



The Grattan Car Plan
practical policies for cleaner transport and better
cities

March 2022

Australians drive cars that are big and dirty

- Australians tend to prefer big cars, petrol vehicles, and high emitters
- Australia has few electric vehicles by international standards
- But sales are picking up fast

How to accelerate the arrival of zero- and low-emissions vehicles

- An emissions ceiling (standard) for light vehicles, ratcheting down to zero in 2035
- Would achieve a significant reduction in emissions, and save drivers money

Australia is well placed to switch to electric vehicles

- Home charging straightforward for most people
- The network of publicly accessible charging is growing fast

Cleaner petrol while we still need it

- Australia's petrol is particularly dirty and harmful to health
- Dirty petrol limits the pollution-reducing vehicle technology available in Australia

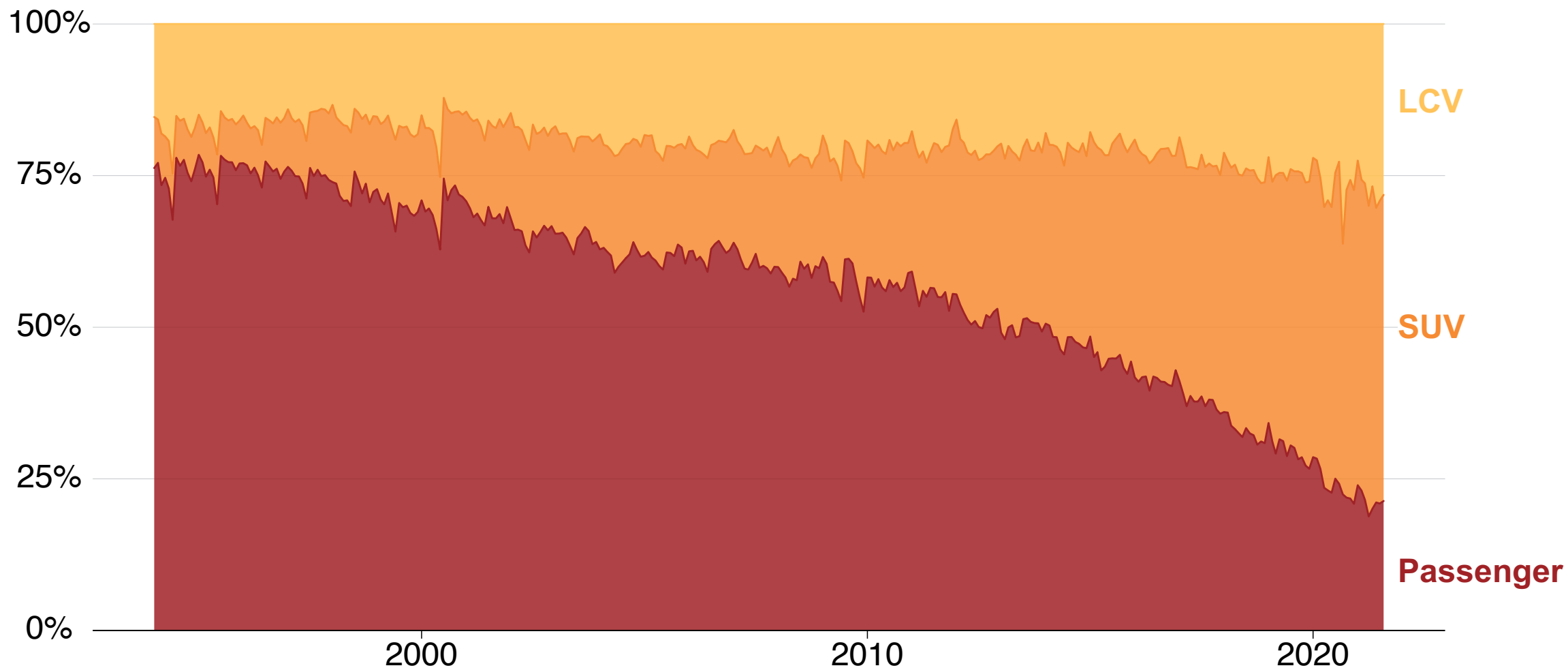
But driving isn't everything

- Cheap-to-run zero- and low-emissions vehicles means more driving
- COVID has pushed people out of public transport into their cars

Recommendations

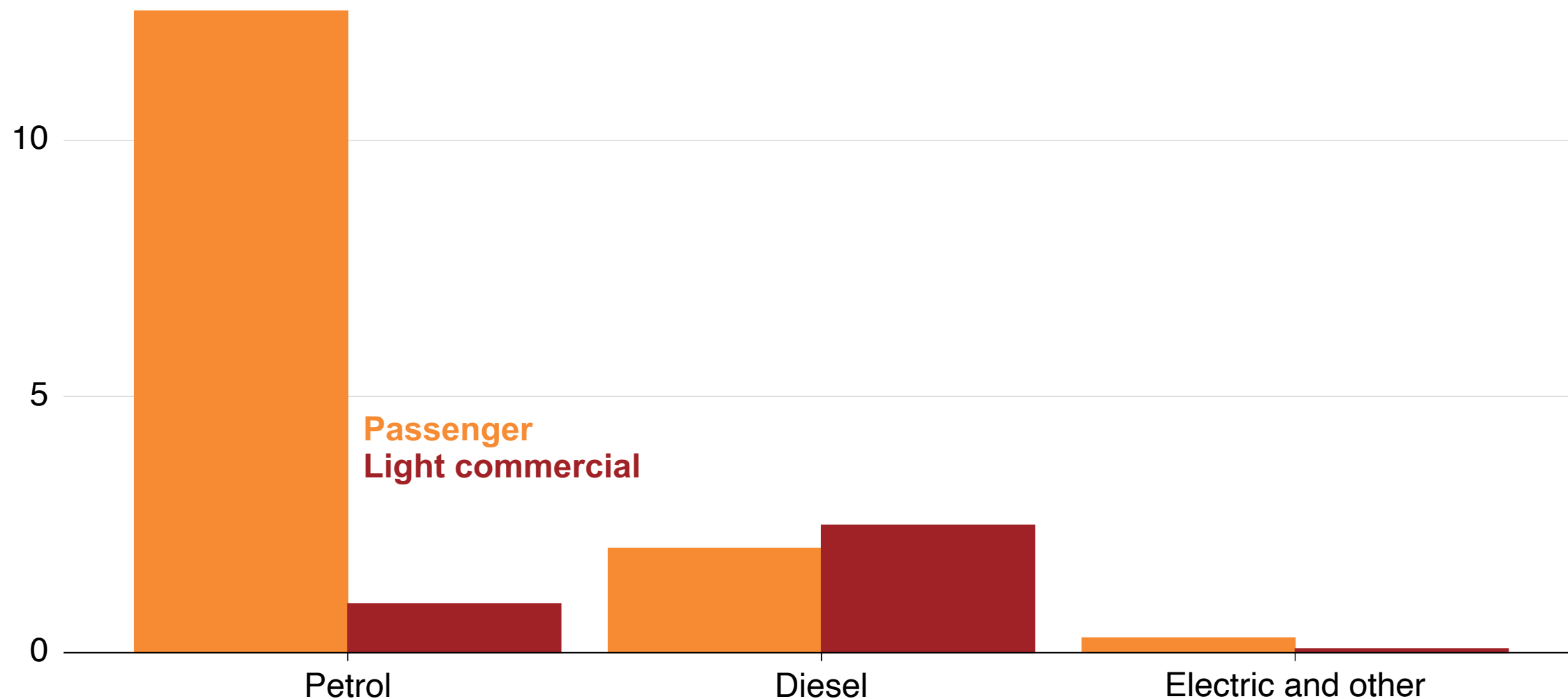
Australians are increasingly choosing SUVs over passenger cars

