REA response to the Environment and Climate Change Committee EV Inquiry

The Association for Renewable Energy & Clean Technology (REA) is pleased to submit this response to the above inquiry. The REA represents renewable electricity, heat and transport, as well as Electric Vehicle charging infrastructure, Energy Storage and Circular Economy companies. Members encompass a wide variety of organisations, including generators, project developers, fuel and power suppliers, investors, equipment producers and service providers. Members range in size from major multinationals to sole traders. There are around 550 corporate members of the REA, making it the largest renewable energy and clean technology trade association in the UK.

Our Electric Vehicle Forum RECHARGE UK[1] consists of around 100 members across the EV sector, ranging from ChargePoint Operators (CPO's), software companies, manufacturers, consultancies, fleet operators and single-issue groups. This diverse membership gives us unique insight in to the electric vehicle space which we hope will be of value to this inquiry and we would be happy to provide additional evidence on any of the points raised in our response.

Overall, we are confident that the 2030 and 35 phase out dates consulted on by Government over several years are realistic and wholly achievable. We have the energy infrastructure to support the EV transition and the right skills available in the UK to deliver it. The charging infrastructure market has grown over the last decade and presents a huge opportunity for growth in the UK economy. Furthermore, the targets as they stand provide us the opportunity to maximise the carbon savings, we desperately need to improve air quality and meet future carbon budgets.

We are seeing the second-hand market develop and confidence in the UK's charging infrastructure grow, demonstrated by the significant uptake in EV sales to date and chargepoints being installed at record speed.

We understand too that there are solvable challenges currently which we have set out in our report Charging Forward to 2030[2] and in our response providing resolutions to these challenges and meet the 2030 and 35 targets.

We identify in our response below how we can ensure we maximise the benefits of owning an EV, looking at the cost, and accessibility of charging infrastructure.

[1] https://www.r-e-a.net/our-members-forum/electric-vehicles/
[2] https://www.r-e-a.net/resources/rea-ev-infrastructure-report/

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REA Response

1. What are the main obstacles to the achievement of the Government's 2030 and 2035 phase-out dates? Are the phase-out dates realistic and achievable? If not, what steps should the Government take to make the phase-out dates achievable?

Although there are some things which our members would like to see improved, which we discuss in the next paragraph, the 2030 and '35 phase out dates as set out in the Government's most recent consultation is deliverable.

In our recent report *Charging Forward to 2030* we make two key recommendations which we believe would enable charging infrastructure to be ready for 2030. The REA has for some time called for technologies like solar and battery storage to be prioritised in the grid connections queue, to ensure there is enough flexibility on the system to power EV's, heat pumps etc. We believe on a per project basis charging infrastructure should then be prioritised as road freight and haulage and emergency services begin rolling out EVs in more numbers meaning connecting chargepoints to the grid has suddenly become of national significance.

Furthermore, we are aware that car manufacturers who wish to build new sites to manufacture electric vehicles are being quoted in some instances over a decade to connect to the grid. This runs the risk of making the UK seriously uncompetitive and we could lose the willingness of manufacturers to produce EVs in the UK as a result. It is clear therefore that both up and down stream connecting EV's to the grid at the point of production and at the point of charging should be classed as nationally critical infrastructure and prioritised in the grid connection queue alongside solar and battery storage to provide grid resilience.

Our second recommendation is for Local Authorities. Currently charging infrastructure plans from Local Authorities are generally short-term - looking only at the next few years. This means that DNO's are put under more pressure to deliver charging infrastructure in a short time frame while also meeting thousands of other already scheduled requests. We recommend that Local Authorities produce charging action plans at least until 2030 to provide DNOs with more adequate timescales in which to deliver the connections required. In Scotland, we see that some local authorities have plans out to 2030 and some even to 2045, although we would caution that such long-term plans would have to be subject to revision. We recommend that Local Authorities follow a similar approach as Scotland and look to 2030 when the ZEV Mandate first comes in as a good milestone by which to set their chargepoint targets for.

2. Do the 2030 and 2035 phase-out dates serve their purpose to incentivise the development of an EV market in the UK? To what extent are car makers focusing on one date or the other? What are the impacts of the deadlines on the ability of the UK supply chain to benefit and how could the Government seek to further support the development of the UK EV industry? Would the introduction of a plan with key dates and timescales support the development of the EV industry in the UK?

