

**The Association for Renewable Energy and Clean Technology**

**Consultation Response**

***Technical consultation on zero emission vehicle mandate policy design***

**10th June 2022**

**Introduction**

**About the Association for Renewable Energy and Clean Technology (‘the REA’)**

The REA is the UK’s largest trade association for renewable energy and clean technology, representing around 550 member companies operating across the heat, power, transport, and circular bioresources sectors. The REA has technology-specific member Forums, each with its own elected Chair and Steering Group. In the case of this consultation response, member interest was received from the REA EV Forum and Renewable Transport Fuels Forum.

The REA EV Forum represents nearly 100 companies operating across the electric vehicle charging infrastructure value chain, from public Charge Point Operators to energy suppliers, eMobility Service Providers, roaming hubs, installers, manufacturers, and financiers. The REA’s EV Forum has been active since 2018 and in 2020 the UK Electric Vehicle Supply Equipment Association merged its operations into those of the REA.

The REA’s Renewable Transport Fuel Forum has around 50 members with interests in fuel production, project development, supply chain and related areas.

**Contact**

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The full consultation documents can be found here: <https://www.gov.uk/government/consultations/policy-design-features-for-the-car-and-van-zero-emission-vehicle-zev-mandate>

Summary

To deliver upon the UK Government’s goal to end the sale of new petrol and diesel vehicles by 2030, it is widely considered that we must invest ahead of need in the UK’s electric vehicle (EV) charging infrastructure network. Doing so will provide consumers and businesses with greater confidence to purchase EVs.

Whilst this consultation concerns regulations that will come to bear on the automotive sector, regulations under the zero emission vehicle (ZEV) mandate will strongly influence the pace of growth in the UK’s EV charging infrastructure network. Furthermore, the ZEV mandate also has a vital role to play in developing the commercial marketplace for EV charging infrastructure, which includes: EV chargepoint manufacturers; installers; network operators; and service providers.

As representatives of organisations across the EV charging value chain, the REA’s priority regarding the ZEV Mandate regulatory framework is to ensure that it contributes to creating an economic environment in which EV charging industry participants can thrive. Broadly speaking, the ZEV Mandate must deliver two things to achieve this:

* Predictability: Regardless of the level of ambition agreed, the ZEV Mandate regulatory framework must influence and enforce a predictable growth in ZEV sales up to 2035. This is essential to allowing EV infrastructure industry participants to produce long-term business plans and confidently invest ahead of need.
* Ambition: The ZEV Mandate should deliver a steady but rapid increase in ZEV sales. This will improve the commercial business case for providing EV charging infrastructure in a shorter period of time, thereby reducing the need for ongoing Government subsidy.

All elements of our response to this consultation are intended contribute to achieving one or both of these outcomes. Failure to deliver these outcomes could result in an under- or over-supply of public and/or private EV charging infrastructure. An under-supply would result in too few chargepoints, damaging the consumer experience of using EVs and impacting consumer confidence. An oversupply would lead to reduced chargepoint usage that would damage the commercial business case for organisations in the EV charging industry, impacting investor confidence.

It is our hope and expectation that, executed correctly, the ZEV Mandate will provide a robust and ambitious ZEV uptake trajectory that will enable the EV charging industry to remain one step ahead as demand for ZEVs and EV charging infrastructure grow in the coming years. The REA is therefore wholly supportive of the Government’s commitment to implement a ZEV Mandate from 2024 and, in this response, we have set out what we believe is required to implement a ZEV Mandate that supports the growth of the UK’s EV charging ecosystem, alongside growth in ZEV sales.

Consultation Questions

Part A: ZEV uptake trajectories

**1a.** **What is your view on the potential trajectories the ZEV mandate for cars should follow and why?**

The REA is supportive of the Government’s position that the ZEV mandate regulatory framework should be based on a ZEV uptake trajectory that is at least as ambitious as the indicative trajectory derived from the Transport Decarbonisation Plan and Net Zero Strategy. In particular, we are supportive of ZEVs accounting for 80% and 100% of all new vehicle sales by 2030 and 2035, respectively.

However, on the basis of recent growth in ZEV sales, we call for Government to adopt a more ambitious short-term trajectory. Doing so will increase the size of the UK market for ZEVs and encourage automotive manufacturers to increase UK supply, thereby increasing the stability and viability of the charging sector. It will cause a more rapid increase the total number of ZEVs within the UK’s total vehicle parc, translating into greater cumulative carbon and pollutant emissions reductions from light road vehicles and ultimately, greater demand for charging.

