

# Stop comparing Australia's EV uptake with Norway's

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REVAi electric vehicles in Oslo, Norway, in 2010. Photo by Mic via Flickr [CC BY 2.0]

Numerous [lobby groups](#), [transport journalists](#), [academics](#), and even [political satirists](#) have argued that Australia should follow [Norway's](#) example in encouraging the take-up of electric vehicles.

But even the [Secretary General](#) of the [Norwegian Electric Vehicle Association](#) admits it would be difficult for other countries to emulate Norway's approach:

From an Australian perspective, Norway's uptake of electric vehicles is similar to [Switzerland](#)'s uptake of broadband: a geographically small country with a small population able to quickly take advantage of local particularities - what I have referred to in the past as "[varieties of particularism](#)" - which include:

*the unique social, political, economic, technological and geographical peculiarities that exist at the nexus of government, business and... technolog[y].*

My concept is derived from what [Thomas P. Hughes](#) referred to as regional "cultures" in his work [Networks of Power: Electrification in Western Society, 1880-1930](#), which looked at how different regional characteristics led to different systems for generating electricity.

Nevertheless, it is difficult to have a point of view that differs from what I reluctantly refer to as "[green-left ideology](#)" about EV policy at the moment, especially when it comes to comparing infrastructure policy with other jurisdictions. I suspect there are powerful industry groups encouraging these approaches, too. But for the green-left, at least, aspiration trumps evidence in all things except tradition and religion, it would seem.

Nonetheless, there is much more to the EV story.

The front page of [The Sydney Morning Herald](#) on 12th May 2021 quotes NSW Planning Minister Rob Stokes, warning:

*Although [electric vehicles] are powered by more efficient and sustainable power sources, they are still cars. Painting them green does not change that reality.*

Stokes also mentioned that heavier and more "torquey" EVs could potentially release more non-exhaust particulate emissions than conventional vehicles. This issue has been identified by the [OECD](#) as an increasingly important public health policy issue as the number of vehicles in cities (of all types) continues to rise.

electricity is generated.

The [majority of Norway's electricity](#) is generated from hydropower (93.4%) with the remainder generated by wind and thermal power. Whereas coal accounts for 75% of [Australia's electricity generation](#), with gas at 16% and the remaining 7% provided by hydro and wind power.

Further, Norway is much smaller than Australia and much wealthier on a per capita basis. Canada provides a much better "fit" in terms of the "[most similar](#)" method of comparison on geographical, cultural, and political grounds. The table below indicates the differences between all three countries on these measures:

Country	Population (million)	Area (square km)	GDP per capita (USD)	Uptake of EVs as %
Norway	5.328	385,207	75,419.63	12.04%
Australia	25.360	7,692,000	55,060.33	0.14%
Canada	37.590	9,985,000	46,194.73	0.40%

Comparison of Norway, Australia and Canada. Data sources below.

Australia and Canada are similar on the most basic demographic statistics, and Norway is no bigger or more densely populated than greater Sydney but it is substantially wealthier with greater access to Europe's EV market.

Canada has its own EV manufacturing industry and is not subject to the same restrictions that Norway is likely to face in the near future if Europe's EV market contracts. On the other hand, Australia has an issue with [supply and consumer choice in EVs](#) which is likely to be exacerbated by important issues arising from the pandemic.

Can the less than 1% uptake of EVs in Australia and Canada be the result of a lack government incentives? Canada has introduced federal cash rebates to promote EV sales, yet the uptake in Canada is not expected to meet federal targets set for

One of the major issues for the EV industry, especially in large, sparsely populated countries like Australia and Canada, is consumers' perceptions of EV's range.

Research conducted by [KPMG in Canada](#) found that EV purchases were motivated primarily by environmental concerns and lower operating costs. While incentives for purchasing EVs were desirable, other concerns about the higher purchase cost, reliability of batteries, long charging times, and doubts about the ability to travel long distances and access to relevant charging infrastructure were the major reasons motorists were reluctant to purchase an EV.