The 2030 and 2035 phase out dates are the most powerful pieces of legislation proposed by any Government in the UK which provides guarantees and provides an investment case for Charge Point Operators (CPOs, who provide EV charging equipment) in the UK. Without such strong legislation in place with clear guidelines set with the proposed sales targets, there would be far less strong investment cases for charging infrastructure in the UK. With some of the largest operators in the UK being multinational companies many may choose to leave the market entirely while other smaller operators will find it more difficult to receive investment which will cause a collapse in the EV market as we know it. The last 3 years or so of Government consultations on the phase out dates and the Government's commitment to it in 2020 has been the driving force for many charging infrastructure investment decisions and planned ones.

In addition, we have now had significant automotive investment in EV production at existing plants partly on the back of this strong commitment – eg BMW Mini committing to make two new electric models in the UK in the past week. It is therefore essential that the 2030 and '35 phase out dates are kept, or we risk collapsing confidence in the EV sector at a time when the Government need more people to drive electric to reach their net zero commitments. It will also put at risk all the associated benefits such as better air quality and resulting reduced NHS costs on treating respiratory problems.

We have seen that such policy intervention from Governments have already delivered positive outcomes. For example, the 95g per km CO2 target set for OEMs by the EU which started in 2020 was discussed at length for a number of years before and has created a legislative target over a long time period and created the range of vehicle models on sale today in the EU and UK. If we do not follow this example and stick to our targets, we run the risk of crashing the vehicle manufacturing sector in the UK. If we choose to have targets which are less ambitious than other countries for example pushing 2035 to 2040, those 5 years of revision will be the equivalent of going back 10 years, as it will take longer to rebuild car plants and infrastructure companies.

Of course as technology improves, elements like Vehicle to Grid and Plug and Charge could be added to the ZEV mandate, and guidance could be changed as we begin to understand the impact of the sales targets, but the sales targets and overall 2030 and 2035 targets must remain if we are to give vehicle manufacturers, and those in the charging industry the best chance of growth in the UK and make the UK an attractive location for investment.

3. What specific national policies, regulations or initiatives have been successful, or have hindered, EV adoption to date? Are these policies or initiatives fit for purpose?

Overall, the UK is the country which has provided the most effective incentives across the EV value chain. Ranging from the hugely successful Plug in Car Grant scheme[3] which has seen over 300,000 domestic chargepoints installed since its inception in 2013, 132,000 of which since July 2021. The Benefits in Kind tax rate for electric cars in 2020 was set at 0% and has now risen to 2% has as a result of the low % offered to Electric Vehicles seen thousands of company car drivers make the switch to an electric vehicle. We are aware that from 2025 that rate will rise by 1% annually until 2028 which has been met with concern by some members and the wider industry but to date is evidence of the positive national policies which have helped EV adoption. Lastly, the first-year capital allowances granted to EV's of 100% which is unique to EV's and vehicles with zero emissions at the tailpipe and not applicable to ICE vehicles should also be recognised as a significant incentive for businesses to purchase an electric vehicle.

However, some of the Government grant schemes to date for charging infrastructure have had a mixed success rate. We saw the Home Charging Scheme cancelled last year which had been hugely successful at getting people in to EV's by helping subsidise the cost of purchasing a chargepoint. But the Landlord Grant Scheme in place currently has received very little attention from Landlord's with substandard levels of chargepoints installed vs other grant schemes. This highlights that as it stands there isn't enough incentive for tenants to ask for a chargepoint or purchase an EV, who are even less likely to be aware of the Landlord Grant Scheme.

We proposed in our report Charging Forward to 2030 that tenants should have a right to charge, as they do in Norway. In Norway residents can apply to have a chargepoint installed, paying for the cost of the chargepoint themselves, but the residents of the building as a whole paying for grid reinforcement costs, if the cost doesn't exceed a predetermined threshold. Additional wiring would be installed at the same time so that in future residents could install a chargepoint without the need for additional reinforcement. This policy would future proof existing rental housing stock and would act as a powerful incentive for renters to purchase an EV.

We also believe that a Scrappage Scheme like the successful one introduced in 2009 which removed nearly 400,000 high polluting ICE vehicles from the road, would be a significant incentive to purchase an EV and has so far been missed by this Government. Our proposed scrappage scheme we believe should be tiered based on the levels of pollution from a vehicle per km. Those with higher levels of pollution would be in a higher tier, to reflect the additional benefit from removing them from the road. Scotland, and devolved authorities such as Birmingham and TfL currently offer scrappage schemes, but we believe it is time to remove the worst polluting vehicles from the road urgently and only a tiered system would do this.

4. Given that the Government should apply a behavioural lens to policy—which involves people making changes to their everyday lives, such as what they purchase and use—is there a role for clearer communication of the case for EVs

[3] https://www.gov.uk/government/statistics/electric-vehicle-charging-device-grant-scheme-statistics-july-2022/electric-vehicle-charging-device-grant-scheme-statistics-july-2022

from the Government? If so, who should take the lead on delivering that? & 5. What is your view on the accuracy of the information in the public domain relating to EVs and their usage?