We believe that the trajectory should begin in 2024 at 30% - in line with CCC Balanced Net Zero Pathway – intersecting with the TDP/NZS at 2029. From there we believe the ZEV mandate should continue to follow the trajectory of the TDP/NZS scenario until 2031, before slowing significantly to accommodate “hard-to-reach” vehicle categories and use-cases. Crucially, for the charging sector, this trajectory smooths the adoption curve for the charging industry, meaning that REA members will not have too sudden a jump in the number of ZEVs – the steeper the jump, the more challenging it will be to deploy the requisite charging infrastructure. This trajectory is shown by the red dotted line in the graph below.



We consider that this suggested trajectory would be realistic because: a) the short-term targets would still be below what the OBR has forecasted, based on historical data; and b) it remains within the bounds of SMMT’s forecasts up to 2030.

**1b. What is your view on annual targets for cars?**

The REA agrees that the annual frequency for ZEV mandate sales targets is appropriate.

We also agree that these targets should be reviewed, albeit no more frequently than once every two years – with exceptional reviews allowed where unforeseen and unavoidable events cause significant disruption (akin to the recent global coronavirus pandemic). Any revisions to targets made at planned review stages should be of an “upwards only” nature.

Ensuring that targets are not reviewed overly frequently is essential to ensuring a predictability of demand for both public and private charging infrastructure. With reviews taking place every two years, this provides EV chargepoint manufacturers, installers and operators with sufficient time to scale their businesses and supply chains to respond to anticipated demand. Were reviews to take place more frequently than every two years, the EV charging infrastructure supply chain would have insufficient time to respond to changes in anticipated demand, potentially leading to short-term imbalances between supply and demand for EV chargepoints.

Ensuring that ZEV mandate sales targets are reviewed no more frequently than once every two years will also provide landowners and local authorities with certainty over a reasonable timescale, allowing them to more effectively plan EV charging infrastructure installations on their land.

Reviews should be considered “upwards only” to ensure that, under normal circumstances, ZEV sales targets are only ever increased from what is already mandated. This is essential to retaining investor confidence in the EV charging sector, across both public and private charging infrastructure. It will also prevent both public and private capital becoming stranded, in the short-to-medium-term, in underutilised charging infrastructure.

Whilst the REA is broadly supportive of ZEV mandate targets being set as a percentage of all new vehicles sales, we are concerned that this metric is vulnerable to fluctuations in the overall new vehicle market. Between 2009 and 2019 – prior to the global coronavirus pandemic – DfT statistics show that UK new car sales averaged 2.27 million cars per year. In 2020 and 2021 – during the global pandemic – this decreased by 28% to an average of 1.63m cars per year. Whilst it is anticipated that sales will rebound in coming years, the extent to which sales recover will have a significant bearing on the number of ZEVs registered. As the EV charging industry will continue to invest ahead of anticipated need for the coming years, any underperformance against anticipated vehicle sales would therefore lead to stranded EV charging assets and an underutilised EV charging network. This uncertainty will have a negative impact on investor confidence within the EV charging sector.

For the reasons stated in the previous paragraph, we recommend that Government tracks total vehicles sales against an anticipated sales trajectory, and sets a lower threshold that, were total car sales to fall beneath, would trigger an exceptional review of the ZEV mandate targets. We would suggest that, where this threshold is exceeded, the ZEV mandate targets should be increased in the short-term to ensure that the number of newly registered ZEVs remains comparable. This will prevent investment in stranded EV charging assets, contributing to greater investor confidence in the EV charging sector. It will also maximise the carbon and pollutant emission reductions achieved through the ZEV mandate. We consider that the impact of such measures would be manageable by the automotive sector as, during the global coronavirus pandemic, data shows that registrations of ZEVs continued to increase even as overall vehicle registrations significantly decreased.

**2a. What is your view on the potential trajectories the ZEV mandate for vans should follow and why?**

The REA accepts that zero emission vans are at a different stage of market development to zero emission cars. We acknowledge the supply challenges highlighted in the BVRLA Van Plan[[1]](#footnote-1), which notes that there are currently limited models available and what models are available often do not meet the requirements of van operators. To overcome this challenge, we support the BVRLA’s recommendation that Government should commit ringfenced research and development funding to increase the choice and the capability of battery electric vans coming to market.

