



**TRANSPORT  
SCOTLAND**  
CÒMHDHAIL ALBA

# **Partial Business and Regulatory Impact Assessment**

## **The Vehicle Emissions Trading Schemes Order 2023**

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## Title of Proposal

The Vehicle Emissions Trading Schemes Order 2023.

## Purpose and Intended Effect

### Objective

The objective of the legislation is to introduce yearly mandated sales targets for new zero emission cars and vans for vehicle manufacturers to meet, ramping up to 80% of new cars, and 70% of new vans, by 2030, and introduce non-zero emissions vehicle (non-ZEV) CO2 emissions regulations for all new non-ZEV cars and vans sold.

### Background

The Scottish Government, UK Government, Welsh Government, and Department for Infrastructure (Northern Ireland) consulted on a zero emissions vehicle (ZEV) mandate and non-ZEV CO2 emissions regulation that will be the crucial first step in helping the Scottish Government realise our commitment to phase out the need for new petrol and diesel cars and vans by 2030.

The ZEV mandate will apply to Scotland, Wales and England from January 2024. The intent of the Department for Infrastructure (NI) remains that Northern Ireland will join the mandate when the Assembly is able to pass the required legislation. In the interim, Northern Ireland will retain an appropriately scaled version of the existing CO2 emissions regulation for new cars and vans.

A full [Cost Benefit Analysis](#) undertaken by UK Government, Scottish Government, Welsh Government, and Department for Infrastructure (Northern Ireland), that includes more detailed analysis alongside environmental, equality and policy analysis, can be found here.

### Rationale for Government Intervention

The Scottish Government declared a Global Climate Emergency in April 2019 and announced that Scotland will be carbon neutral by 2040 and will emit net-zero emissions by 2045. The [Scottish Government's Climate Change Plan update \(CCPu\)](#), published in December 2020, set out the pathway to meet Scotland's statutory greenhouse gas emission reduction targets by 2032.

With the transport sector being the largest emitter of greenhouse gases in Scotland, accounting for 29% of all emissions in 2019, and road transport making up the majority of those emissions at 66% ([Scottish Greenhouse Gas Statistics](#)), we have committed to decarbonising transport in Scotland. Scotland's ambitious climate change legislation sets a target date for net zero emissions of all greenhouse gases by 2045, with interim targets of 75% by 2030 and 90% by 2040. In line with this, the [National Transport Strategy 2](#) sets out the strategic vision for Scotland's transport system and the national Mission Zero for transport aims to ensure people and places benefit fairly from the shift to sustainable, zero emission mobility. This underlines our ambition to deliver a healthier, cleaner and greener Scotland for current and future generations.

The Scottish Government commitment is to phase out the need for new petrol and diesel cars and vans by 2030, with an increasing uptake of zero emission vehicles in the period up to 2030 essential to help us meet that goal.

Therefore, the Scottish Government, alongside the UK Government, Welsh Government, and Department for Infrastructure (Northern Ireland), are implementing a Zero Emissions Vehicle (ZEV) mandate and non-ZEV CO2 emissions regulations that are a crucial first step to meet our commitment.

## Consultation

### Within Government

Consultation has taken place with colleagues across Transport Scotland and the Scottish Government.

Colleagues in Legal Services are involved in the process throughout, working with UK Government lawyers, who were the lead drafters of the legislation, on ensuring that the correct path towards the implementation of the legislation is taken in Scotland.

### Public Consultation

During the consultation, there was an extensive stakeholder engagement programme to understand better the views and opinions on the various design features, which included roundtables, official-led workshops and bilateral meetings.

The final consultation received 146 responses in total, 46 from private individuals and the remainder from a variety of organisations.