It is imperative that the Government's own messaging around EV's becomes clearer, as soon as possible. We have seen that over the last few weeks the Energy Security and Net Zero Secretary of State contradict the Secretary of State for Business both of whom were arguing against different pieces of the ZEV mandate consultation led by the Minister of State for Transport. It is imperative therefore that leadership comes from the top, and the PM must be seen to be supportive of the policies his Government is implementing and also set a position for his cabinet to follow. There is a clear role for making the case for EVs especially with the cost savings of running an EV over a petrol vehicle. The Secretary of State for Transport, the Chancellor and PM should all be able to communicate the case for EVs more clearly.

The accuracy of information available to the public regarding EVs is very mixed. On the one hand there is a clear campaign in some media outlets to discredit EVs without backing up their claims with evidence and using debunked studies to promote a point of view that has been proven in the past to be false.

There is also a clear and obvious need to provide accurate information at the point of sale and raise awareness for the different types of charging available to consumers. Many consumers are simply not aware that they can purchase an EV without a driveway, as they do not have confidence in the public charging infrastructure near to them. There are however, already solutions on the market which enable you to charge from the pavement and connect to your home, enabling you to have the cost benefit of paying the 5% VAT rate from your home tariff for example. There are also community charging options which provide a useful way for those who can charge at home to make money from their chargepoint while also providing an invaluable service to residents who do not. It is estimated that as many as 5 million vehicles could also be taken off the road by car sharing in 2030 and therefore the role of community charging is likely to grow as less people have a chargepoint at their home relative to numbers of EVs on the roads.

6. What are the overall environmental benefits that would result from achieving the 2030 and 2035 targets?

By reducing the number of ICE vehicles sold each year, we will have fewer residual ICE vehicles after the end of sale dates set. On average an ICE vehicle could last around 20 years, meaning the last ICE vehicles could still be emitting emissions in the late 2040s. Reducing the number sold by 2030 will reduce the amount of residual ICE vehicles on the road by 2050, therefore reducing carbon dioxide and nitrous oxide emissions and improving air quality in cities and towns. Better air quality will also result in fewer adverse health impacts for the general population resulting in direct savings to the NHS.

The significant CO2 reductions from switching to an EV is massively influenced by the fact that our grid acted early and over the last ten years has made significant steps towards decarbonisation. Moving to an EV ten years ago simply wouldn't yield the same

CO2 savings. We believe the Government should learn from the example of the grid and act now and stick with the 2030 and '35 targets otherwise we run the risk of seeing severely diminished carbon emissions reductions in the future.

7. What are the likely costs that will be faced by consumers as a result of the Government's phase-out dates for non-zero emissions vehicles? Are there policies or initiatives that the Government could use to specifically target barriers arising from unpredictable costs to the consumer, for example significant fluctuations in the cost of electricity, changes to road taxes, or the introduction of low emission zones?

One cost that will be faced by every consumer charging in public is the 20% VAT rate, 300% more than the VAT rate applied to those who can charge at home. Around half of homes in the UK do not have off street parking and so could theoretically be charged 300% or 4 times more to run their vehicle than those who have off street parking. The entire charging industry has called for this to be changed to 5% in line with the domestic rate for at least two years and we are repeatedly told that Treasury will not accept this to be necessary despite the unjust nature of it. To create parity in the cost of charging, the Government must address this urgently.

In addition - to lower the cost of charging at home, Government should urgently look to help establish a tariff for Vehicle to Grid charging, which has been missing for a number of years since the first trials started by Octopus in 2019. A full V2G tariff should be transparent about the amount of energy sent back to the grid at peak times, and reflect that on a bill, to encourage greater use of V2G.

As we make more progress on decarbonising our grid and become less reliant on fossil fuels, we should consider decoupling the price of renewable electricity supplies from those of fossil fuel supplies, to more accurately reflect the cost of the energy produced. As renewables are producing the lowest possible cost electricity at present, this would overall lower electricity prices and protect consumers from fluctuations in energy prices due to global conflicts like the Russia - Ukraine crisis.

EV Market and Acquiring an EV (Q's 8-15)

Currently around 60% of new car sales are through the fleet sector and it normally takes around 3-5 years for these fleet vehicles to enter the second-hand market. This can in turn lead to a delay in vehicles entering the second-hand market and with the cost of ownership of an EV being too expensive for many people first hand.
Therefore, we need the fleet sector to rapidly electrify for this to filter to the second-hand market as soon as possible.