Vehicle type as a proportion of monthly vehicles sold



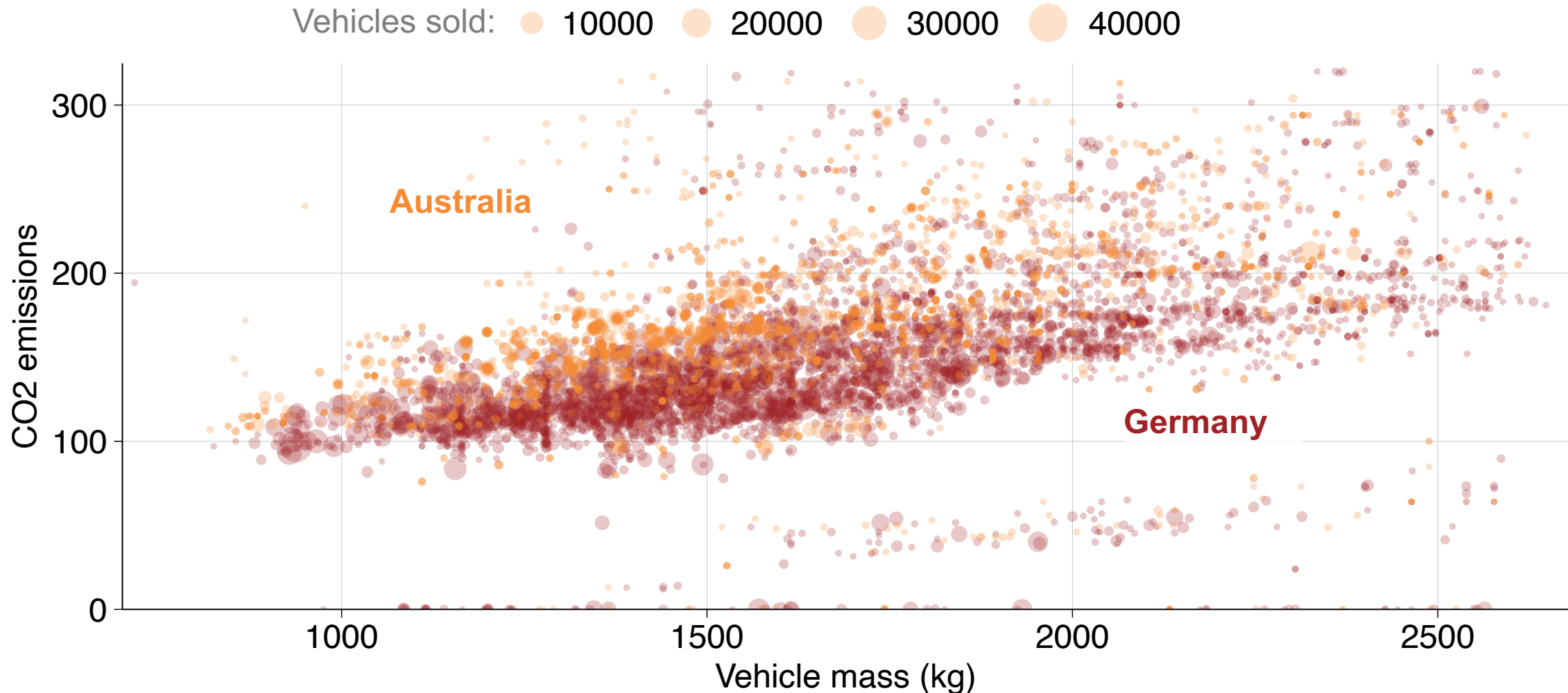
The vast majority of the Australian fleet is fuelled by petrol or diesel

Number of vehicles (millions) by fuel



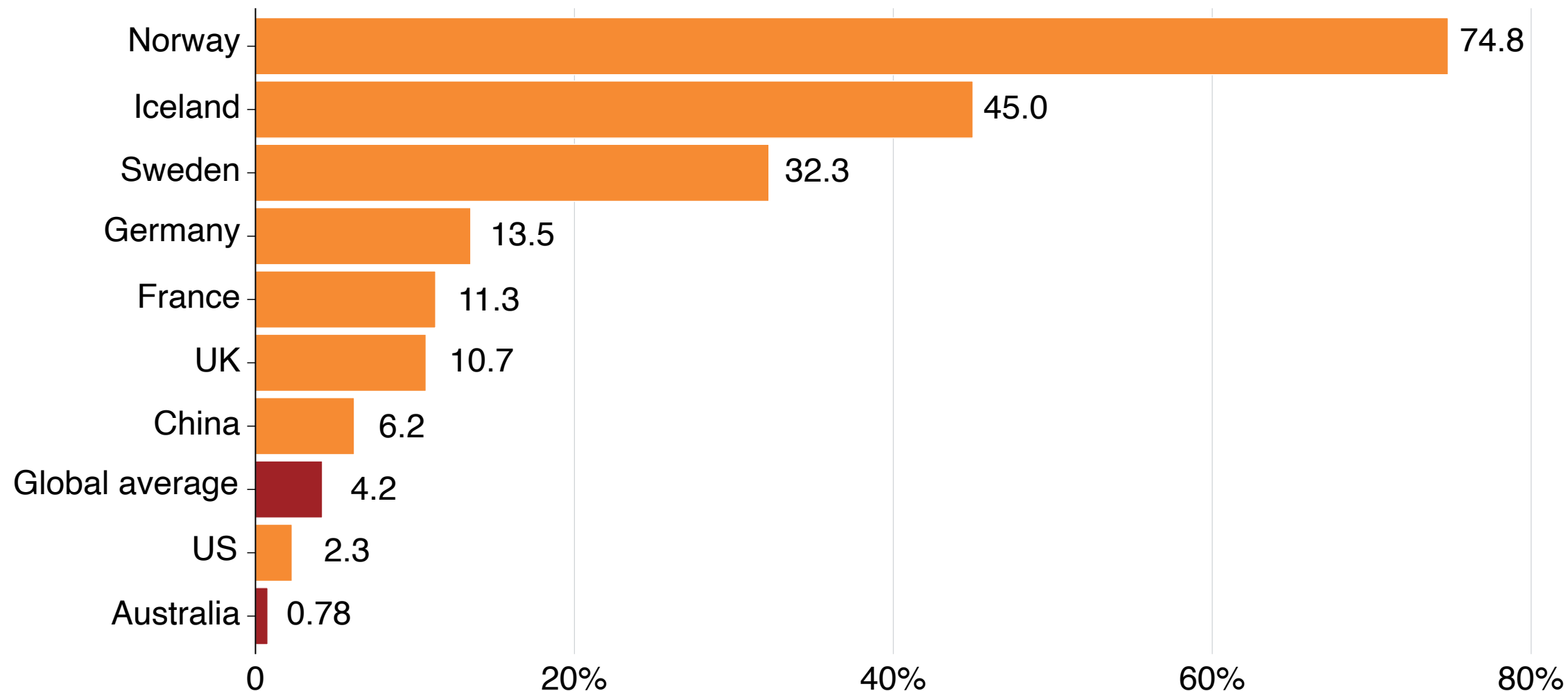
Germany's passenger car fleet is much cleaner than Australia's

Emissions (grams CO₂/km) and mass (kg) of passenger car models sold in Australia (2020) and Germany (2019)



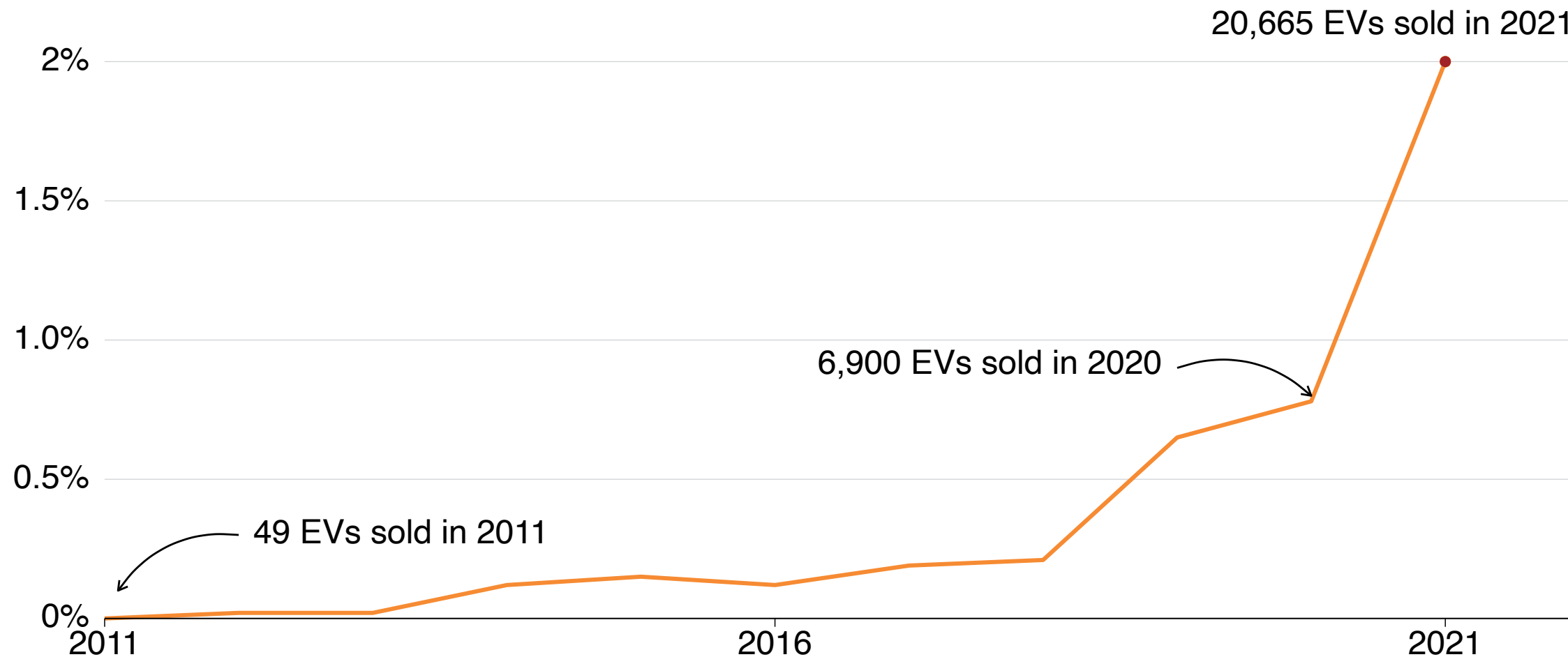
Australia is a global laggard on vehicle technology