List of respondents

- Allianz
- Allied Vehicles Group
- ANFIA
- Ariel Motor Company
- Aston Martin
- BAC
- Bentley Motors
- BMW Group
- BorgWarner
- Briggs Automotive Company Ltd
- BVRLA
- Campaign for Better Transport
- Caravan and Motorhome Club
- Caterham Cars
- ChargePoint
- ChargeUK
- ChargeWorks
- Chartered Institution of Highways and Transportation
- ClientEarth
- Co Wheels
- Community Transport Association
- CoMoUK
- Connected Kerb
- Consumer Council Northern Ireland
- DecarboniseNow
- DPD UK
- Dr Ben Spencer MP
- E.ON Energy
- EDF Energy
- Energy Saving Trust
- Energy UK
- Enterprise Holdings
- EO Charging
- EVA England
- EVA Northern Ireland
- Ferrari
- Fife Council
- Ford
- Green Alliance
- Greenergy
- Greenpeace
- Growing Mid Wales
- Harris Maxus UK
- Honda
- Hour Car

- ICCT
- INEOS
- Infyos
- Isuzu TruckIM Group
- Jaguar Land Rover
- JAMA
- JLR
- KIA UK
- LEVC
- Lloyds Banking Group
- Logistics UK
- McLaren
- MG Motor UK Ltd
- Millwheels Ltd
- Motability
- Myenergi
- New Automotive
- NFDA
- NIE Networks
- Nissan
- Octopus Electric Vehicles
- OVO Energy
- Petrol Retailers Association
- Podpoint
- Portsmouth City Council
- Private individuals
- RAC
- REA
- Renault
- Renault Trucks
- Road Haulage Association
- Roadchef
- Royal Mail
- RTFA
- SAP UK
- Scottish Power
- SMMT
- Stellantis
- Subaru
- Sunderland City Council
- Tactran
- Tesla
- TfL
- The NCC
- The Thalidomide Trust
- Toyota
- Transport and Environment

- Uber
- UK Electric Fleet Coalition
- UK Petroleum Industry Association
- UKLA
- Valero Energy Ltd
- Volkswagen Group UK
- WAVCA
- Wells Motor Cars Ltd
- Zemo Partnership
- Zeta Group

## Sectors and Groups Affected

The proposed legislation will impact a number of stakeholders including:

- members of the public
- vehicle manufacturers
- trade associations
- chargepoint/infrastructure operators
- energy providers and distributors
- fleet operators
- engine/drivetrain manufacturers
- transport operators
- insurance companies
- delivery companies

## Regulatory and EU Alignment Impacts

### Intra-UK Trade

It has been assessed that there is no impact on intra-UK trade.

The ZEV mandate will apply to Scotland, Wales and England from January 2024. The intent of the Department for Infrastructure (NI) remains that Northern Ireland will join the mandate when the Assembly is able to pass the required legislation. In the interim, Northern Ireland will retain an appropriately scaled version of the existing CO2 emissions regulation for new cars and vans.

### International Trade

The ZEV mandate could be thought of as a non-tariff measure in that it will affect trade through a kind of product regulation – elements of this could be thought of as a technical barrier to trade, although there are similarities to quantity restrictions in that it will apply differentially based on the number of ZEVs and non-ZEVs already traded. That said, the mechanism is atypical as instead of imposing more stringent requirements on all vehicles traded, or greater costs on vehicles traded above a certain quota, the regulations will require the sale of a non-ZEV to be compensated by a given number of ZEV sales. This will cause some degree of trade friction for non-ZEVs.

The regulations will apply equally to imports, exports, and domestic trade as they apply to GB registrations regardless of product origin. The regulations impose no



explicit barrier or cost on production and exports; manufacturers would be free to produce ICEVs for international trade. It may, in fact, facilitate exports of non-ZEVs to economies without ZEV mandates and/or with less stringent regulations, because the domestic non-tariff measure imposed through the ZEV mandate would likely lead to greater implicit costs associated with domestically-produced (and sold) ICEVs, relative to the costs they incur when exported to these other nations.

