Department for Transport
Great Minster House
33 Horseferry Road
London
SW1P 4DR
United Kingdom

22 September 2021

EDF's response to the consultation on CO2 emissions regulatory framework for all newly sold road vehicles in the UK

EDF is the UK's largest producer of low carbon electricity. EDF operates low carbon nuclear power stations and is building the first of a new generation of nuclear plants. EDF also has a large and growing portfolio of renewables, including onshore, offshore wind and solar generation, and energy storage. With around five million electricity and gas customer accounts, including residential and business users, EDF aims to help Britain achieve net zero by building a smarter energy future that will support delivery of net zero carbon emissions, including through digital innovations and new customer offerings that encourage the transition to low carbon electric transport and heating.

In February 2020, EDF acquired a majority stake in Pod Point. The acquisition will help accelerate Pod Point's activities and national roll-out of charging infrastructure across the UK. Pod Point is one of the UK's leading providers of electric vehicle (EV) charging. Since forming in 2009, Pod Point has manufactured and sold over 100,000 charging points across the UK and Norway and has also developed an extensive public network connecting EV drivers with 5,200+ charging bays at locations including Tesco, Lidl and Center Parcs. Pod Point installs smart home charging points for customers of major automotive brands including Audi, Nissan, Volkswagen and Hyundai while Workplace and Fleet customers include companies like Skanska, Mitie and Pepsico. Pod Point also works with property developers and managers like Barratt Homes, Savills and Bellway to wire up their developments.

EDF also has other activities in the UK electric vehicles sector, seeking to provide integrated solutions for electric cars, charging infrastructure and electricity supply to both residential and business customers. EDF is working with partners in a joint venture DREEV to develop vehicle-to-grid (V2G) solutions which aim to take advantage of the inherent bi-directional power market flexibility offered by EV batteries. In November 2019, EDF Renewables acquired Pivot Power which specialises in battery storage and power infrastructure for electric vehicle charging. Pivot Power has a nationwide portfolio of 40 sites which will be connected to the high-voltage transmission network and could provide up to 2GW of flexible storage capacity to integrate more renewable energy, provide power to locations for EV charging infrastructure and support the UK's net zero commitment.

(Redacted - Regulation 13 of the Environmental Information Regulations 2004)

We welcome the opportunity to respond to this consultation and set out our responses to the consultation questions in the attachment to this letter.

EDF are very supportive of the Government's action towards decarbonising road transport and the various schemes to enable electric vehicles to be more attractive to customers in contrast to internal combustion engine (ICE) vehicles has enabled the fast growth of the EV market. EDF believes that a phase out of the sale of all cars and vans that emit any carbon emissions at the tailpipe should be mandated for 2030 and allowing a period for the sale of hybrids between 2030-2035 will only delay the transition to zero emission vehicles (ZEVs) on the road. Therefore, to ensure that those hybrid vehicles sold between 2030-35 do provide a genuinely "significant" zero emission capability in practice, we strongly recommend that a demanding continuous zero emission range combined with a stringent grams of CO2 per km (gCO2/km) metric is used to set eligibility. We do not support the use of the percentage of journey time spent in zero emission mode because it is not an established metric and will vary depending upon the vehicle owners driving patterns and charging behaviour.

We support the Government's preferred option for the CO2 regulatory framework of strengthening the existing CO2 targets combined with introducing a ZEV mandate. The ZEV mandate should increase each year in line with Government commitments and providing visibility on the expected increase in ZEV deployment will significantly benefit investment in the wider EV ecosystem, most importantly, charging infrastructure. This combination will support the fast growth of the EV market in the lead up to 2035. The technology is becoming available to decarbonise all road vehicles and as a result we fully support the extension of the Government's preferred regulatory framework option to all road vehicles. We expand on these points in more detail under the consultation questions within the attachment.

I confirm that our response may be published on the Department for Transport website. Should you wish to discuss any of the issues raised in our response or have any queries, (Redacted - Regulation 13 of the Environmental Information Regulations 2004).

Yours sincerely,

(Redacted - Regulation 13 of the Environmental Information Regulations 2004)

(Redacted - Regulation 13 of the Environmental Information Regulations 2004)
(Redacted - Regulation 13 of the Environmental Information Regulations 2004)
(Redacted - Regulation 13 of the Environmental Information Regulations 2004)

Attachment
CO2 emissions regulatory framework for all newly sold road vehicles in the UK
EDF's responses to your questions

Significant Zero Emission Capability
Q1 - What metric, or combination of metrics should be used to set eligibility for cars and vans between 2030 and 2035?