The [Electric Vehicle Council of Australia](#) arrived at similar findings to the Canadian experience. Of note is "range anxiety", with some 79% of consumers estimating the average range of EVs to be well under 400km. The EV Council suggests that ranges can vary from 260km to 650km. But this is [significantly less than the ranges](#) of most modern conventional vehicles.

Range anxiety is very real in Australia and Canada with both countries ranking in the top five longest national highways in the world.

Most importantly, however, is that [traffic congestion in Norway](#) is still a major concern, with the supply of roads confirming the old adage that increasing the supply of roads leads to increasing demand. This issue alone more than justifies NSW Planning Minister Rob Stokes' concerns about EVs.

I am not against EVs and I have no interest in hindering their uptake. But comparing Australia with Norway is oversimplified, unjustified, and inherently lacking in rigour. If we were to take Canada as a more appropriate example, then there is much more than just policy at play.

long-distance car travel are unlikely to be persuaded to buy an EV.

The logical conclusion in the short run, then, is that government subsidisation is likely to benefit the relative few by contributing to traffic congestion at taxpayers' expense (and indeed without contributing to the fuel excise) until EV technology improves.

In Australia, EVs are not the panacea for greenhouse gas emissions and may actually contribute to them if EV charging increases demand on Australia's predominantly non-renewables electricity generation system.

To add insult to injury, subsidising EV ownership without incorporating an appropriate road user charge will only exacerbate the problem of traffic congestion. In this regard, Victoria is on the right track.

For NSW, Transport Minister Andrew Constance is in a difficult position and must deal with the EV lobby while also fitting in with Planning Minister Stokes' and NSW Treasurer Dominic Perrottet's plans to introduce a distance-based tax on EVs.

Politics will decide the outcome and it will not be neat and tidy. In the meantime, looking to Norway is unlikely to address the real reasons behind Australia's slow uptake of EVs.

## Data Sources

### Australian Statistics:

Australian Bureau of Statistics (2020). *Motor Vehicle Census, Australia*.

See: <https://www.abs.gov.au/statistics/industry/tourism-and-transport/motor-vehicle-census-australia/latest-release>.

[are-there-in-australia-and-where-are-they/](#).

### Canadian Statistics:

Electric Autonomy (2021). New Canadian EV sales figures from Statistics Canada show strong recovery in Q3 2020, following sharp lockdown dip.

See: <https://electricautonomy.ca/2021/02/11/canadian-ev-sales-data-q3-2020/>.

Statistics Canada (2020). Automotive Statistics.

See: <https://www.statcan.gc.ca/eng/topics-start/automotive>.

Statistics Canada (2021). Zero-emission vehicles in Canada, third quarter of 2020.

See: <https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2021012-eng.htm>.

### Norwegian Statistics:

Statistics Norway (2021). Registered Vehicles.

See: <https://www.ssb.no/en/transport-og-reiseliv/landtransport/statistikk/bilparken>



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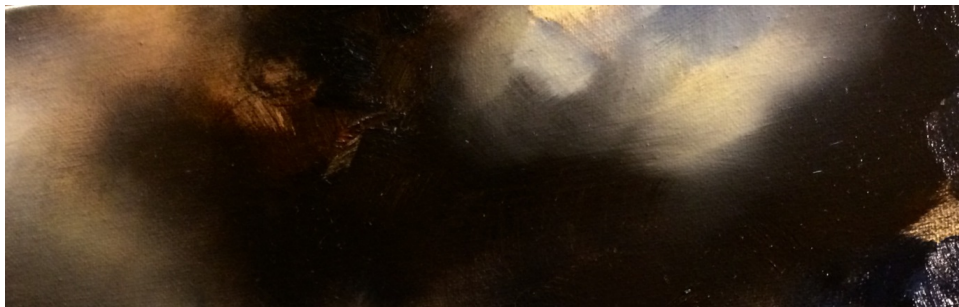
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