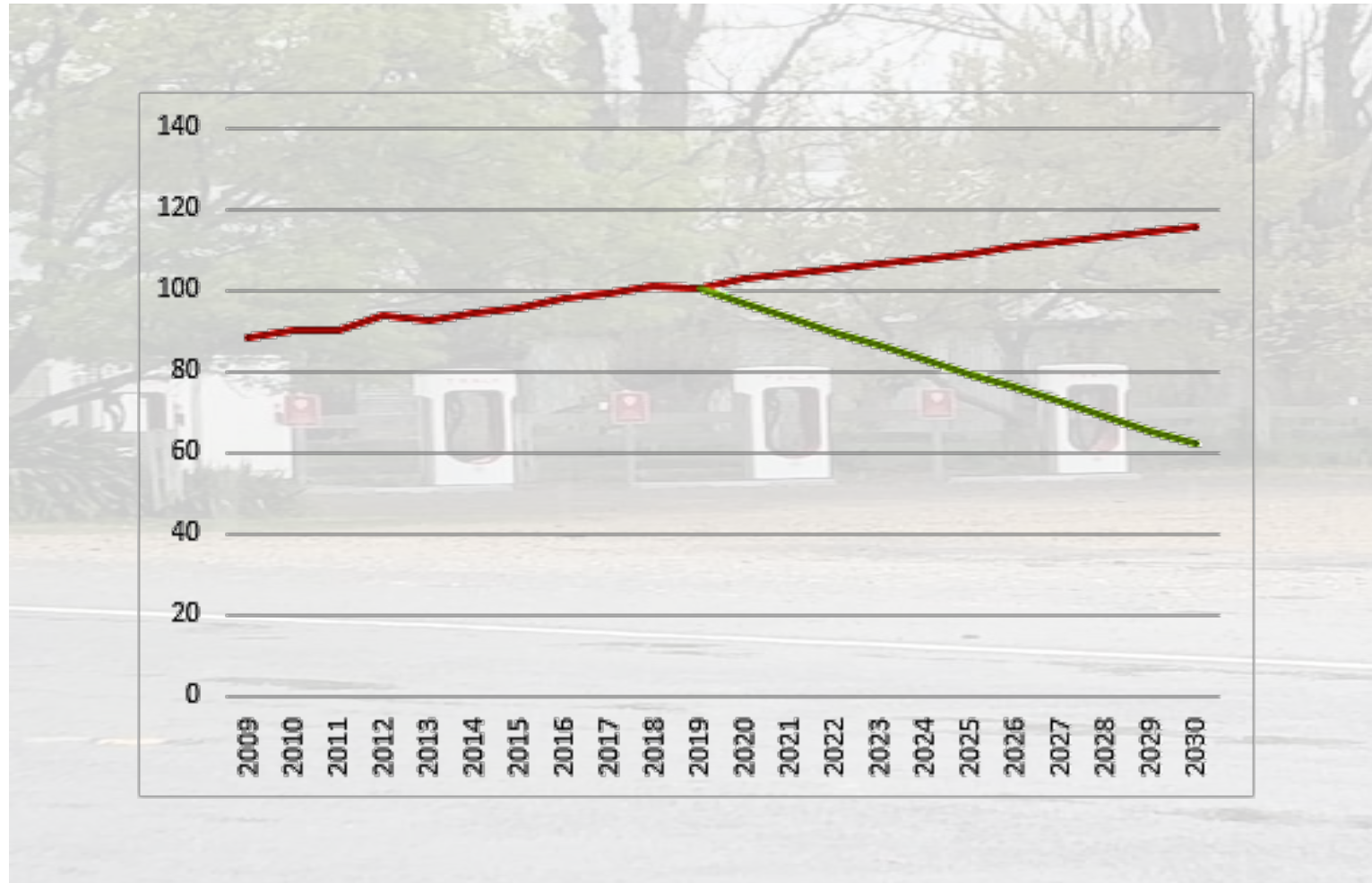
Promote competitive national and international supply chains while reducing the regulatory burden, to make Australia's land transport system more productive and efficient