Electric vehicle sales as a proportion of new light vehicle sales, 2020



Electric vehicle sales are growing

Sales as a percent of light vehicle sales



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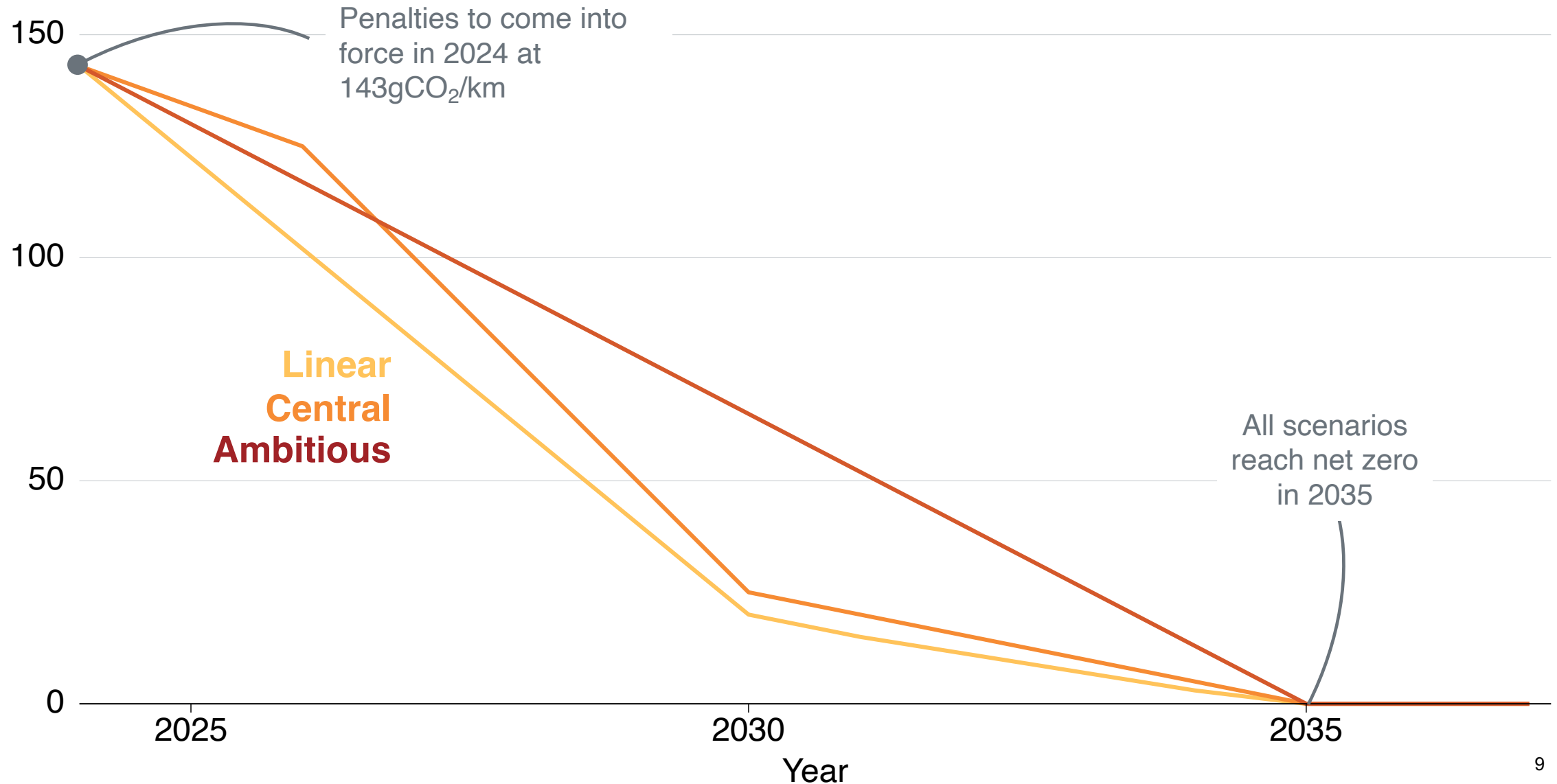
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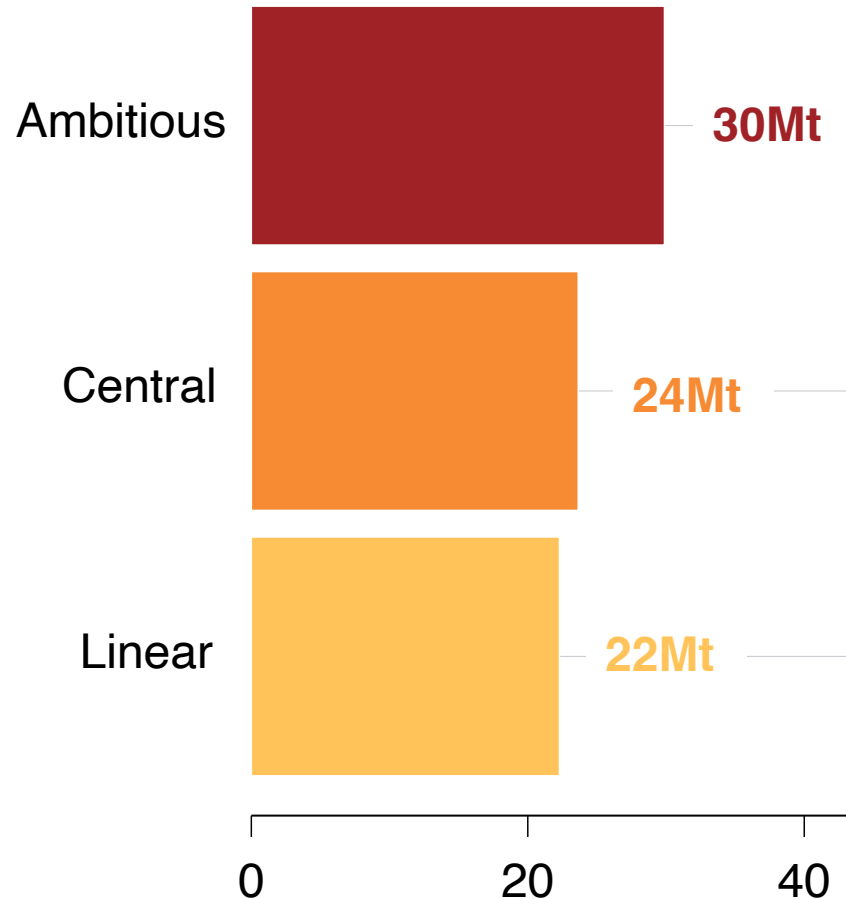
The three scenarios we modelled

Average vehicle emissions targets under an emissions ceiling, gCO₂/km

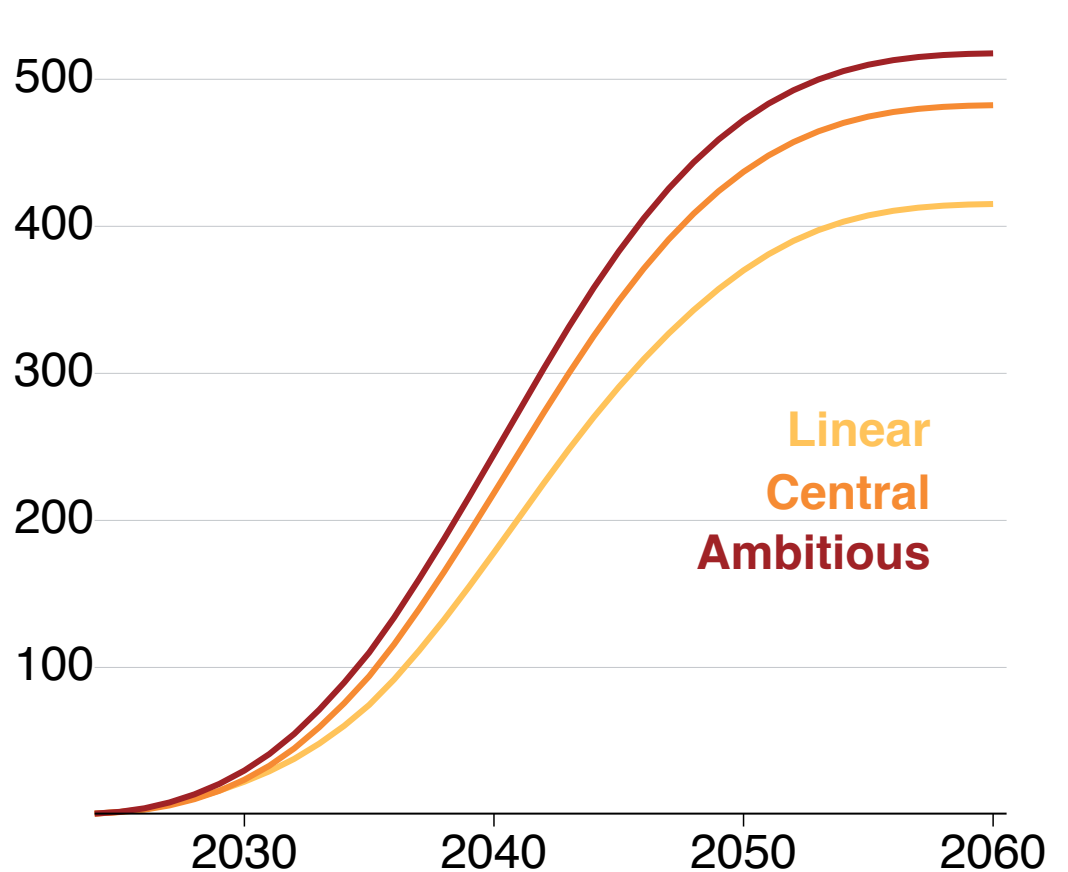


An emissions ceiling could achieve more than 40 per cent of the emissions reductions Australia needs to meet its 2030 target