On the understanding that such measures are taken to develop the market for zero emission and particularly battery electric vans, we are supportive of the Governments intended ZEV mandate trajectory for zero emission vans.

**2b. What is your view on annual targets for vans?**

The REA agrees that the annual frequency for ZEV mandate sales targets is appropriate.

As stated in our response to Question 1b, we believe that targets should, under normal circumstances, be reviewed on an “upward only” basis no more frequently than once every two years. We also suggest mirroring the requirement for Government to track total van sales against agreed estimates, with a review triggered that raises the ZEV mandate sales target when total annual van sales fall below an agreed threshold.

In the case of vans, we are concerned that ZEV sales will not necessarily translate into demand for EV charging. As noted by the BVRLA Van Plan, battery electric drivetrains may not be the ideal solution to decarbonise all light vans and therefore different technologies may be required. As is the case with charging infrastructure for battery electric cars, investment ahead of need is required is often cited as a prerequisite to unlocking demand for battery electric vans. In the case of cars, ZEV mandate targets provide a solid basis for investment ahead of need, as they are likely to translate directly into battery electric cars – widely regarded as the most suitable drivetrain for zero emission cars. In the case of vans, ZEV mandate targets could translate into different technologies (most notably hydrogen fuel cell electric vehicles) that would dilute demand for EV charging for battery electric vans and lead to stranded assets.

In light of this, we suggest that, either alongside or as part of the ZEV mandate sales targets for vans, Government should introduce separate sales estimates/targets for battery electric vans and those powered by other zero emission drivetrains (most notably hydrogen). This supports a further recommendation made in the BVRLA Van Plan that Government should produce a powertrain roadmap for zero emission vans. This would provide the EV charging industry with more certainty on future demand for battery electric vans and therefore demand for EV charging infrastructure.

Part B: ZEV certificate allocation

**3a. What is your view on how the certificate system should operate and on our initial long list of potential vehicle attributes that could be rewarded/incentivised?**

The REA is supportive of the Governments proposals to only award credits to vehicles meeting a minimum eligibility criteria. The majority of our members are also in favour of awarding additional credits to vehicles meeting conditions deemed favourable to the wider decarbonisation of light road vehicles. Some of our members believe that, at least in the first few years after the regulations are implemented, few or no incentive credits should be issued and instead the ZEV mandate should operate on a strictly 1 ZEV = 1 credit basis.

In broad terms, we believe that the credit eligibility and incentivisation metrics should be kept as simple as possible. Not only does this make the requirements easier to understand by automotive manufacturers, but it also makes the outcome of the ZEV mandate more predictable.

In the case of the certificate eligibility criteria longlist, we agree with the Government’s proposal.

In the case of the incentivisation longlist, we believe that this risks becoming overly complex and, instead, Government should focus on a smaller number of metrics and, at least in the short-term, ideally a single metric, albeit potentially categorised to reflect different vehicle classes and/or battery sizes.

The REA supports the need for credit incentives but measures must be in place to ensure that the ZEV mandate delivers a predictable number of ZEVs – not just a predictable number of credits. Without a predictable uptake of ZEVs, the EV charging industry (and other stakeholder groups) will not have a robust basis to produce long-term business plans and confidently invest ahead of need. The majority of our members believe that this can be delivered whilst offering automotive manufacturers a carefully considered amount of additional credits based on incentive criteria. However, some of our members consider that, to deliver this, the ZEV Mandate should operate on a 1 ZEV = 1 credit basis, at least in its initial phase.

Regardless of its final design, it is essential that the ZEV mandate certificate system is fully transparent, ensuring that both the award and trading of certificates is open to public scrutiny.

Our specific views on the proposed longlist of requirements are included in our response to Question 3b.

Our suggested approach is set out in our response to Question 3c.

**3b. Please provide detail on options you specifically support or oppose.**

The longlists are set out in the following tables, expressing support or opposition for each metric and a brief explanation of why.