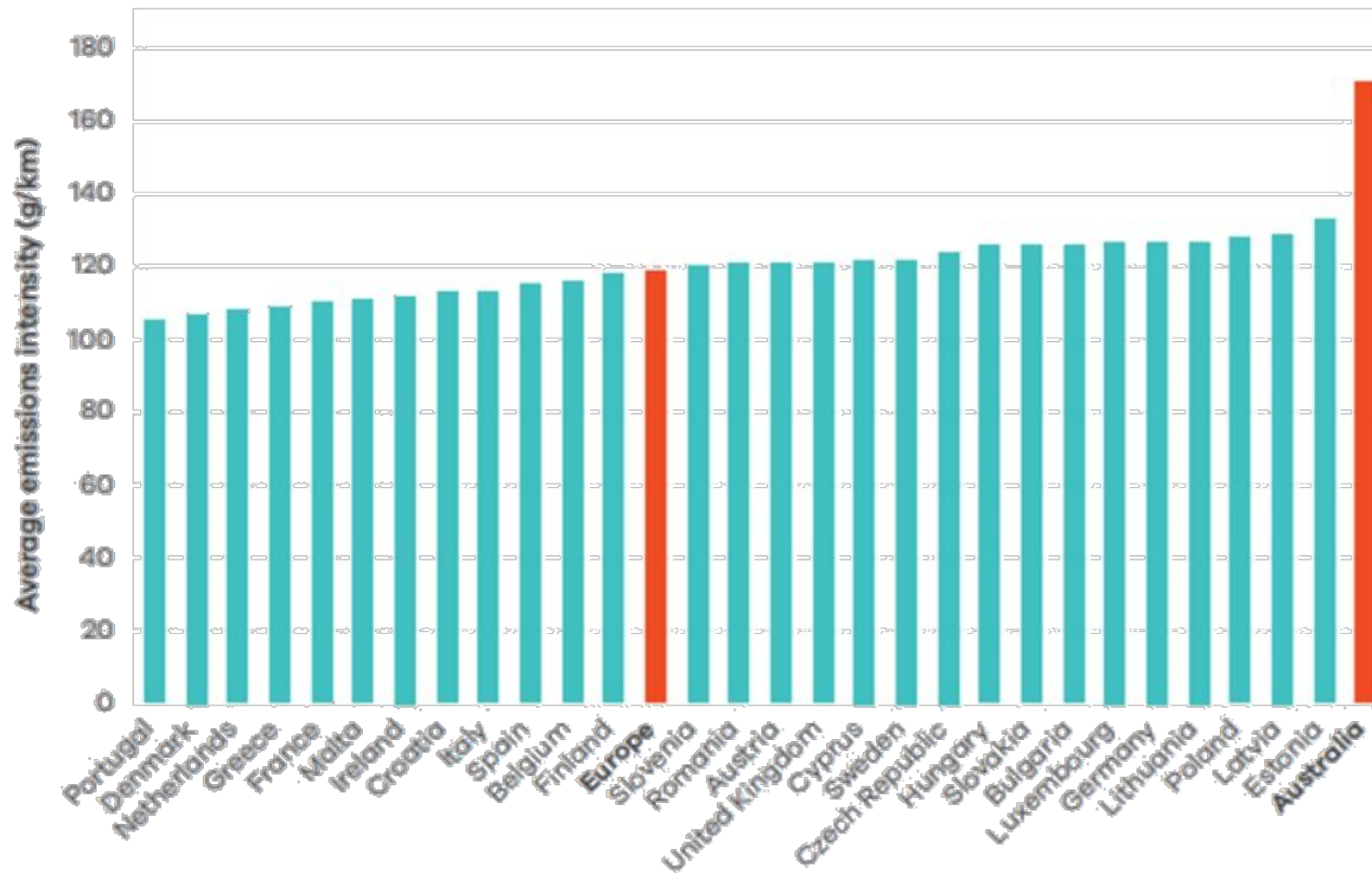
Sustainability

Facilitate a sustainable transport system to better promote better environmental outcomes.