That said, these regulations would be very unlikely to be viewed as trade-promoting or protectionist measures, for several key reasons. Firstly, there is no distinction between domestic and foreign producers; secondly, the majority of both domestic and foreign vehicle manufacturers produce a mix of ZEV and non-ZEVs. For these reasons it is not likely to have a differential effect on domestic versus foreign producers or trading partners in a way which may lead to trade issues.

The overall effect on the UK trade balance is not clear. Trade modelling is generally based on large amounts of historic data; given the nascent nature on the BEV market; challenges modelling non-tariff measures in general; and broader challenges regarding modelling the effect of quantity-based non-tariff measures (as which the ZEV mandate could be conceived), it is unlikely that bespoke trade modelling (e.g. structural gravity) would deliver proportionate value. However, the effect on domestic/foreign manufacturers and the trade balance will be considered in the development of the monitoring and evaluation plan.

For the years following 2035, where the ZEV mandate will require 100% of standard cars and vans to be zero emission, the regulations should be thought of as a technical barrier to trade. This period is, however, outside the scope of this cost benefit analysis. Further analysis will be conducted to assess the trade impacts of subsequent regulations at the appropriate time.

The regulations may require WTO notification, given that they will affect UK trading partners. They are, however, considered unlikely to lead to any dispute, unless specific provisions are made which favour domestic over foreign producers.

## EU Alignment

The EU objective is to reach zero-emission road mobility by 2035. This target is expressed as an EU fleet-wide target to reduce the CO<sub>2</sub> emissions produced by new passenger cars and light commercial vehicles by 100% compared to 2021. This is similar to the proposals consulted on – ZEV mandate targets have been set out to 100% by 2035 but we are only legislating to 2030 initially.

This legislation, while similar to the EU's proposals, is not wholly aligned. The EU scheme focuses on reducing the CO<sub>2</sub> emissions of the manufacturers new fleet of

cars and vans, rather than sales of zero emissions vehicles. Critically, unlike the ZEV mandate, the sales incentive mechanism (the EU equivalent of the ZEV mandate) is not a mandated target for manufacturers and is rather an incentive for manufacturers.

Fundamentally, even if the ZEV mandate was closely aligned with the EU schemes, the UK is not part of the EU market and the EU schemes have been designed for compliance across the whole of the EU rather than within individual member states.

## Scottish Firms Impact Assessment

As stated in the 'public Consultation' section on page x, there was an extensive stakeholder engagement programme to understand better the views and opinions on the various design features, which included roundtables, official-led workshops (including a Scotland specific workshop) and bilateral meetings with a variety of organisations that included:

- vehicle manufacturers
- trade associations
- chargepoint/infrastructure operators
- energy providers and distributors
- pro-electric vehicle organisations
- fleet operators
- engine/drivetrain manufacturers
- non-governmental organisations
- transport operators
- insurance companies
- delivery companies

## Competition Assessment

These regulations will affect incumbent manufacturers as well as potential market entrants. It is therefore prudent to consider the potential effect on competition in the car and van markets.

The regulations will have some differential impact on firms of different sizes, as small volume manufacturers (SVMs) are proposed to be exempt from annual ZEV targets. SVMs are those with fewer than 2,500 car or van registrations per year and may be unable to fund investment in ZEV production, and/or incur disproportionate costs in administering the scheme. No derogations are proposed for manufacturers with annual registrations exceeding 2,499.

For non-exempt manufacturers (around 99.5% and 97.5% of sales, for cars and vans, respectively), these regulations are expected to apply similarly. This is

because each manufacturer's target is based on a proportion of their sales in a given year, so it inherently scales with their size relative to the rest of the market. In terms of their UK presence, then, the requirements of the scheme relative to the manufacturer's size is likely to be broadly equal.

However, there are some costs associated with the scheme which are likely to be relatively fixed, most prominently the costs of setting up new business functions to monitor and ensure compliance. We expect these costs to be relatively small, given any new business functions will replace those that monitor and ensure compliance under existing EU regulations. Nevertheless, as these are not expected to vary closely with manufacturers' sales, larger manufacturers may be at some advantage to smaller ones, as their costs could be spread over a greater number of sales.