We are very supportive of the Government's action towards decarbonising transport and the various schemes to enable EVs to be more attractive to customers in contrast to ICE vehicles has enabled the fast growth of the EV market. However, EDF believes that a phase out of the sale of all cars and vans that emit any carbon emissions at the tailpipe should be mandated for 2030 and allowing a period for the sale of conventional hybrids between 2030-2035 will only delay the transition to ZEVs on the road. By the time we reach 2030 we anticipate there will be cost competitive ZEVs available and ZEVs with a sufficiently large range suitable for all customer needs, with extensive EV charging infrastructure available across the UK. For these reasons we do not envisage the need for a later phase out date of 2035.

However, we recognise the Government's preference for a 2035 phase out date for hybrid vehicles, so it will be important to ensure that those vehicles sold between 2030 to 2035 do offer significant zero emission capability in practice and therefore do actually contribute to the decarbonisation of transport. We therefore strongly recommend that the continuous zero emission range should be used in combination with the Government preferred option of a grams of CO2 per km metric (gCO2/km).

A demanding continuous zero emission range in the region of 70 miles would ensure that a very "significant" zero emission capability is met and would encourage ambition from manufacturers in line with the requirement to transition to full ZEVs by 2035. There are already many examples of plug-in hybrids on the market that currently have a range of 30-40 miles, therefore, a 70 mile continuous zero emission requirement following another decade of technology improvements and battery cost reduction would be a demanding ambition yet we consider still realistic. Using a range of 70 miles will capture a large proportion of typical journeys carried out by the public and this will ensure those journeys are completed in zero emission mode.

The zero emission capability requirement should be accompanied by a stringent target for the grams of CO2 per km that manufacturers also need to achieve for vehicles sold between 2030-2035. The test cycle conditions for vehicles are often optimal in comparison to driving in real life, therefore, the lower the gCO2/km needed to complete the test cycle, the lower the emissions will be when the car is driven with other factors at play, such as additional passengers, weather conditions etc.

We do not support the use of the percentage of journey time spent in zero emission mode because it is not an established metric and will vary depending upon the vehicle owners driving patterns and charging behaviour.

Q2 – For your chosen metric, what threshold should new cars and vans be required to meet from 2030?

As stated above, we strongly recommend that a continuous zero emission range in the region of 70 miles combined with a stringent target for the grams of CO2 per km to be achieved by the vehicle will most accurately represent a "significant" zero emission capability. We believe that solely using a gCO2/km metric will not guarantee the scale of reduction in road transport emissions that Government is looking for or represent a "significant" zero emission capability.

The continuous zero emission range and gCO2/km metrics could be reviewed over time as the technology improves to make sure Government is as closely aligned with the progression of the market as possible.

Q3 - What other requirements could be introduced, if any, to maximise zero emission capability?

The 70-mile zero emission requirement will capture a large proportion of typical journeys carried out by the public and this will ensure those journeys are completed in zero emission mode. This demanding continuous zero emission range will motivate manufacturers to maximise zero emission capabilities through innovation but adding extra requirements may become overly restrictive for the market.

Q4 – What would the impact be on different sectors of industry and society in setting an SZEC requirement, using evidence where possible?

We believe that requiring all cars and vans to have a genuinely significant zero emission capability in the period between 2030-2035 will ensure that everyone who purchases a vehicle during this period will gain familiarity with and have exposure to electrically powered vehicles with a meaningful electric only range. As familiarity of using EVs increases and the environmental benefits, such as reduced carbon emissions and improved air quality are more greatly recognised, this would ease the transition to 2035 and the point where all sales must be zero emission.

Possible Future Frameworks

Q5 - Do you have any comments regarding Option 1, to replicate the current regulatory framework, albeit with strengthened targets, to meet our wider carbon reduction targets and phase out dates?

EDF does not support Option 1 because we believe a ZEV mandate is needed in addition to strengthened targets of the CO2 regulation in order to deliver the right level of ambition from Government and deliver the transition to zero emission cars and vans by 2035.

Q6 - Do you have any comments regarding Option 2, to introduce a ZEV Mandate or sales target alongside a CO2 regulation?