▀ Australia's path to lower emissions



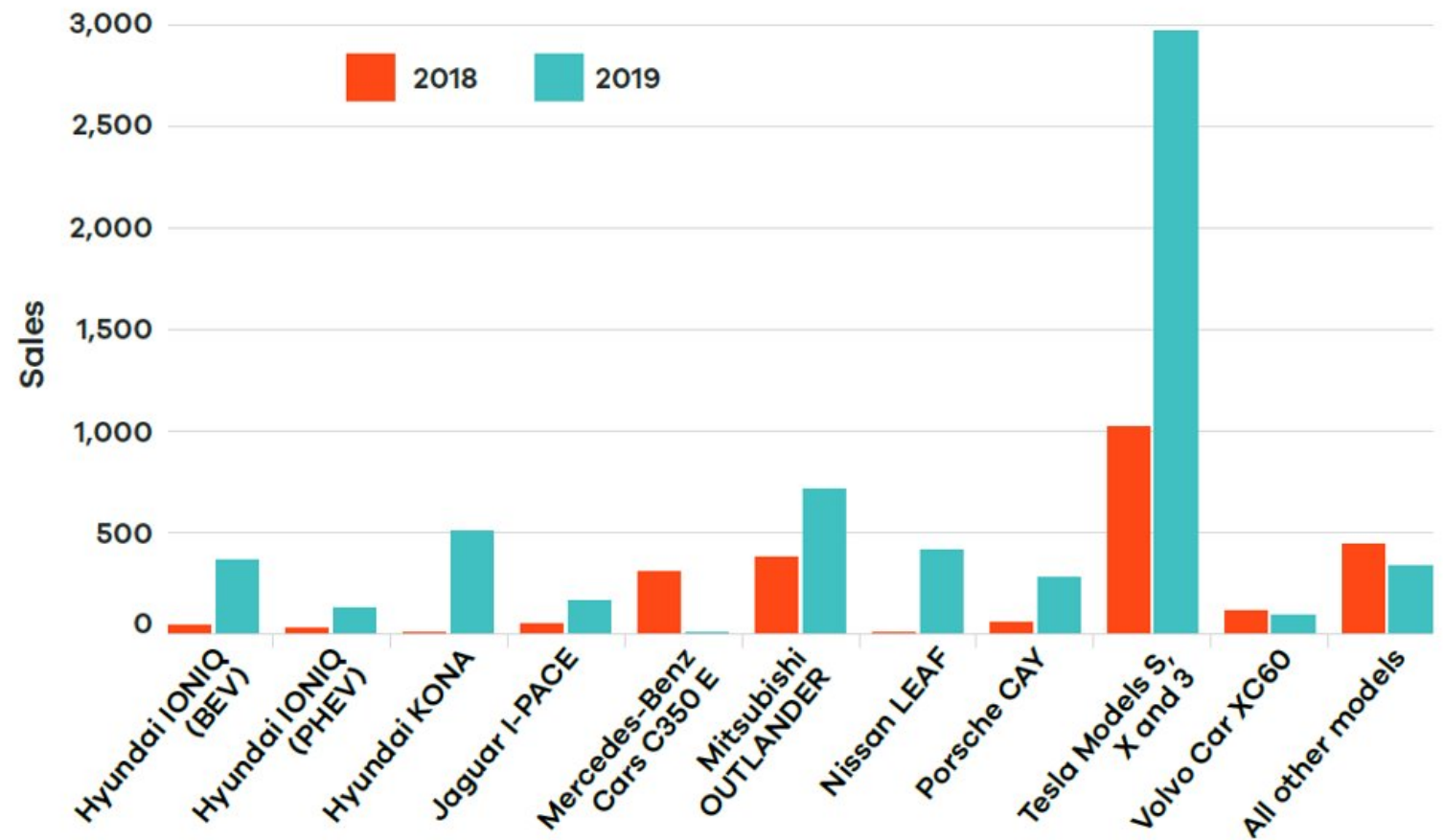
International comparison



Electric vehicles

- 2019 = highest number of EV sales recorded to date in Australia
- Around 40% of all EVs on the road in Australia were sold in 2019
