

# Driving Norse: Electric Vehicle policies in Norway

*Norway has implemented a suite of policies to boost electric vehicle uptake. These policies should be considered in Australia's electric vehicle debate.*

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April 2019

## Norwegian leadership in electric vehicles

The Nordic countries (defined in this briefing note as Norway, Denmark, Sweden, Finland and Iceland) represent the world's third-largest electric vehicle market by share of sales, despite being far smaller in population than the top two markets, China and the United States of America. Norway is a prominent leader in electric vehicle (EV) policy amongst the Nordic countries and the world. In Norway, the number of new car registrations that are EVs is now over 50%.<sup>1</sup>

Norway's success has been driven by government leadership, creating a policy environment to drive a large-scale and sustainable shift to EV use. Norway's policy

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<sup>1</sup> Norsk Ebilforening (2019) *Norway reaches historical electric car market share* <https://elbil.no/norway-reaches-historic-electric-car-market-share/>

framework to boost uptake of EVs has been in place since 1990.<sup>2</sup> The country has the highest share of EVs per-capita in the world<sup>34</sup> and is aiming for all new cars sold to be EVs by 2050.<sup>5</sup>

By contrast, in Australian EV sales last year were only about 0.2 per cent of the total compared with just under 2 per cent globally.<sup>6</sup>

Norwegian policies serve as a useful roadmap for OECD members suffering from low-uptake, such as Australia. A useful English language source on Norwegian EV policies is the recent International Energy Agency report, *Nordic EV Outlook 2018 Insights from leaders in electric mobility*.

## Policy levers at play

Norwegian EV policies can be roughly divided into three categories:

- **Purchase incentives:** Aim to reduce the upfront cost of EVs as compared to ICE vehicles. These policies tend to have the most influence, as consumers appear to be more influenced by short-term expenditure than longer-term savings.<sup>7</sup>
- **Use incentives:** Aim to reduce the cost of using EVs as compared to ICE vehicles.
- **Access incentives:** Incentivise EVs by allowing them access to bus lanes and designated parking.

The following table (Table 1) outlines the EV policies for five Nordic countries. The policies are explained in more depth below, with specific reference to Norway.

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<sup>2</sup> International Energy Agency (2018) *Nordic EV Outlook 2018 Insights from leaders in electric mobility*, <https://webstore.iea.org/nordic-ev-outlook-2018> p 8.

<sup>3</sup> The International Council on Clean Transportation (2018) *Using vehicle taxation policy to lower transport emissions: An overview*, p ii  
[https://www.theicct.org/sites/default/files/publications/EU\\_vehicle\\_taxation\\_Report\\_20181214\\_0.pdf](https://www.theicct.org/sites/default/files/publications/EU_vehicle_taxation_Report_20181214_0.pdf)

<sup>4</sup> IEA(2018) p8

<sup>5</sup> <https://elbil.no/english/norwegian-ev-policy/>

<sup>6</sup> Bloomberg New Energy Finance (2018) *Cumulative Global EV Sales Hit 4 Million*  
<https://about.bnef.com/blog/cumulative-global-ev-sales-hit-4-million/>

<sup>7</sup> Ibid, p 25

**Table 1: Nordic Policies to Encourage Uptake of Electric Vehicles**

	Denmark	Finland	Iceland	Norway	Sweden
Purchase Incentives	Registration tax rebate	Registration tax rebate		Registration tax rebate	Registration tax rebate
			Registration tax exemption	Registration tax exemption	
			GST exemption	GST exemption	
					Tax Credits
Use Incentives	Circulation tax rebates/exemptions	Circulation tax rebates/exemptions	Circulation tax rebates/exemptions	Circulation tax rebates/exemptions	Circulation tax rebates/exemptions
	Waived fees for tolls, parking, ferries at the local level			Waived fees for tolls, parking, ferries	Waived fees for tolls, parking, ferries at the local level
					Tax credits for company cars
Access Incentives	Free/dedicated parking		Free/dedicated parking	Free/dedicated parking	
				Access to bus lanes	

Source: International Energy Agency (2018)



