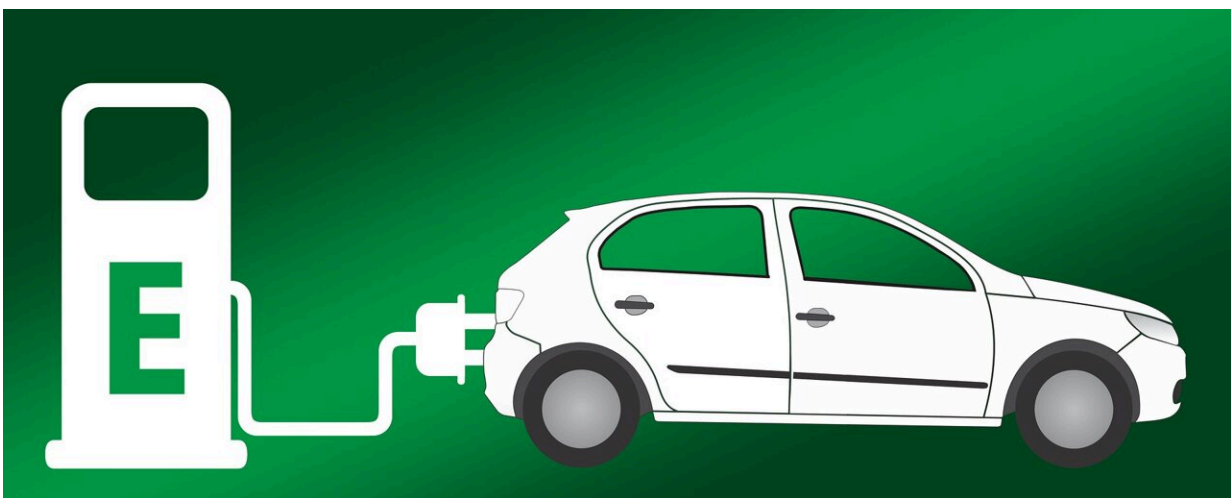


Why electric vehicles won't be enough to rein in Australia's transport emissions any time soon

December 22 2022, by Philip Laird



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Progress towards Australia's new emissions target of a 43% reduction by 2030 (from 2005 levels) has been decidedly mixed. Emissions [in the electricity sector](#) have fallen in recent years, but the upward trend in another major sector, transport, is [set to continue](#).

There is a widespread view, [implicitly encouraged](#) in some states, that transport emissions can simply be reduced by more use of electric vehicles powered from [renewable energy sources](#). On the contrary,

reducing overall transport emissions will require policy reform and infrastructure investment on many fronts.

Recent decades, though, have been marked by a lack of action. The 2022 [International Energy Efficiency Scorecard](#) shows how far Australia has fallen behind. Overall, Australia [ranked 18th](#) out of 25 of the world's largest energy users, and 23rd for transport.

On five of the nine criteria for assessing transport, Australia scored zero points. These were: no 2025 [fuel economy standards](#); poor on light [vehicle](#) average fuel economy; low electric vehicle sales share; no heavy vehicle fuel economy standard; and no smart freight programs.

The [federal government](#) has acknowledged effective vehicle fuel-efficiency standards are long overdue. And, as the source of [45% of all pre-COVID transport emissions](#), reducing emissions from cars is important—but it's only part of the solution.

It will take years for more efficient cars and electric vehicles to replace the current less energy-efficient ones. [Recent experience](#) also suggests more than high petrol prices will be needed to reduce vehicle travel and emissions.

What more can be done?

Reducing transport emissions was the subject of reports produced by the Bureau of Infrastructure, Transport and Regional Economics (BITRE) [up to 2009](#). Proposals included "no regrets" measures such as more freight on rail, while effective road pricing reform (to strengthen the connection between costs to drivers and [travel times](#) and distance) was judged to "offer the largest potential for reducing [greenhouse gas emissions](#) from transport".

Only a few measures were implemented, such as energy labeling of cars and 50km/h urban speed limits. As a result, [BITRE data](#) show overall transport emissions (excluding electric rail) increased some 19% from 2005 to 2019 (before temporary COVID-related reductions). There were increases of 16% from cars, 16% from articulated trucks and 50% from domestic aviation.

To turn this around, the federal government has set up a Net Zero Unit. The minister responsible for transport, Catherine King, [acknowledged](#):

"Achieving our government's emissions reduction targets on the path to net zero by 2050 will require concerted action to drive emissions lower across the transport sector."

In a recent [consultation paper](#) for the forthcoming National Electric Vehicle Strategy, the ministers' foreword noted:

"Today, Australians are being sold some of the highest-emitting cars in the world. On average, new passenger vehicles in Australia have around 20% higher emissions than the United States, and around 40% higher emissions than in Europe. We need to catch up to the rest of the world when it comes to transport emissions."

What's being done overseas?

Measures that have worked overseas include better public transport (which was effective during the 2010s in Australia) and congestion pricing (charging drivers for travel at peak traffic times) in major cities.

A further measure, recommended 20 years ago by state transport ministers, was to move from high annual registration fees to higher fuel excise. This would mean people who drive their cars less are not subsidizing those who drive their cars more. New Zealand has adopted this approach.

New Zealand has also adopted an [Emissions Reduction Plan](#) that includes "a focus on reducing reliance on cars and delivering considerable change in walking, cycling and public transport. The transport actions set a target to reduce vehicle kilometers traveled by the light vehicle fleet by 20%, by 2035."

This ambitious target is complemented by other measures, including land-use planning to reduce the distances people need to travel to get to work, services and amenities.

[Britain](#) and [Europe](#) have introduced similar strong measures.

Shifting freight to rail and sea

As has often [been said](#), "without trucks, Australia stops". However, the convenience of moving freight by trucks, which has been boosted over the past three decades by a much-improved road system and larger and heavier trucks, comes with many costs.

One cost is the impact of more trucks on the roads. A further cost is higher emissions. Trucks [use three times the energy](#) and so produce three times the emissions of a given freight task done by rail or sea.

I have calculated that if rail were to regain a 50% share of the freight on the Sydney-Melbourne route alone, it would cut emissions by over 300,000 tons a year. This is the equivalent of taking about 100,000 cars off the road.

Keeping aviation emissions in check

Although domestic flights were producing just 9% of all pre-COVID transport emissions in Australia, a 50% increase in aviation emissions from 2005 to 2019 demands government action to limit further growth. This will be a challenge given Australians' reliance on flying between capital cities and to regional centers.

Other countries such as France are [limiting short-haul air travel](#) where rail is an alternative.

Globally, as the International Energy Agency has [noted](#):

"Rail transport is the most energy-efficient and least carbon-intensive way to move people and second only to shipping for carrying goods."

One corridor where an improved train service competes with regional aviation is Bundaberg to Brisbane. On many other corridors, such as Canberra to Sydney, more frequent and faster trains would be well received and would reduce emissions.

In the longer term, a dedicated high-speed rail service—electric trains moving at over 250km per hour—will be needed between Melbourne and Sydney. In the medium term, track upgrades and tilt trains offer scope to [cut the travel time](#) from 11 to about six hours within four years.

Australia needs to act with urgency on all fronts—cars, freight and aviation—to get [transport](#) emissions on track for net zero.

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Provided by The Conversation

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<https://techxplore.com/news/2022-12-electric-vehicles-wont-rein-australia.html>

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