

## HOW TO INCENTIVISE THE UPTAKE OF ELECTRIC VEHICLES?

As the UK is exploring what is required to achieve its target of net zero emissions by 2050, how can we best enable the rapid transition to zero carbon vehicles – for personal transport, primarily electric vehicles (EVs)?

Since 2011 the Office for Low Emission Vehicles (OLEV) has provided “plug-in grants” to encourage the uptake of EVs by reducing the up-front cost.<sup>1</sup> It has also provided grants to support individuals, businesses, and Local Authorities in installing charging points. Wider incentives include reduced parking charges or exclusive parking for EVs, TfL’s scrappage scheme in London currently offering certain van owners £9,500 to switch to an EV (in addition to the OLEV grant), and there are a range of tax incentives for personal and corporate EVs.

The plug-in car grant has proven successful with over 200,000 grants awarded. Ultra-low emissions vehicles (ULEVs) accounted for 7% of new vehicles registered in the first three months of 2020 (4% were eligible for the OLEV grant), accounting for 0.9% of all cars currently registered in the UK.<sup>2</sup> The scheme has helped accelerate early uptake of plug-in cars (with the grant cap subsequently being reduced from £5,000 to £3,000 and emissions eligibility criteria being tightened to focus on ULEVs). The next challenge is how to scale up access to ULEVs, including for consumers on lower incomes. In that regard, we note that the van scheme, introduced in 2012 with a higher maximum grant of £8,000, has been less successful – in part due to higher prices and fewer models to choose from, as well as concerns about range and charging.

A recent report by think-tank Policy Exchange argues for the UK to supplement the plug-in grant and other existing EV policies with a supply-side incentive.<sup>3</sup> It points to California’s Zero Emission Vehicle (ZEV) mandate as an example of such supply-side incentives. The ZEV mandate is a market-based solution for encouraging EV adoption and has helped California become one of the world leaders in EV adoption. The ZEV mandate requires all large auto manufacturers to meet a ZEV production target, which varies depending on the company’s total annual vehicle sales, with more sales requiring increased ZEV production. Manufacturers then receive credits based on the type of ZEV and its driving range, which they must submit each year to comply with the regulation. The target is ramped up over time so that ZEVs make up an increasingly larger share of a manufacturer’s vehicle production.

Any excess credits not required for compliance can be banked, sold or traded to other firms, creating a market for ZEV credits. Some firms, such as Tesla, have benefited greatly as a result of the ZEV credit market. Around 7% of Tesla’s revenue for Q2 2020 came from the sales of ZEV and other regulatory credits.<sup>4</sup> Each year the California Air Resources Board (CARB) release annual credit bank balances and data on ZEVs produced by each manufacturer. Policy Exchange note that critics of the ZEV compare its current state to the early days of the EU ETS, where an oversupply of credits kept the price low, making it cheap for firms to avoid ramping up ZEV sales.

The ZEV mandate has been adopted in nine other U.S. states and in British Columbia, Canada, where the target is set in terms of sales instead of production.<sup>5</sup> Nearly 30% of new car sales in the U.S. are now covered under the ZEV regulation.<sup>6</sup> Clearly, introducing such a supply-side scheme in the UK would need to be considered in the context of existing policies and the UK’s economic and environmental ambitions.

CEPA’s expertise in advising on the decarbonisation of transport means we are particularly well placed to help industry stakeholders, policy-makers and regulators who are grappling with questions such as:

- What is the right balance of demand-side and supply-side incentives to encourage the uptake of EVs?
- How to set subsidies to encourage EV uptake while mitigating unwanted (distributional) impacts?
- What service offerings would consumers be interested in, and could they be viable business models?
- How can regulation enable cross-sector innovation while ensuring consumers are protected?
- How best to facilitate investment in the enabling infrastructure (e.g. network capacity and EV charging)?

<sup>1</sup> Parliament.uk (2012) “[Plug-in vehicles, plugged in policy?](#)”; Gov.uk (Accessed Jul 2020) “[LEVs eligible for a plug-in grant](#)”

<sup>2</sup> DfT (2020) “[Statistical data set: All vehicles \(VEH01\)](#)” VEH0101, VEH0130, VEH0150, VEH0170

<sup>3</sup> Policy Exchange (2020) “[Route ‘35: How a California-style ZEV Mandate can deliver the phase-out of petrol and diesel cars.](#)”

<sup>4</sup> Tesla (2020) “[Tesla, Inc. Q2 2020 Financial Results](#)”

<sup>5</sup> BC Gov (Accessed Jul 2020) “[Zero-Emission Vehicles Act](#)”

<sup>6</sup> California Air Resources Board (Accessed Jul 2020) “[Zero-emission vehicle program: About](#)”





### **Gaynor Mather, Director**

Gaynor heads CEPA's transport practice. She has 30 years of experience in the sector and is a recognised expert in transactions and economic regulation of transport. She has advised a range of clients, including Transport for London, the National Infrastructure Commission, World Bank and UK100, on supporting the decarbonisation of transport.



### **Margaret Riach, Senior Consultant**

Margaret is an expert in understanding and developing policies to address air quality and decarbonisation issues. She has advised clients in the UK and Ireland on issues including how industry and the government can best facilitate decarbonisation of freight.



### **Douglas Bryan, Economist**

Douglas' work has focused on environmental and resource economics, with emphasis on the economics of renewables, energy sector investment and sustainable transportation. He has published research on the impact of California's support schemes for EVs.

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