Emissions abated (Mt) between 2021-2030 under an emissions ceiling



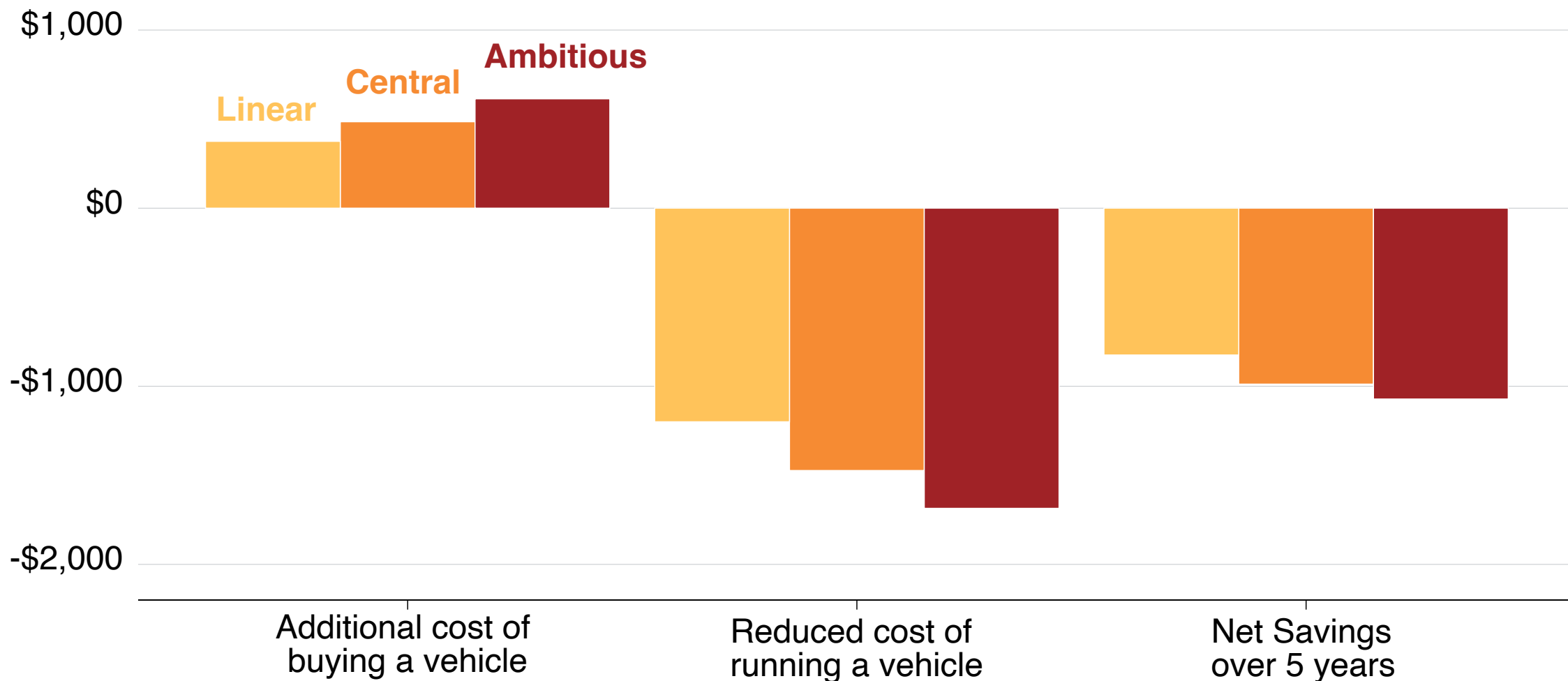
Cumulative emissions abated under an emissions ceiling (Mt)



Notes: What we call Australia's 2030 target refers to a 26 per cent reduction in emissions compared to 2005 levels, without the use of credits, and is calculated over the 2021-2030 period.

Low-emissions and electric vehicles cost more to buy but less to run

Estimated change consumer cost under a vehicle emissions ceiling



A discount rate of 7% is applied to all figures. Fuel savings are calculated based on average expected manufacturer level cost increases and average consumer driving behaviours.