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| --- | --- | --- |
| **Eligibility Criteria** | **Position** | **Explanation** |
| Minimum range (e.g. not eligible for certificatesunless vehicle has a certain range) | Support w. concerns | Must ensure that this does not disincentivise ZEVs that are shorter-range by design (e.g. urban vehicles, supermini class, etc.) |
| 0g CO2 / km as measured by WLTP | Support | Essential element of ZEV definition. |
| Battery efficiency (or drive train efficiency for **h**ydrogen fuel cell vehicles) (e.g. must have a **m**inimum miles per kWh to be eligible for certificates) | Support w. concerns | Must ensure that this does not disincentivise ZEVs that are less efficient by design (e.g. vehicles with large, heavy batteries, designed to offer long range) |
| Requirement for vehicles to provide certain charging cables as standard | Support | Necessary to improve and protect consumer confidence |
| Minimum requirements around vehicle or **b**attery/drivetrain warranty | Support | Necessary to improve and protect consumer confidence |
| Requirement to establish battery pack/vehicle recycling at end of life | Support w. concerns | Govt. must ensure requirements are realistic in the short-term  |

|  |  |  |
| --- | --- | --- |
| **Incentivisation Criteria** | **Position** | **Explanation** |
| Range (e.g. more certificates linked to larger ranges) | Support w. concerns | Should be banded by vehicle class and/or weight to avoid distorting market towards larger, heavier, more expensive vehicles |
| Vehicle weight (with lighter vehicles eligible for higher/more certificates) | Oppose | Would skew market towards smaller vehicles |
| Battery/drive train warranty packages - more certificates for better consumer offer | Oppose | So long as a minimum warranty is offered within the eligibility criteria, any additional warranty should be determined by free market competition |
| Vehicle footprint (with smaller vehicles eligible for higher/more certificates) | Oppose | Would skew market towards smaller vehicles |
| Range as a function of weight (incentivising smaller vehicles with longer ranges) | Support w. concerns | Should be banded by vehicle class to protect consumer choice and avoid skewing the market against the extremes of both large vehicles with long ranges and small vehicles with shorter ranges  |
| Range as a function of battery weight or drive train weight for hydrogen fuel cell vehicles (to incentivising more efficient power drive trains) | Oppose | Would skew market towards smaller vehicles |
| Vehicle price point (incentivising lower priced vehicles to the market) | Oppose | Should be left to free market competition |
| Use of the vehicle, for example higher certificates for Mobility as a Service / car club vehicles or higher mileage vehicles | Support w. concerns | Linking incentives to high-mileage or shared ownership use cases would increase emission reduction potential. However, measures must be in place to ensure that such ZEVs are used as intended. Measures must also be in place to prevent overly incentivising sales to commercial customers, who are typically higher-mileage users, to the extent where they are unduly prioritised ahead of private motorists. |
| Differing certificates for using lower pollutant emitting tyres / brakes | Oppose | This should be regulated separately, if at all. Anything that the owner can remove after sale provides only temporary benefit and should not be incentivised. |
| Support specialist vehicles with more certificates (e.g. wheelchair accessible) | Support | Without additional incentives, the additional costs of manufacturing such vehicles may result in no ZEV options being available for certain use cases. |
| Bidirectional charging ability | Oppose w. caveat | Should not be included in short-term targets, but potentially added in medium-term, when the wider commercial ecosystem for bidirectional charging has matured into a mass-market proposition. |
| Sustainability of the supply chain | Oppose | This issue, while important, should be regulated for separately, as part of the wider battery supply chain. |

**3c. Are there additional options not listed we should consider?**

REA believes that, once plug-and-charge communications protocols have been agreed under an international standard, this should swiftly be added as essential criteria under the ZEV Mandate. This will ensure that consumers benefit from the convenience of plug-and-charge technology at the soonest possible opportunity.

As many of the attributes listed in the incentivisation longlist are either a cause or an effect of vehicle efficiency, the majority of our membership believe that credit incentivisation should be based on vehicle efficiency. Vehicle efficiency is also the main factor impacting electricity use and therefore, until grid electricity is net-zero carbon, more efficient ZEVs will achieve greater emission reductions. We acknowledge however that, without further nuance, efficiency-based credit incentives would skew the ZEV market towards smaller vehicles with smaller batteries and shorter ranges.

Members have also expressed that basing incentive credits on the WLTP range of ZEVs could encourage automotive manufacturers to bring vehicles to market with attractive driving ranges, improving consumer confidence. However, this acknowledges that, without further nuance, this could skew the ZEV market towards ZEVs with larger batteries and longer ranges.

**3d. What are your views on how flexible the ZEV certificate system should be over time?**

The REA believes that the ZEV certificate system should be flexible but, under normal circumstances, reviewed no more frequently than once every two years. At planned review points, the ZEV certificate system should evolve to reflect developments in the automotive sector, ensuring that incentives are only available for ZEVs that exceed the prevailing technological norms of the market. Government should also use review points to introduce incentives for particular vehicle technologies or specifications that are deemed to be in the wider public good, potentially including bidirectional charging and plug-and-charge compatibility.