Current analysis suggests that the costs of setting up this function, relative to current regulatory requirements, are likely to be less than £200k per manufacturer, on average. The effect on competition of these fixed costs is likely to be negligible.

As SVMs are not set binding targets, they may choose not to incur the fixed costs associated with monitoring and evidencing compliance. For this reason, these regulations will have a differential impact on SVMs versus non-SVMs. However, SVMs hold very small shares of the car and van markets; therefore, the effect of this differential impact on competition and market structure is expected to be minimal. In addition, some SVMs may choose to sell ZEVs and the allowances that they are allocated, though doing so would lead to administrative costs. This would reduce the average differential impact between SVMs and other manufacturers.

Smaller manufacturers above the SVM threshold could be perceived to be placed at a disadvantage compared to SVMs based on the proposed thresholds, however these regulations are broadly aligned with the thresholds in the regulations which they replace. The current retained EU CO<sub>2</sub> regulations provide derogations in the form of bespoke targets for SVMs which have between 1,000 – 10,000 and 1,000 – 22,000 registrations, for cars and vans respectively, across the whole EU market.

If these thresholds were to be applied proportionally to manufacturers' domestic sales, the corresponding upper bounds would be circa 1,600 registrations for cars and circa 3,500 registrations for vans. The proposed threshold of 2,500 for both cars and vans is relatively closely aligned with these thresholds and is therefore not expected to have a significantly different impact on competition compared to the existing, baseline regulations.

In addition, a number of policy details are proposed, which intend to limit differential impacts which could affect competition in the automotive markets (as set out in Section 1). The rationale and methodologies under-pinning each of these policy details are explained in greater detail in the annexes.

Firstly, manufacturers will be permitted to trade allowances. This will help address uncertainty over sales volumes and proportions in individual years, and allow firms facing relatively high costs of decarbonisation to minimise costs by purchasing ZEVM and CO<sub>2</sub> allowances from firms with lower decarbonisation costs.

Secondly, banking and borrowing permits some level of under-/over-delivery in individual years; this is intended to allow individual manufacturers to align their longer-term production plans with annual targets and mitigate adverse impacts for manufacturers whose ZEV production is planned to ramp up later in the delivery period. Borrowing may also allow under-delivering manufacturers to reduce compliance costs if they expect to face lower decarbonisation costs in the future than the price of ZEVM and CO<sub>2</sub> allowances determined on the open market.

Thirdly, the compliance payment is also expected to mitigate any anti-competitive effects. The payment will be charged on a per-allowance of under-delivery basis, effectively functioning as a 'price cap' for ZEV allowances. This will prevent excessive costs of compliance for under-delivering firms by limiting the price which can be charged by over-performing firms.

Similarly, the Government may exercise discretion in the operation of an enforcement regime, should certain exigent criteria be met. This is intended to ensure that these regulations are reflective of - and consistent with - the geopolitical and industry-specific context. This could, for instance, be used to suspend payments for under-delivery should there be compelling evidence of supply chain issues which are outside the control of regulated vehicle manufacturers.

Taken together, then, the derogations offered to SVMs suggest that these regulations will impose no additional barriers to entry for car and van manufacturers. Manufacturers with annual sales exceeding 2,500 vehicles are proposed to receive no derogations, and those at the bottom of the distribution may face some disadvantage relative to larger manufacturers, who may be able to spread fixed costs over a greater number of sales. However, the marginal effect of these regulations on administrative costs is expected to be very small, therefore these costs are not expected to be disproportionate.