EDF welcomes the Government's preferred option of a ZEV mandate in addition to the strengthened targets of the CO2 regulation. The ZEV mandate will provide confidence and visibility to the market on the proportion of ZEVs being sold in the UK each year and the ZEV mandate should increase every year in line with Government's commitments to ensure an appropriate number of ZEVs are deployed that matches the ambition of Government. This increasing ZEV deployment year-on-year will provide the certainty needed for investment in the wider ZEV ecosystem, most importantly, charging infrastructure, and support the rapid growth of the overall ZEV market. The increased CO2 targets will ensure that the remainder of manufacturer's fleets not covered by the ZEV mandate continue to decarbonise year-on-year in the lead up to 0gCO2/km by 2035.

Q7 - Do you have any views on the government's initial preference for the regulatory approach set out in Option 2?

We support Option 2.

Q8 - Are there alternative approaches that could deliver on the government's carbon budget and 2030/2035 commitments?

We agree with the Government proposals, so we do not suggest an alternative.

Q9 - Do you have any views on how either, or both, of the options could be implemented?

No additional views that we have not already set out in previous questions.

Q10 - Do you have any further comments or evidence which could inform the development of the new framework?

No additional views that we have not already set out in previous questions.

Additional Issues for Consideration

Stringency of CO2 Target

Q11 - If deploying a combined ZEV Mandate and CO2 regulatory framework, how should the CO2 element be set?

We do not have strong views between setting the increased CO2 targets for the whole fleet including the portion covered by the ZEV mandate or the remainder of the fleet not covered by the ZEV mandate. The underlying necessity is that either option must ensure there is a demanding target to encourage the sale of lower emission vehicles over ICE vehicles.

In the scenario where the CO2 target applies to the whole fleet (including the portion under the ZEV mandate), this overall CO2 target must increase year on year in line with the ZEV mandate yearly increase. If the CO2 target is only applied to the portion of the fleet not covered by the ZEV mandate, the CO2 target does not necessarily need to increase year on year but should nonetheless remain demanding and over time require the sale of increasingly more fuel-efficient vehicles.

Q12 - Should the focus be on delivering the largest possible CO2 savings, or the quickest possible switch to zero emission mobility?

Both are important but prioritising the switch to zero emission mobility should be the lead focus as this will provide the largest CO2 savings over the long term and enable the road transport sector to be net zero by 2050.

Q13 - How do we ensure that the target allows for sufficient supply of low and zero emission vehicles; supports investment in the UK; and delivers our carbon reduction commitments?

We believe that the visibility of the 2030 and 2035 targets will encourage clarity that can be incorporated into the plans of manufacturers to invest in decarbonisation and electrification of their vehicle fleets. In order to ensure that Government makes their direction of movement within decarbonising the transport industry clear, future announcements should be made as early as possible to allow the market to adjust as we have seen with the rapid uptake of EVs.

Transparency around the sanctions and fines for non-compliance will also motivate decarbonisation and investment in electrification. We expand further on the fines in our response to question 21.

Derogations and Exemptions

Q14 - Should the new regulatory framework include exemptions or modified targets for certain specialist vehicles and/or niche and small volume manufacturers?

EDF acknowledges that the new regulatory framework may need to include exemptions or modified targets for certain specialist vehicles where there is a compelling case for such exemption/modification, for example, military or emergency services vehicles. These specialist vehicles may warrant derogations or exemptions because they serve a critical public need or national defence requirement.

However, we do not consider that small manufacturers or any passenger cars should be eligible for derogations or exemptions due to wider commercial reasons because there is no compelling public interest to justify this and all commercial manufacturers need to decarbonise if net zero targets are to be met.

Credit Levels

Q15 - Should credits be awarded to vehicles that meet the SZEC definition?

We do not agree that additional credits should be awarded for such sales because this will allow manufacturers to sell more polluting or non-zero emission vehicles while remaining within their overall targets, thus undermining the CO2 reduction objectives of the regime.

We do not agree that any additional credits or "super-credits" should be awarded to vehicles that meet the significant zero emission capability definition. The zero-emission capability should be a minimum requirement which all vehicles sold must meet. We do not support the use of such credits in any circumstances because they allow the sale of more polluting (ICE or hybrid) vehicles while simultaneously allowing manufacturers to still meet the required number of credits for the year, which is contrary to the CO2 reduction aims of the framework.

Q16 - If so, should this be a fixed number of credits, or should there be a sliding scale that recognises the difference in CO2 efficiency of various SZEC-compliant vehicles?

We do not support the use of credits for SZEC-compliant vehicles due to the reasons outlined above.

Credit banking and trading

Q17 - Should this be considered within the new framework?

Not applicable as we do not support the use of credits.