- First time (non-Tesla) battery-electric vehicle (BEV) sales has ever exceeded 200 in a year

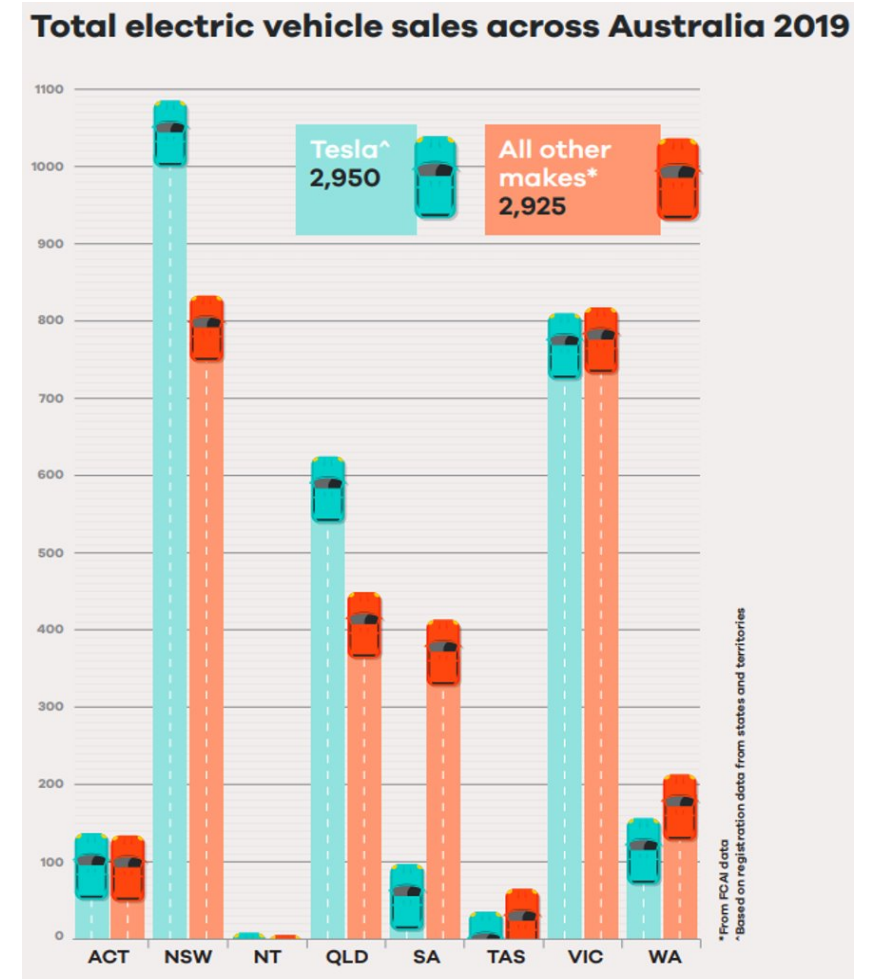
Figure 14: Sales of selected electric vehicles, 2018 and 2019



EV sales – who is buying them?