## Purchase Incentives

### ***Registration tax rebates and exemptions***

In all Nordic countries, car registration is a one-off ‘registration tax’ (though it is more similar to a fee in Australia). In Norway, this registration fee is 30% for an average ICE car.<sup>8</sup> In Norway, the registration fee is differentiated between vehicles based on their weight, carbon dioxide (CO<sub>2</sub>) emissions and nitrogen oxide (NO<sub>x</sub>) emissions. Norway’s registration tax keeps up to date with the latest technological advancements too, changing how CO<sub>2</sub> and NO<sub>x</sub> emission levels are taken into account to incentivise models with the highest environmental standards.

<sup>8</sup> IEA (2018) p 20.

A registration fee rebate returns some of the money charged as registration fee, whilst registration fee exemptions means that certain vehicles pay no registration fee at all. By reducing the amount of registration tax paid on EVs, customers are incentivised to choose EVs over ICE vehicles, due to the lower upfront costs. An example is provided in Figure 1 comparing standard European car in both ICE and EV models.<sup>9</sup>

### **GST exemption**

Goods and services tax (GST or value-added tax, VAT) exemptions have a similar effect as registration tax rebates/exemptions. In Norway, zero-emissions vehicles have been exempt from a 25% GST on purchase since 2001.<sup>10</sup> This reduces the upfront cost of EVs, encouraging consumers to purchase them over ICE vehicles.<sup>11</sup>

For example, the following table shows the difference in drive away price between an ICE Volkswagen Golf and an electric Volkswagen Golf in Norway. Although the import price is higher for the electric Golf, once registration and GST exemptions have been applied, the electric Golf retails at a comparatively lower price.

**Table 2: Import and retail price for electric and non-electric VW Golf in Norway**

(AUD)	Volkswagen Golf (VW golf TSI 110 hk)	Volkswagen e-Golf (Electric)
<b>Import Price:</b>	\$31,377	\$45,148
<b>CO<sub>2</sub> tax:</b>	\$5,528	0
<b>NOx tax:</b>	\$393	0
<b>Weight tax:</b>	\$3,739	0
<b>Scrapping fee:</b>	\$417	\$417
<b>GST:</b>	\$10,364	0
<b>Retail Price:</b>	\$51,818	\$45,565
<b>Comparative Saving</b>	<b>13% more</b>	<b>13% less</b>

Source: 'Norwegian EV policy', <https://elbil.no/english/norwegian-ev-policy/>

Note: prices converted to \$AUD at the rate of 1AUD = 5.75660 NOK current at 12/04/2019



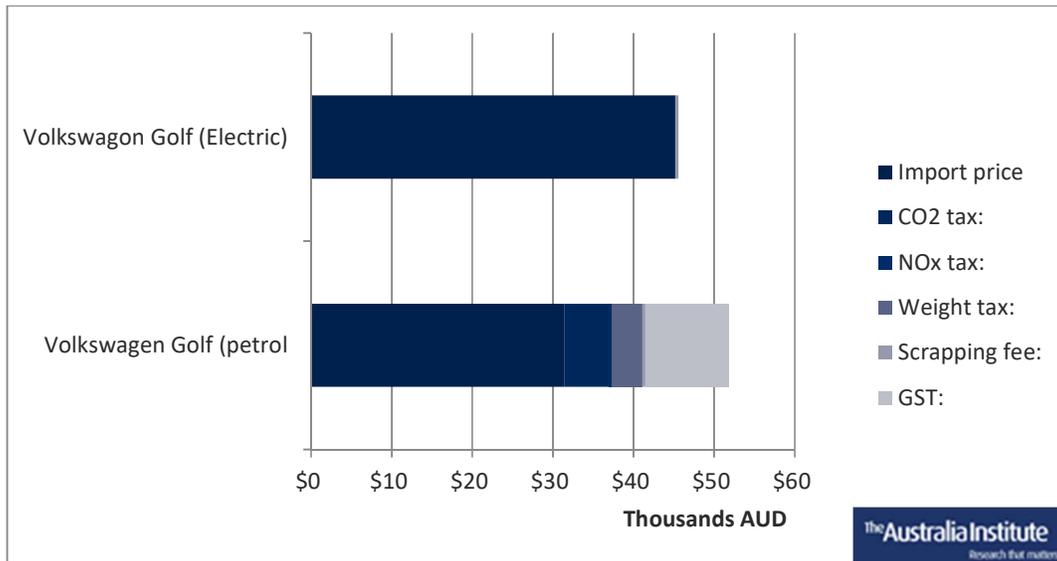
<sup>9</sup> Ibid.