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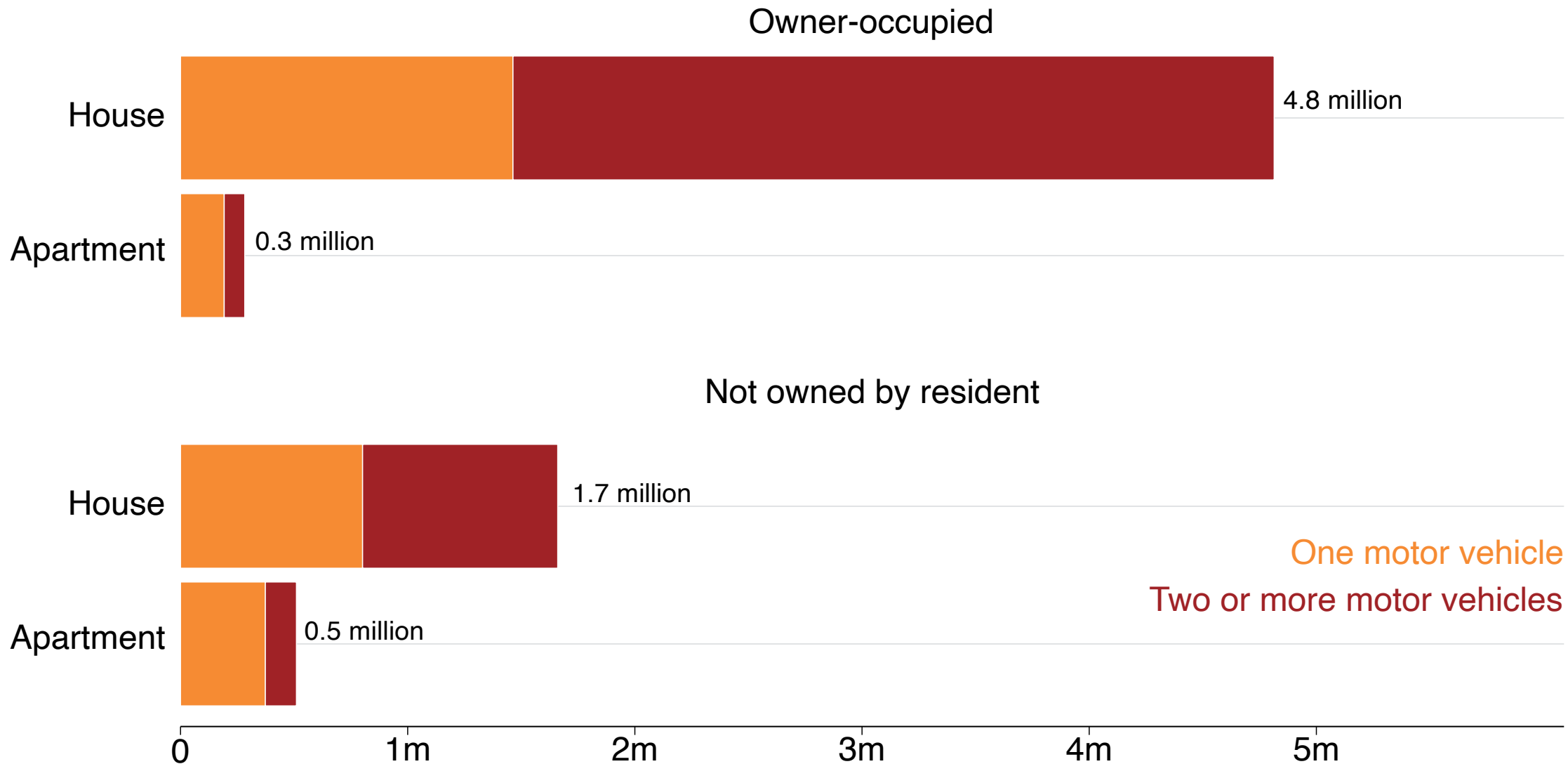
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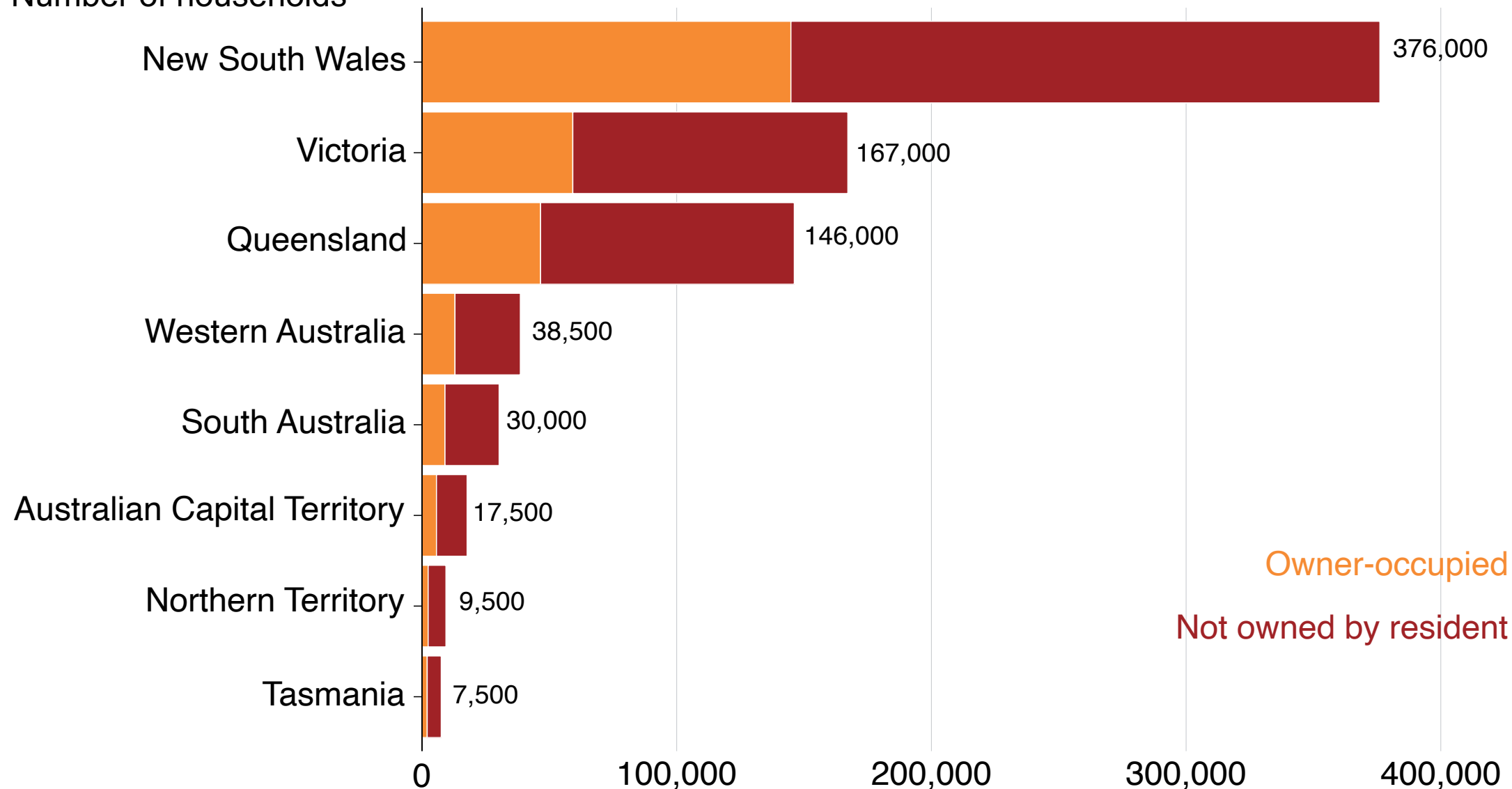
Most households that own a vehicle own a detached or semi-detached house

Number of households



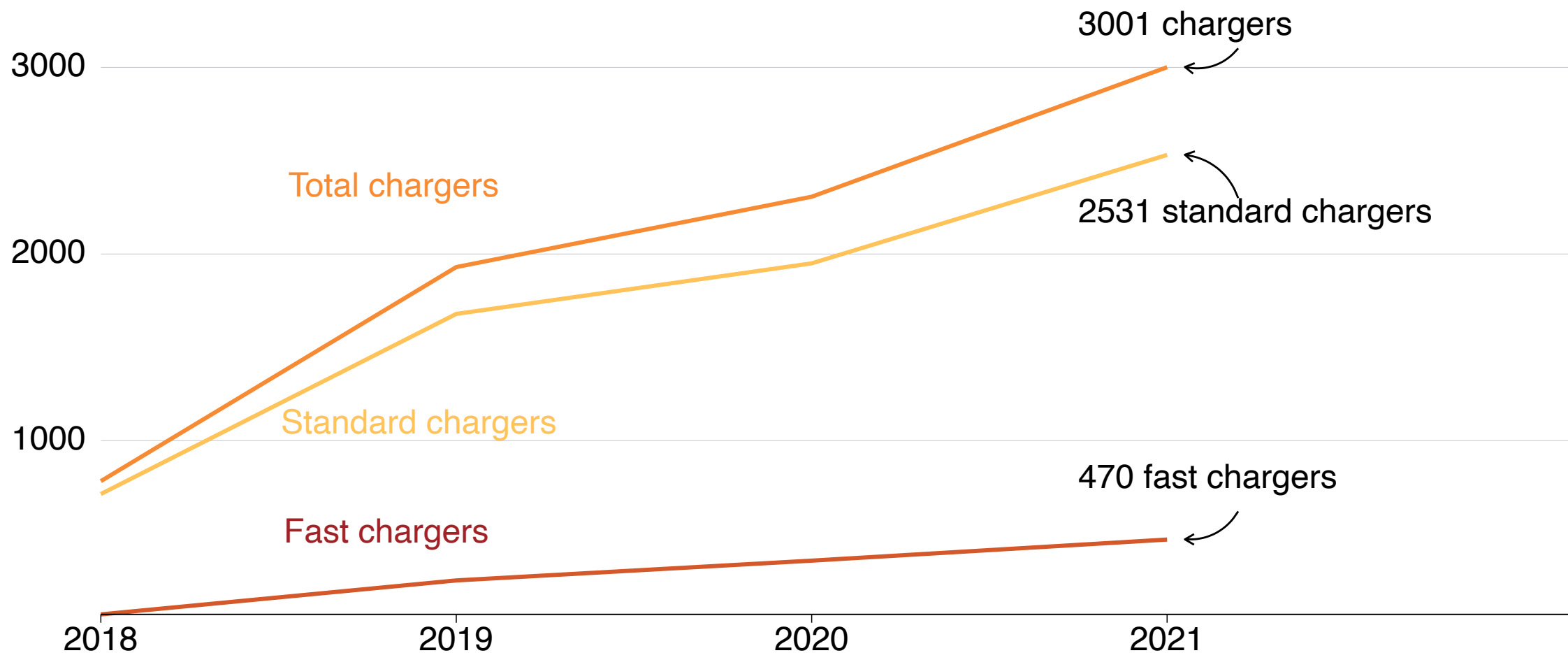
Households who live in apartments and own cars are concentrated in NSW