Q18 - If so, over what timeframe should they remain usable and should credits and debits be treated the same or differently?

Not applicable as we do not support the use of credits.

Q19 - Within the trading element of the new scheme, should there be limits on the number of certificates/grams of CO2 that can be bought or sold?

Not applicable as we do not support the use of credits.

Q20 - Should such a market cover the whole of road transport or should there be some constraints imposed on trading across manufacturing sectors (e.g. cars and Heavy Duty Vehicles)?

Not applicable as we do not support the use of credits.

Levels of fines for non-compliance

Q21 - How, and at what level, should fines be set in the new UK regulatory framework and should this vary for different vehicle types?

The intention of the Government's preferred option is to guarantee the deployment of new ZEVs in the UK. Therefore, there should be substantial fines set for not achieving the ZEV mandate target and the fleet average gCO2/km target.

Regarding the gCO2/km target, we agree that the proposed fine level under the current car and van CO2 regulatory regime of £86 x the grams of exceedance x the number of vehicles sold in that year represents a significant incentive to meet targets.

Regarding the ZEV mandate, the level of fine needs to be set to a fixed figure x how many ZEVs were undersold against the ZEV target. The fixed figure needs to be a meaningful value to clearly incentivise manufacturers to decarbonise and not prefer the option of simply paying the fines.

Another benefit of implementing a substantial fine on manufacturers for missing ZEV targets is that the market price of credits which overachieving manufacturers can sell will increase, rewarding the decarbonising manufacturers more significantly. A substantial fine should also ensure that those manufacturers underachieving have to decarbonise because the fine will be too damaging to carry on over-selling polluting vehicles.

In order to achieve these objectives, we would suggest that the fine should be of the order of at least £ several thousand per vehicle sold above ZEV targets.

Target setting process

Q22 - Would there be benefits in seeking to ensure any CO2 targets in the new UK regulatory framework take into account real-world emissions data alongside the lab-tested WLTP CO2 emissions figures? If so, how might the two be linked?

We believe that it is important for the test cycle regime to be adjusted to better reflect vehicles' likely real-world performance. Linking real world testing to real world emissions will ensure that ZEVs or hybrids achieve significant carbon emission reductions in practice, compared to solely in the testing cycle.

Extending the Framework to All Road Vehicles

Heavy Duty Vehicles

Q23 - For vehicle sub-categories that are not yet covered by VECTO, could a ZEV Mandate/sales target be extended before VECTO is adapted?

We support the extension of the Government's preferred option of a ZEV mandate combined with increasing targets to all road vehicles, including HDVs. In order to promote the decarbonisation of HDVs, Government should not wait for the development of a standardised HDV emissions test for sub-categories that are not yet covered by VECTO. A ZEV mandate could be implemented first and

followed by increasing CO2 targets when the equivalent to VECTO is adapted for HDV sub-categories. This should be subject to the development of HDVs that can perform a significant zero emission range.

The earlier that a ZEV mandate is applied the higher the motivation will be for the market to transition rapidly towards solutions, such as electric batteries or hydrogen fuel cells. The technology is becoming increasingly available for vehicles other than cars and vans, now the market must be motivated towards utilising zero emission technologies.

Q24 - Would there be any unintended consequences of establishing a ZEV Mandate for certain vehicle sub-categories before a CO_2-based regulation?

Government should be satisfied that there are sufficient zero emission options for sub-categories before implementing a ZEV mandate.

Q25 – Do you have any views on imposing a CO2 regulation on vehicle types that are not yet covered by a CO2 test procedure, or existing regulation, particularly in light of the planned future phase out consultation for new non-zero emission buses?

We support the extension of Option 2 (ZEV mandate + increasing CO2 targets) to all vehicle types and the Government should be encouraging the development of CO2 test procedures for vehicles that are not yet covered in order to achieve full decarbonisation of road transport, providing it is feasible and there are zero emission options available.

L-Category vehicles (Motorbikes, Mopeds, Quad Bikes etc)
Q26 - Should the preferred regulatory approach be extended to all L-category vehicles or should the diversity of the sector (motorbikes, mopeds, motorised tricycles, quadbikes, motorised quadricycles etc) necessitate different approaches?

We agree that the preferred Option 2 (ZEV mandate + increasing CO2 targets) should be extended to all L-category vehicles, providing it is feasible and there are zero emission options available, in order to ensure the total decarbonisation of the road transport sector. The diversity of this sector can be recognised by adapting yearly CO2 targets for the different types of L-category vehicles.

EDF
September 2021