## The market and competition

Due to differences in manufacturers' product cycles and decarbonisation strategies, the regulations may affect different manufacturers in different ways. Some manufacturers have already committed to phase-out dates for non-ZEVs and many have begun (or plan to begin) producing ZEVs, whereas some other firms may have intended to decarbonise their sales using non-zero emission technologies, during the transitional period, or to do so over a longer time horizon. In the simplest form of the

ZEV mandate, with annual targets and no sources of flexibility, there could be undue differential impacts for these two groups of firms.

In addition, in absence of any exemptions and/or derogations, the regulations could cause barriers to entry and thereby limiting competition. This is because manufacturers would only be able to enter the market if they had already developed ZEV models which they would sell alongside any non-ZEV models.

Several policy features are proposed to mitigate these risks: flexibility achieved through the provision of banking, borrowing, trading, and non-compliance payments allow manufacturers to meet their obligations through delivering ZEVs in different time periods and/or purchasing allowances from Government or other manufacturers. This is expected to mitigate the potential differential impacts caused by the regulations.

To address barriers to entry, ZEV mandate allowances are offered to small volume manufacturers (SVMs). SVMs are not set binding targets, although they may sell ZEVs and trade the allowances they are allocated. This avoids creating barriers to entry, although taken in isolation there may be barriers to growth, as SVMs producing no ZEVs would be required to significantly alter their product mix once they cross the SVM registrations threshold.

Taken together, these measures are expected to preserve healthy competition by mitigating differential impacts based on manufacturers' pre-determined strategies and their sizes, and support competition by avoiding barriers to entry and growth.

## Supply constraints

The ZEV mandate is expected to lead to an increase in the supply of EVs to the GB market. At the same time, global demand for EVs and several other low-carbon industries is expected to rise, raising demand for similar input materials. The UK makes up a small proportion of demand for these inputs, and its share of production is much lower. For this reason, it is exposed to global shifts in supply and demand.

Demand for several key minerals such as lithium, nickel, cobalt, as well as other inputs like microchips/semiconductors is projected to increase significantly over the next decade. Supply of these inputs is also projected to increase, in response to long-term, widespread signalling of an increasing push towards electrification of industries which are currently largely dependent on fossil fuels.

For certain input resources (such as cobalt and lithium), the projected increase in supply and demand is expected to be broadly equal, although some small mismatches may occur. In addition, shortages of other inputs, such as semiconductors, are expected to alleviate by the beginning of the ZEV mandate

trajectory, as investments expand productive capacity. In these cases, the likelihood of shortages and supply chain issues is likely to be fairly limited.

There are, however, some input markets which may be unable to increase supply at the same rate that demand is expected to increase (based on current technologies). There are also certain markets where production is very concentrated and geopolitical issues may pose a further risk to the supply of these resources. In these cases, it is possible that demand exceeds supply and there are difficulties meeting the requirements of the numerous sectors and nations competing for these resources.

However, there are market developments that will help mitigate supply side risks. Battery technology continues to develop, which is expected to lead to a diversification of the input materials required. For instance, the development of sodium-ion batteries is likely to mitigate strains on global lithium supplies; similarly, several car manufacturers have already begun producing ZEVs with cobalt-free batteries, and batteries free from both cobalt and nickel are also in widespread use.

Furthermore, widespread investment in battery recycling technology is expected in the medium to long-term, and the diversification of resource extraction will expand as the demand for earth minerals continues to rise. This is expected to increase supply of certain battery inputs – for instance, [The Faraday Institute](#) expects recycling of Cobalt to produce a significant amount of supply after 2030, and [anecdotal evidence from Li-Cycle Corp](#) suggesting that recycled cobalt, nickel and lithium could make up 10%-20% of global demand by the end of 2030. Such developments are expected both to alleviate supply issues in the ZEV supply chain as well as in other low-carbon technology supply chains, reducing competition for virgin, high-grade resources.

With regard to timing, the ZEV mandate will gradually raise the proportion of sales to be made up of ZEVs from 22% in 2024 to 80% in 2030 for cars. This increase will be incremental and has been clearly signalled in advance, meaning that supply chains have notice that demand will be increasing, and that the increase in demand will be gradual.