Table 20: Electric vehicle sales by buyer type for FCAI data, 2018 and 2019

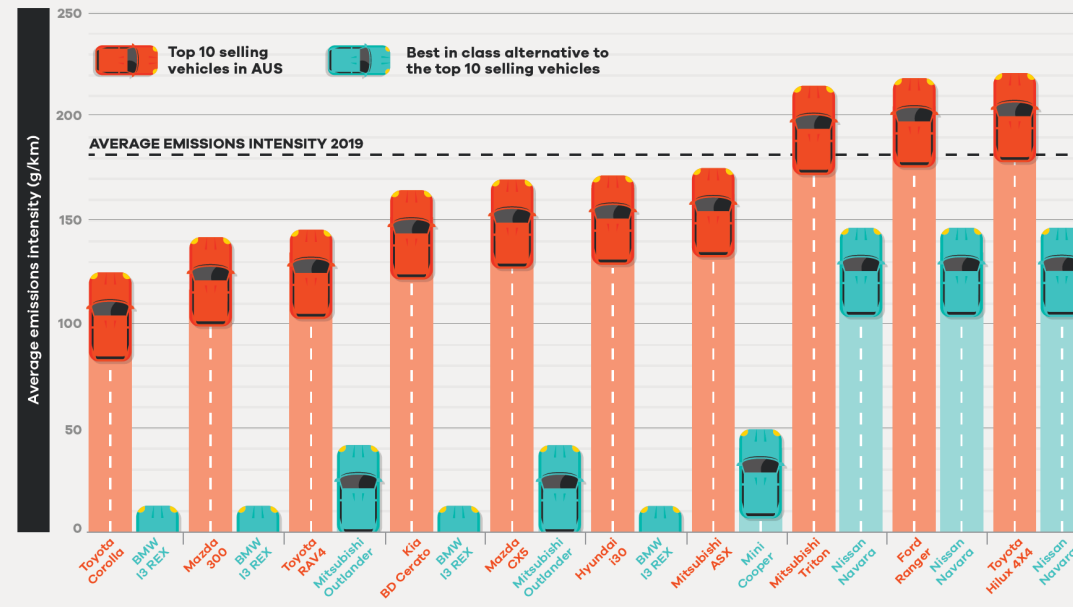
State	2018	2019
Company capitalisation	304	518
Dealer demonstrator	381	456
Diplomatic	1	1
Federal Government	1	16
Fleet	111	146
Large fleet	36	215
Local Government	16	136
Not-for-profit organisation	3	19
Private – local delivery	442	1,293
Rental	23	2
State Government	34	123
Total	1,352	2,925



Consumer choice

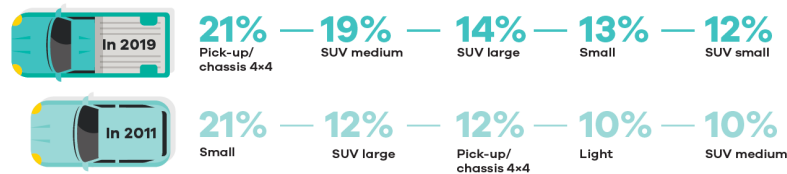
Carbon dioxide emissions intensity

for new Australian light vehicles 2019



The growth in SUVs and pick-up trucks has changed the fleet mix in Australia since 2011.

The five largest 'contributions' to the national average emissions intensity were from:



2019 electric vehicle sales

Electric vehicle sales **rose 149%** taking the number on Australian roads to 14,500 – out of the nation's almost 18 million cars and light trucks.

Number of sales:

2,950 Tesla	2,925 All other makes
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If everyone bought a vehicle with best-in-class emissions performance, Australia would see a **63% decrease** in average emissions intensity.

Consumer sentiment

56% of surveyed consumers would now consider purchasing an electric vehicle as their next car.

Almost 80% of consumers underestimate electric vehicle range. Consumers rate public fast charging and home charging as equally important.

Consumers want to see governments provide public charging infrastructure, subsidies for home charging installation, and subsidies to reduce vehicle purchase costs.

Almost two-thirds of consumers say that the COVID-19 pandemic means governments should continue prioritising electric vehicle policies at the same level or make them an even higher priority.