<sup>10</sup> IEA (2018) p 21

<sup>11</sup> The International Council on Clean Transportation (2018) *Using vehicle taxation policy to lower transport emissions: An overview*, p ii

[https://www.theicct.org/sites/default/files/publications/EU\\_vehicle\\_taxation\\_Report\\_20181214\\_0.pdf](https://www.theicct.org/sites/default/files/publications/EU_vehicle_taxation_Report_20181214_0.pdf)

**Figure 1: VW Golf - Petrol vs Electric**



Source: 'Norwegian EV policy', <https://elbil.no/english/norwegian-ev-policy/>

Note: prices converted to \$AUD at the rate of 1AUD = 5.75660 NOK current at 12/04/2019

## Use Incentives

### ***Circulation tax rebates/exemptions***

Circulation tax requires an annual fee to allow the vehicle to operate on public roads. In most Nordic countries, circulation taxes are differentiated based on fuel consumption, weight, and/or CO<sub>2</sub> per km rating. In Norway, it is based just on the type of fuel and full electric vehicles will pay the minimum amount, NOK 455 (AUD 75).<sup>12</sup>

### ***Waivers on fees (tolls, parking, ferries)***

Nordic countries have toll roads, similar to most Australian capital cities. Tolloed ferries also connect parts of the national road network. Norway waives or lower these fees for EVs, incentivising their uptake.

## Access Incentives

Some Nordic Countries offer free or discounted parking for EVs. This policy can be used at multiple levels of governance, and is the most widely applied policy instrument at the local level. Norway also allows EVs to access bus lanes. These incentives encourage

<sup>12</sup> IEA (2018) p 25.

the use of EVs on Norwegian roads by making driving and parking easier and more accessible to EVs.<sup>13</sup>

## Charging Infrastructure

The availability of publicly accessible charging stations encourages consumers to purchase EVs and enables longer distance trips for EV drivers. The Norwegian government has established a program to finance a minimum of two fast charging stations per every 50km of main road.<sup>14</sup> In addition, the European Union has funded fast-charge networks across Europe to enable long-distance cross-border EV journeys.<sup>15</sup>

## Conclusion

Australia has a long way to go before it can catch-up to the impressive uptake of EVs in Norway and other Nordic countries. However it is all well within reach through targeted government policies. Equally important, many of these policies are popular with Australians. Recent Australia Institute's research has found three in five Australian's support a national program to switch to an electrically charged transport system (62%).

When it comes to specific policies there is an overwhelming majority of Australians (79%) who support the Government building a network of EV charging stations across the country. The majority of Australians support for governments to procure electric vehicle fleets (76%) and providing loans for electric vehicle uptake (55%).<sup>16</sup> While some policies are not very popular in Australia, including allowing EVs to use dedicated bus lanes, there remains a menu of choices the government can choose from and implement in the next year. All that is missing is the leadership to drive the change.

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<sup>13</sup> Ibid, p 26.

<sup>14</sup> Fleetcarma (2019) *How Norway became the leading EV market* <https://www.fleetcarma.com/norway-became-leading-ev-market/>

<sup>15</sup> Rapid Charge Network (2019) *EU-funded fast-charge network opens up pan-european travel* [http://rapidchargenetwork.com/news\\_post.php?id=34](http://rapidchargenetwork.com/news_post.php?id=34)

<sup>16</sup> Merzian (2019) *Poll: Overwhelming Support for Electric Vehicle Incentives* <http://www.tai.org.au/content/poll-overwhelming-support-electric-vehicle-incentives>