Number of households



Australia's publicly-accessible charging network is growing rapidly

Number of public chargers



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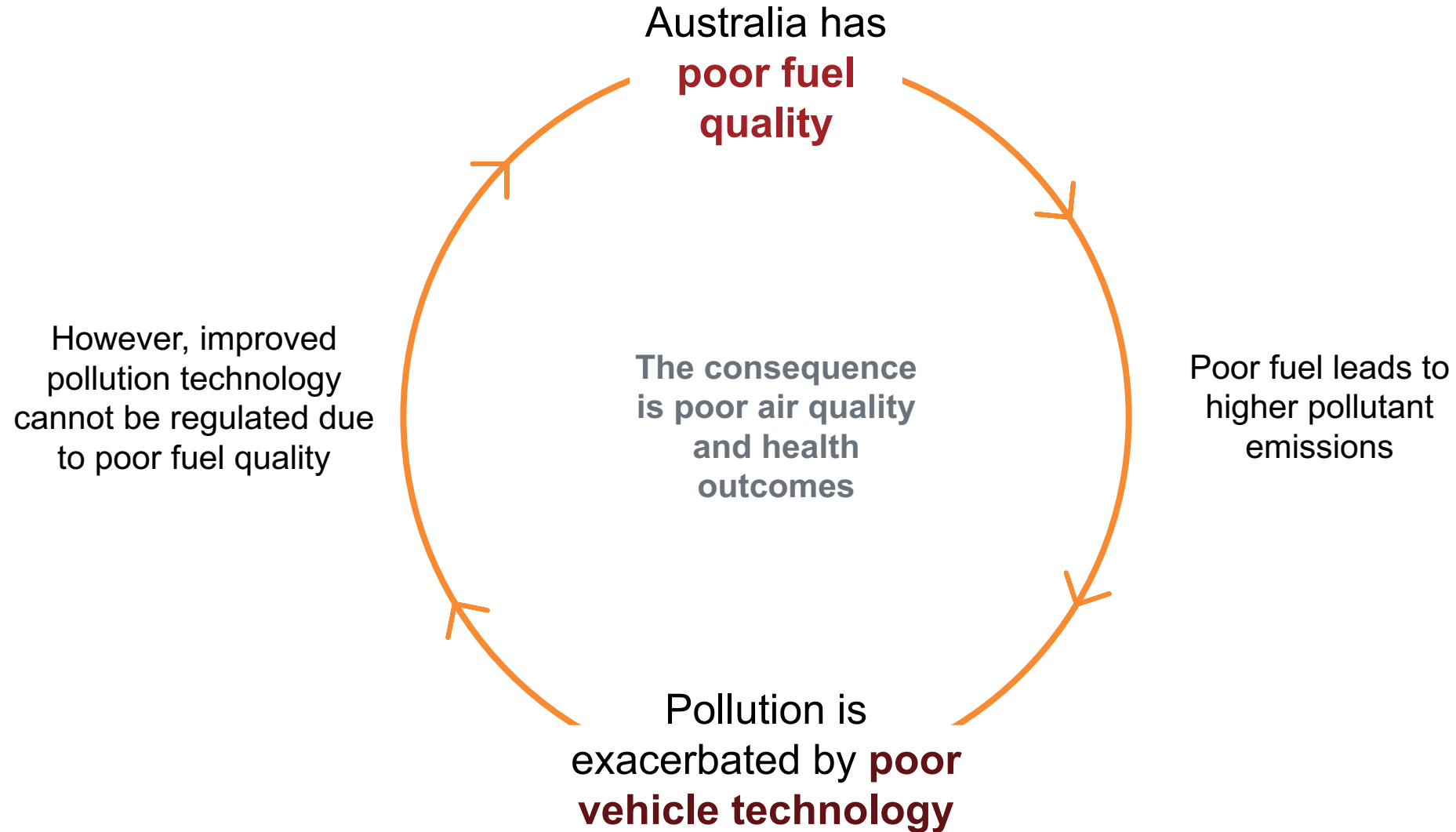
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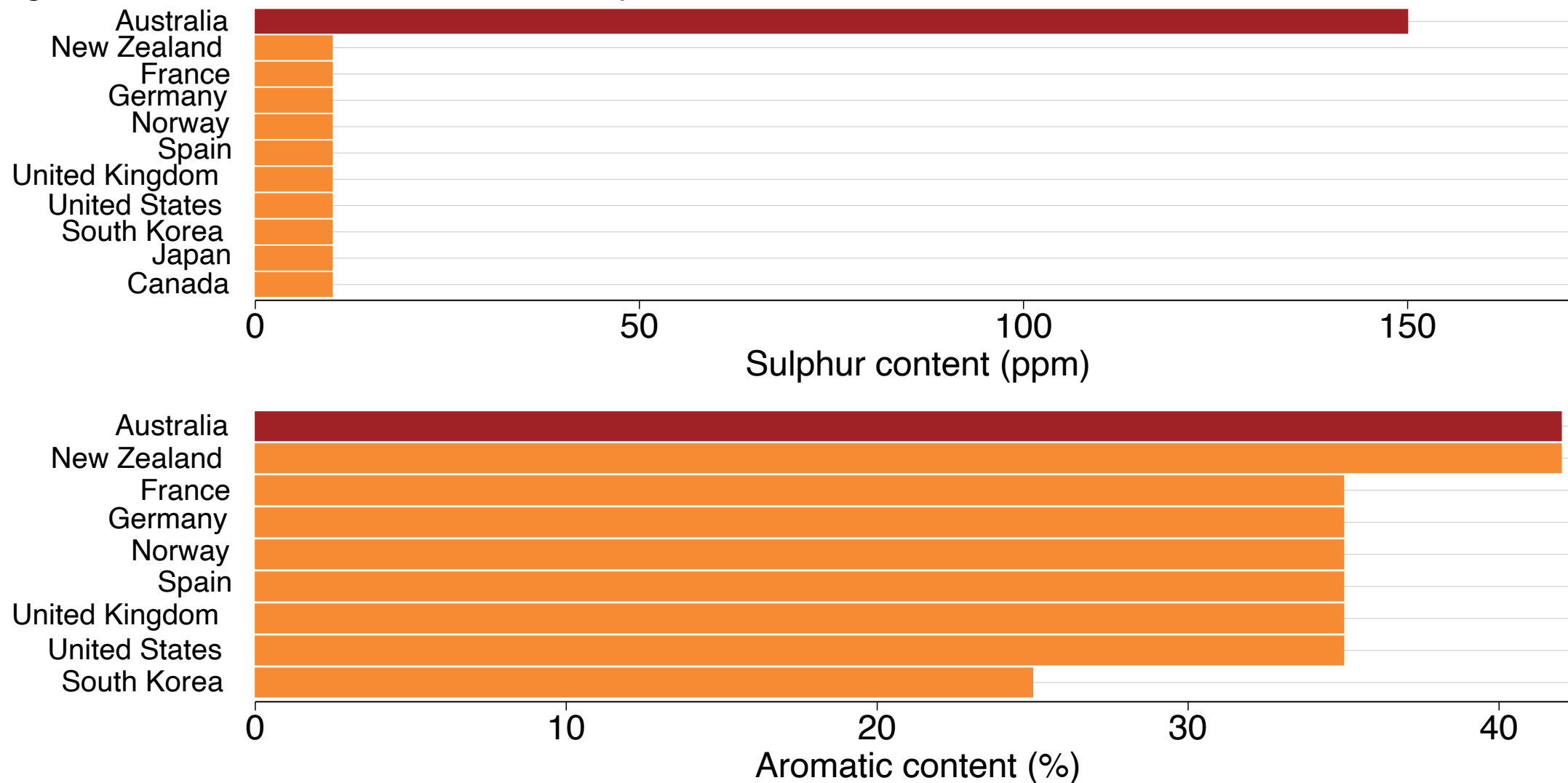
Recommendations

Australia needs to improve both fuel quality and vehicle technology



Australia's petrol is poor quality by international standards

Regulated sulfur and aromatic content of petrol



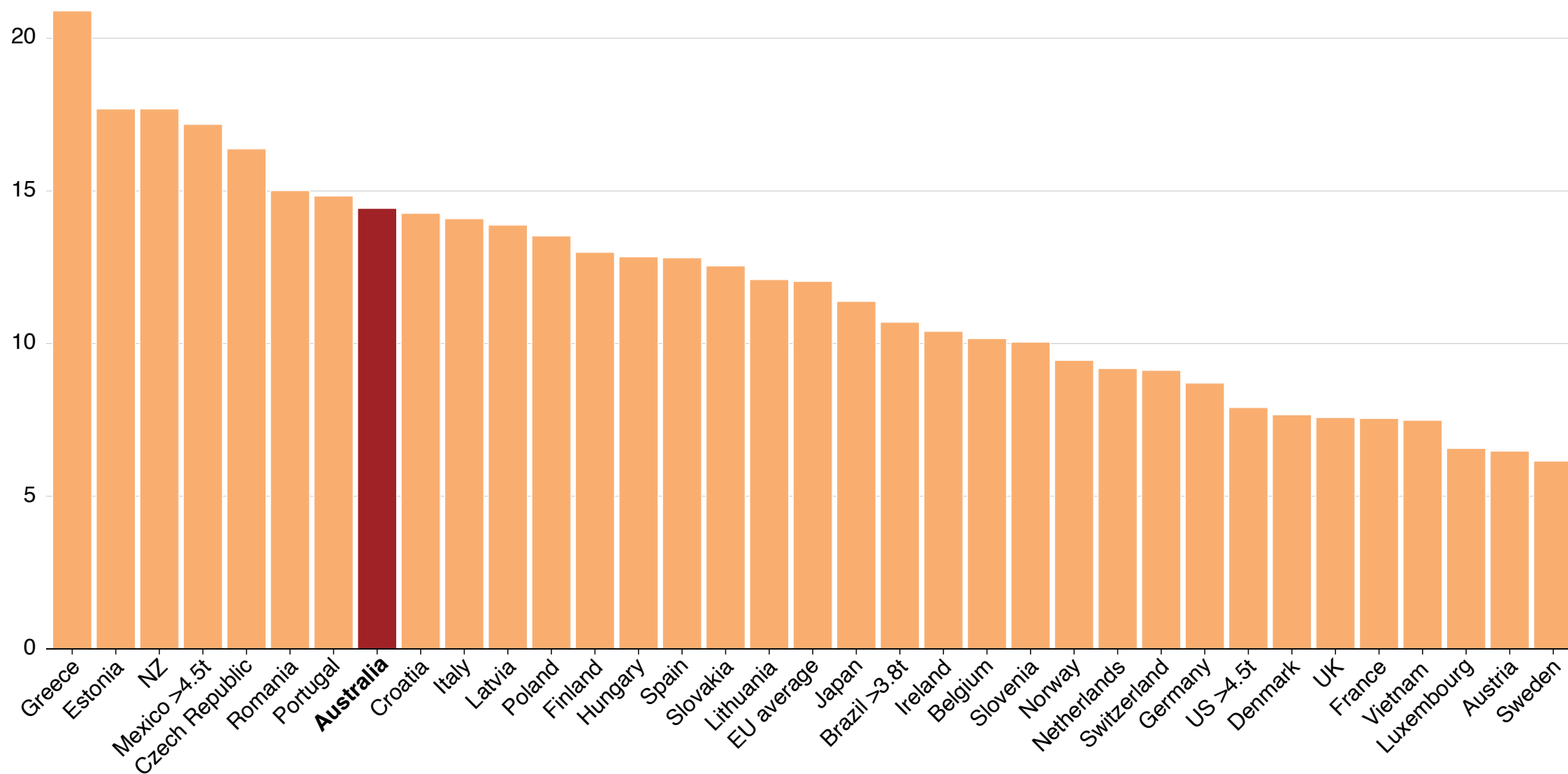
Regulated limits are given as pooled limits where available, or maximum limits if no pooled limit applies.