Part C: Banking, borrowing and transfer of ZEV certificates

**4a. What are your views on our initial preference for the certificate scheme to now allow any form of banking, borrowing or pooling? Please explain your reasoning.**

The REA supports the Government’s proposals to not allow banking, borrowing or pooling. This maximises the predictability of when new ZEVs are likely to be registered for road use, thereby allowing the EV charging industry to confidently invest ahead of need.

**4b. Should trading only take place in the same period in which the certificate is earnt or should it be more flexible than this?**

The REA believes that trading should ideally only take place in the period in which the certificate is earnt, but should not be delayed by any more than one additional trading period. This is to ensure that there is no benefit to postponing trading in the interests of waiting for more favourable market conditions or a more favourable economic climate, and also to ensure short-term predictability of demand for EV charging.

**4c. Should or shouldn’t there be a minimum price set for selling certificates and/or a cap on the number of certificates that can be earnt in a year by a vehicle manufacturer?**

The REA has no view on whether there should be a minimum price for selling certificates.

The REA is not supportive of a cap on the number of certificates that can be earnt in a year by a vehicle manufacturer. We believe that this would act as a ceiling on the ambitions of automotive manufacturers.

Part D: Operation of the ZEV mandate

*Applicability*

**5a. Do you have any concerns with the proposal to ‘link’ the two legal entities of one manufacturer responsible for new car and van registrations in the UK, purely for the purposes of the ZEV Mandate and accompanying CO2 regulation?**

The REA has no concerns on this proposal.

*Exemptions*

**5b. Please provide specific detail on the specific vehicle types you believe should be exempt from ZEV mandate requirements, for both cars and vans, with clear reasoning.**

The REA is not equipped to suggest specific exemptions from the ZEV mandate requirements, but we recommend that such exemptions are as limited as possible. For any exemption, there must be a clearly evidenced case for why it is being made and this should be published to ensure that the EV charging industry can assess the impact it may have on demand for EV charging.

*Derogations*

**5c. Please provide specific detail on what derogations you think should apply to the ZEV mandate for cars and vans with clear reasoning? Please include detail on what that derogation would entail – both the pre-determined criteria that would trigger eligibility, and what the derogated target should look like.**

The REA is not equipped to suggest specific derogations that should apply to the ZEV mandate, but we recommend that such derogations are as limited as possible. For any derogation, there must be a clearly evidenced case for why it is being applied and this should be published to ensure that the EV charging industry can assess the impact it may have on demand for EV charging.

Part E: Regulating CO­2 emissions in the new non-ZEV fleet

**Q6a. What are your views on how the CO2 emissions regulations is linked, not linked or part linked to the ZEV mandate certificate system?**

The REA believes that CO2 emissions regulations should remain in place, but not be linked to requirements under the ZEV Mandate, nor be part of the ZEV Mandate certificate system. In other words, a vehicle that meets the eligibility criteria for a ZEV should not be counted towards meeting targets under the C02­ emissions regulations.

The primary reason for this is to ensure that there is clear visibility of the emissions performance of vehicles that are not classed as ZEV – including vehicles that meet the SZEC definition. Were ZEVs to be included in these estimates, it would paint a misleading picture on the progress (or lack thereof) to decarbonise vehicles with internal combustion engines (ICEs). We also believe that, by keeping CO2 targets separate from the ZEV mandate, it will encourage investment and innovation to further reduce emissions from vehicle with ICEs.

Were the certificate systems for the CO2 regulations and ZEV mandate to be linked, this would introduce uncertainty in the number of ZEVs likely to be registered in the future. This is because automotive manufacturers could trade overperformance against CO2 regulations with underperformance on ZEV mandate. This would reduce the number of ZEVs on the road and prevent the EV charging industry and other stakeholder groups from being able to confidently invest ahead of need.

Q6b. Do you agree or disagree with our initial intention for how the CO­­­2 regulations will operate?

The REA agrees with the Governments position.

1. [BVRLA Van Plan, 2021: https://www.bvrla.co.uk/resource/bvrla-van-plan-2021.html](https://www.bvrla.co.uk/resource/bvrla-van-plan-2021.html) [↑](#footnote-ref-1)