These technological developments offer several benefits: not only do they diversify the battery supply chain, reducing reliance on individual resources and nations, but they also, in cases, are expected to deliver performance benefits through increased energy density and reduced costs. This suggests that although the ramp-up in ZEV delivery may lead to some risks and costs, these effects are also likely to catalyse developments which will deliver social value in the long-run.

While we think it is unlikely that supply constraints will be binding, given the considerations set out above, there remains a risk of unforeseen circumstances impacting upon supply. As such, as stated in the 'Consumer Behaviour' section of



this assessment, we have considered sensitivity analysis of constrained car sales. This found that even if ZEV sales are depressed by 10% between 2027 and 2029 (inclusive) this would only result in a relatively small impact of 2MTCO<sub>2</sub>e in lost carbon savings from 2024-2050.

The proposals also include a recognition the Government may exercise discretion in the operation of an enforcement regime, should certain criteria be met. This is intended to ensure that the regulations are reflective of- and consistent with- the geopolitical and industry-specific context.

## Test Run of Business Forms

At this point no new forms have been prepared.

## Digital Impact Test

As the proposals are centred around the selling of ZEV's there is not considered to be an online usability issue associated with this at the moment.

## Legal Aid Impact Test

There are not considered to be any legal implications, or increased use of the Legal Aid budget resulting from this proposal.

## Enforcement, Sanctions and Monitoring

Vehicle manufacturers may achieve annual compliance (i.e., cover all of their activity) through a combination of in-year allowances, banked or borrowed allowances, credits earned for the sale of zero emission special purpose vehicles or ZEVs sold to car clubs, and allowances purchased through trading. If the manufacturer is still unable to meet compliance for the trading period through all of those means, they must make a payment to government proportionate to the amount of activity not covered by allowances or credits. These will be £15,000 per car ZEV allowance in the ZEV mandate. For vans, payments are reduced to £9,000 in 2024 only, rising to £18,000 for the rest of the proposals timeframe.

Vehicle Manufacturers who do not meet annual targets for the average CO<sub>2</sub> emissions standards of their non-ZEV car or van schemes and do not purchase allowances from other manufacturers to offset any shortfall must make a payment of £86 per gram (or fraction of a gram) of CO<sub>2</sub> above the manufacturer's target multiplied by the number of non-ZEV cars or vans sold.

## Implementation and Delivery Plan

The ZEV mandate will apply to England, Wales, and Scotland from January 2024. The intent of the Department for Infrastructure (NI) remains that Northern Ireland will join the mandate when the Assembly is able to pass the required legislation. In the interim, Northern Ireland will retain an appropriately scaled version of the existing CO<sub>2</sub> emissions regulation for new cars and vans.

As this will be a retrospective scheme, with reporting and trading done in the year after the mandated target year (so in 2025 for 2024 new car and van sales), statutory guidance for manufacturers on the mechanisms in the proposals will be prepared and published in 2024 ahead of this.

## Post Implementation Review

There will be a mid-point review to be published in Q1 2027. This review will then be followed by the post-implementation review in 2029, the statutory review with a potential approach described in section 5.0 of the ZEV mandate Cost Benefit Analysis.

Separately, the trading schemes administrator will publish an annual report, in each year, summarising the scheme year following the close of the trading window for that year.

These activities will also be utilised to evaluate elements of scheme design and operations, with the view to improving it for the second phase of the policy, which will run from 2031 – 2035.

## Summary and Recommendation

**It is recommended that The Vehicle Emissions Trading Schemes Order 2023 is introduced under the Climate Change Act 2008.**

### Declaration and Publication

I have read the partial Business and Regulatory Impact Assessment, and Cost Benefit Analysis, and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs I am satisfied that business impact has been assessed with the support of businesses in Scotland.

**Original hardcopy signed by Màiri McAllan MSP, Cabinet Secretary for Transport, Net Zero and Just Transition**





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