Japan and Canada do not prescribe an aromatic petrol content limit.

Source: DIRD (2016) and Grattan analysis

Trucks are old by international standards

Average age of trucks, by country



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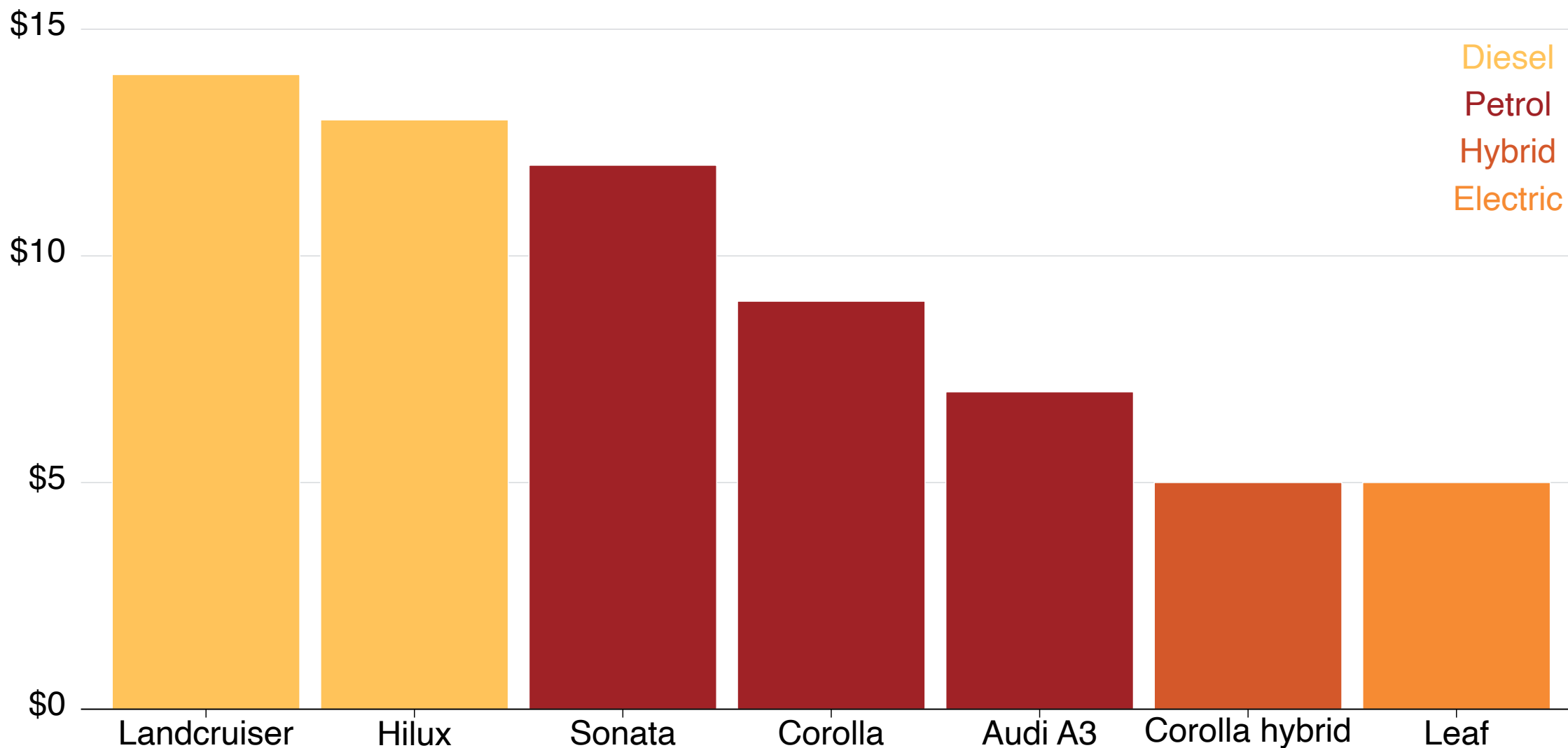
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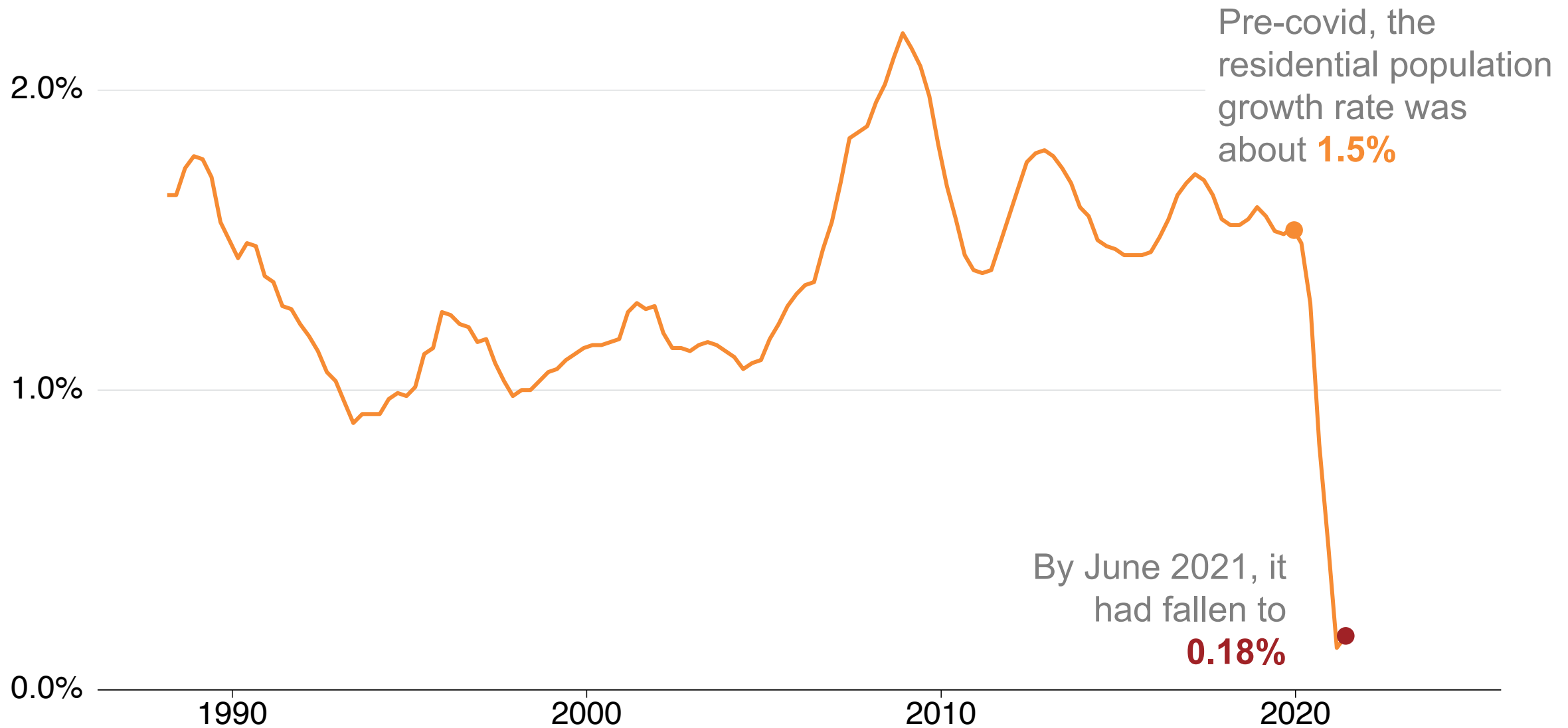
Low and zero-emission vehicles cost more to buy but are cheaper to run