Consumers are encouraged by electric vehicles' lower environmental footprints, lower running and maintenance costs, and relative performance.

Environmental benefits are regarded as the main public benefit of transitioning to electric vehicles, but fuel security and public health benefits are also highly regarded.

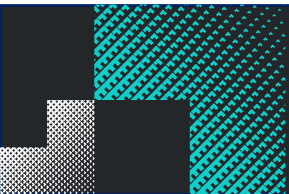
Almost half of consumers say they would power their electric vehicle using renewable energy.

Source: Survey carried out by NRMA, RACV and RAA on behalf of the Electric Vehicle Council.

What is happening around Australia

National

- The National Electric Vehicle Strategy out soon
- A world-leading electric vehicle to grid trial in the ACT (\$2.4m funding from ARENA) to demonstrate EVs discharging electricity back to the grid
- Roll out of ultra-fast EV charging network along Australia's highways. This includes:
 - Evie's 42 charging sites to connect Adelaide, Melbourne, Canberra, Sydney and Brisbane, plus destination charging in Far North Queensland, Tasmania and Perth
 - 21 ultra rapid charging stations in the Chargefox network, to unlock Australia's most trafficked inter-city routes along major highways



What is happening around Australia



Northern Territory

- Charging infrastructure included in new urban infrastructure in Darwin
- EV strategy under development
- EV categorised as 'small car' for registration purposes.

Western Australia

- EV strategy under development
- WA Renewable Hydrogen Strategy targets for 2030, includes fuel cell EVs
- First green hydrogen refuelling station for mining industry could expand to 1000 cars in metro Perth
- \$53 million Future Battery Industries Cooperative Research Centre and strategy
- EV charging station operators exempt from electricity retail licensing; EV taxis exempt.

South Australia

- EV action plan will be released later this year
- Fleet SA surpassed its target of 30% EV by 2019 now 41%
- SA's first ultra-rapid EV charging station opened in March – delivering 400km range in 15 minutes
- Second station to open later this year making drive from Adelaide to Melbourne seamless
- Two companies are bringing EV manufacturing and vehicle assembly to SA
- 'Blue Carbon' hydrogen strategy to identify optimal locations for renewable hydrogen production.

Tasmania

- Rolling-out a statewide EV charging network
- Supporting electric vehicle infrastructure with ChargeSmart grants for fast, destination and workplace chargers
- Autonomous bus trial in Hobart
- Smarter Fleets Program supporting uptake of EVs.

Queensland

- Queensland Electric Super Highway - 31 charging sites with more to come
- Australia's first end-to-end renewable hydrogen project to power fuel cell EVs and supply BOC industrial customers
- Battery EVs have the lowest registration fee
- \$2.5m investment in Brisbane-based Tritium EV charging stations
- Queensland Hydrogen Industry Strategy (2019-2024)
- Queensland Government's Electric Vehicle Strategy (2017)
- Renewable energy to charge electric vehicles.

New South Wales

- 10% new passenger vehicles to be electric or hybrid by 2020/21
- Customer information platform (jointly developed by TfNSW and Everergi)
- Trial of zero emission buses and electrifying Sydney's bus fleet
- Co-investment in 38 EV charging stations with another 20 planned
- Co-funding the transition of fleets to EVs
- Co-leading the development of the National Hydrogen Strategy
- NSW Government Electric and Hybrid Vehicle Plan: Future Transport 2056.

Australian Capital Territory

- Canberra to have the largest EV-to-grid trials in the world
- 51 Nissan LEAF EVs to plug in National Electricity Market
- All newly leased passenger fleet vehicles will be zero emissions vehicles from 2020–21 (where fit for purpose)
- Registration discount of 20% for zero emissions vehicles and transit lane use.

Victoria

- Zero Emissions Roadmap and EV strategy out later this year
- Regional tourism EV charging network expands to 24
- \$100 discount in annual registration
- \$2m ARENA towards autonomous rooftop solar EV prototype.

Contact

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