Cost per 100km



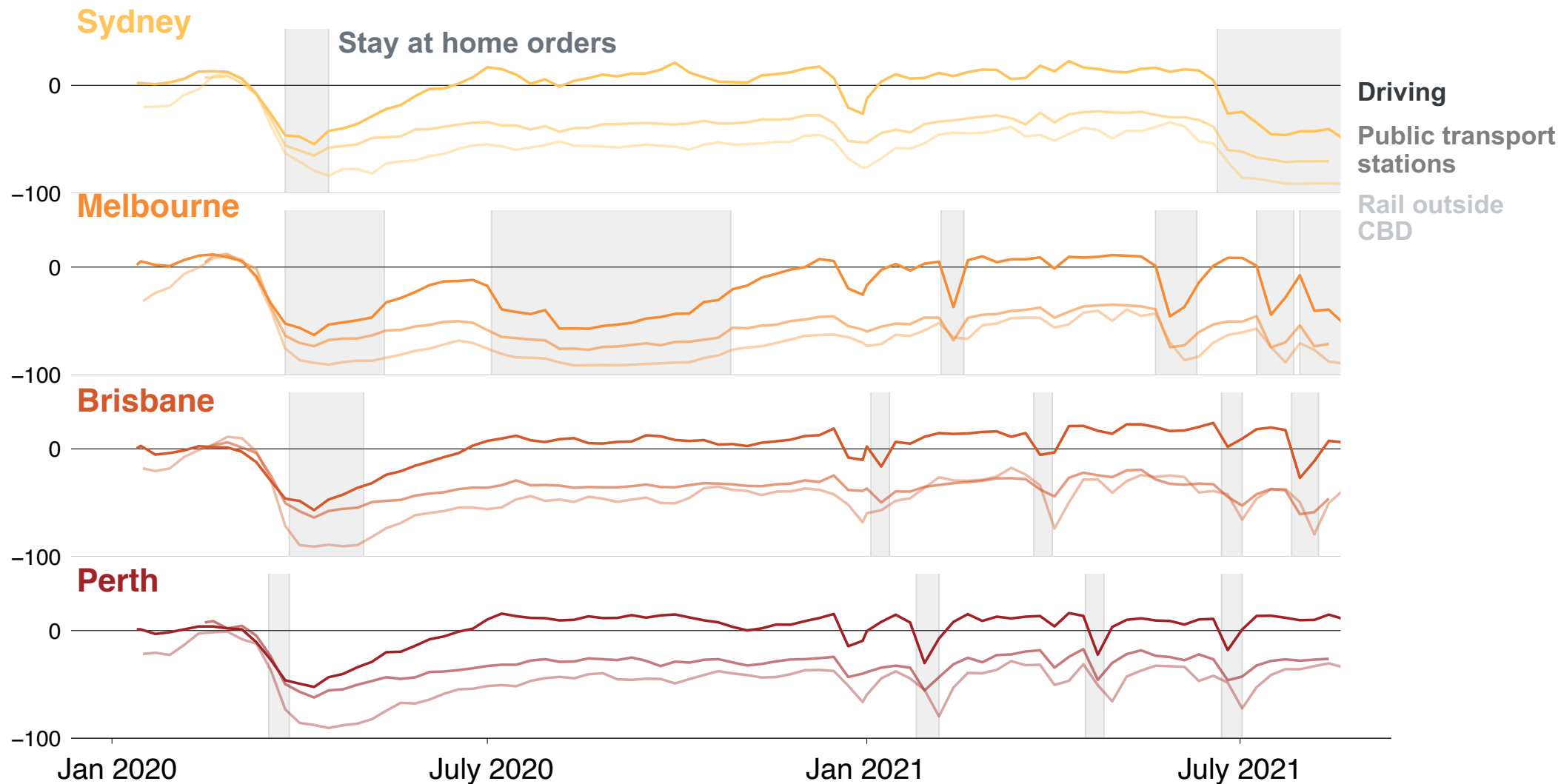
Population growth has fallen off a cliff

Annual growth in the Australian residential population



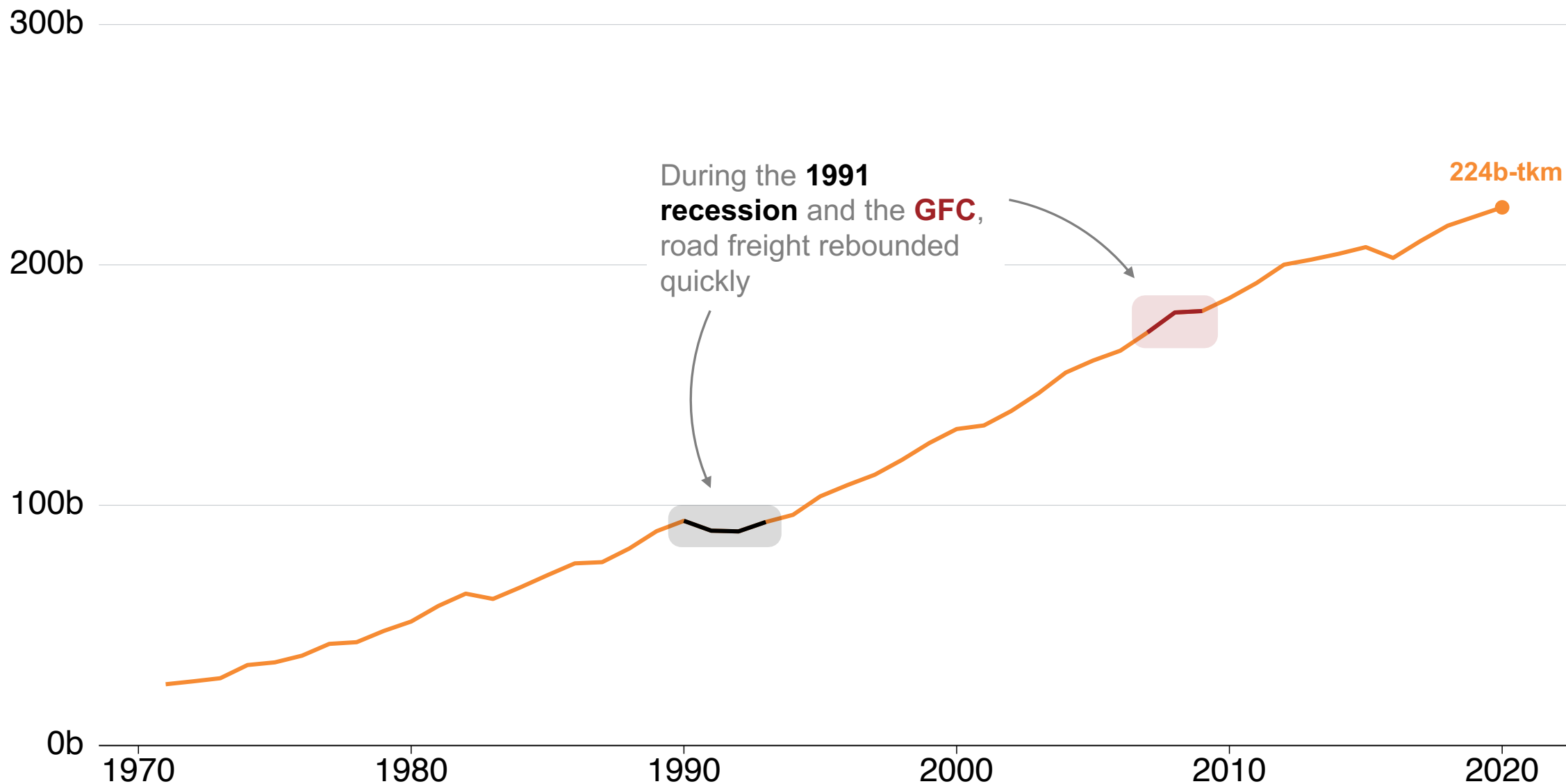
Even outside of lockdown, travelers have been shunning public transport

Mobility, percentage change from baseline, weekly average



Road freight has recovered quickly from past downturns

Total yearly road freight tonne kilometres (billions)



Recommendations

Zero- and low-emissions vehicles

- Impose a single annual average emissions standard, or ceiling, covering all new light vehicle sales, capped at:
 - 143 grams of carbon per kilometre (g/km) in 2024;
 - 100g/km by 2027;
 - 25g/km by 2030; and
 - Zero by 2035.

Charging infrastructure for electric vehicles

- Government funding should be limited to investments in publicly accessible chargers that encourage substantial numbers of people to switch to electric vehicles, and which are not otherwise commercially viable.
- State governments should require landlords and vendors to disclose whether their property has charging infrastructure.
- The National Construction Code should be updated to require new dwellings with off-street parking to be ready for electric vehicles.

Support for buyers

- The Federal Government should permit the import of any new and second-hand vehicle that meets safety and environmental standards (including the annual average emissions ceiling)
- Australia's fuel consumption labels should include an estimate of real-world emissions and indicative costs of the vehicle.

Fewer tailpipe pollutants

- Improve the quality of Australia's petrol, so that vehicles here can meet international pollutant standards by mid-2024
- Tighten vehicle pollution standards to match current international standards, immediately for diesel vehicles, and by mid-2024 at the latest for petrol vehicles.