Q's 16-18 Not Answered.

19. What are the main benefits that UK consumers could realise from using an EV?
On the whole, particularly if consumers can charge at home, which presently over 80% of EV drivers can, they will see cost savings of running their vehicle vs an equivalent ICE

vehicle. In addition, they have the ability to smart charge, meaning through a flexi tariff they can charge off peak when electricity is generally cheaper and realise additional savings. As there are far fewer moving parts, maintenance costs are generally much lower for an EV compared to an ICE vehicle.

With the development of Vehicle to Grid, it will be possible in future to provide additional savings by exporting energy from the battery back to the grid at peak times, leading to the value of this energy exported being taken from a consumers energy bill at the end of the month, leading to savings also in the running of a household.

As well as being quieter, therefore reducing noise pollution, EVs also produce zero tailpipe emissions, meaning the air of the owners and those around the EV will be cleaner, reducing the likelihood of causing breathing difficulties from excess pollution. EV drivers also report the quieter cabin of an EV, improves their alertness levels, which as more people begin to purchase an EV, could see a reduction in accidents on the road.

20. How prepared are car dealerships, service networks, repairs and maintenance organisations, breakdown services and aftermarket suppliers to meet the growing EV uptake?

On the whole recent skills data suggests that we have a skilled workforce who in theory are able to fulfil current demand for repairs, service works and maintenance. However, this is not necessarily the case for the entirety of the UK, with some parts of the UK having long wait times for EV repair and maintenance. We have a solution which would help ease this problem and we hope to publish it as part of a wider skills report this November.

However, our members remain confident that there are enough skilled engineers to fulfil their chargepoint operator obligations to install and maintain their chargepoints. Many members report that the workforce is in itself, skilled enough but may sometimes require upskilling when they move from a skilled profession such as maintenance or repair of other devices to doing the same for chargepoints. One of our members reports that one of their best chargepoint engineers used to repair fruit machines and with a little upskilling is now their best engineer. So, there is a clear role for industry to also set realistic expectations of the existing workforce and provide relevant upskilling programmes to ensure that they get the staff they need to fulfil their obligations as CPOs.

21. How does the charging infrastructure for EVs need to develop to meet the 2030 target? Does the UK need to adopt a single charging standard (e.g., the Combined Charging System (CCS)) or is there room in the market for multiple charger types?

The Government has previously set a target for 300,000 chargepoints to be installed by 2030. However, what they haven't focused on is the utilisation of the existing charging network. We suggest in our report Charging Forward to 2030 that to better utilise charging infrastructure we need to have smart design principles in place.

What this means is instead of blanket installing fast chargepoints for example at out-of-town shopping centres we understand the use case for the car park. Not everyone will need a fast charger, some may only be stopping for half an hour for their weekly shop and need a rapid charger, while others may be staying overnight in the hotel and need a slow charger. With a better variety of chargepoints to meet different use cases we would see less queues and higher turnover in EV's connecting to chargepoints. This would mean fewer chargepoints would be required to service a larger number of vehicles.
In addition, there are a number of vehicles in circulation that are not able to charge with CCS, and therefore to ensure that owners of vehicles that cannot charge with CCS are not inadvertently forced to scrap their EV, which would more likely make them return to an ICE vehicle, there should be more than one charger type available at chargepoints.

22. The Government recently published the draft legislation of "Public Charge Point Regulations 2023". What assessment have you made of the draft legislation text, and what contribution will it make in ensuring the charging experience is standardized and reliable for consumers?

The Public Charge Point Regulations 2023 are an exemplar of how legislation should be developed. The regulations were developed with significant industry engagement over a number of years meaning not only were there no surprises but that for the most part the regulations are themselves wholly achievable for most CPOs.

Our only concerns with the regulations which are otherwise wholly workable are the reliability and roaming requirements. Currently OZEV are working with industry to update the reliability guidance over a 6-month workshop period. This should resolve any concerns the industry has over how the reliability regulations will be applied and enforced.

The second concern around roaming we believe however has yet to be addressed. Presently the regulations say that CPOs need to roam with one other provider. We think that many OEMs already have wider roaming agreements in place than this and by the time the regulations come into force in 2 years most CPOs will have already exceeded this requirement. We would prefer if this requirement was therefore stronger.

23. What assessment do you make of the requirements set out in the draft legislation of "Public Charge Point Regulations 2023" for charge point operators to make data free and publicly available, and how may this improve the EV charging experience for consumers?

Consumers being able to see in advance of their arrival the status of a chargepoint will be very important in providing confidence in charging infrastructure as people who are not EV enthusiasts begin to purchase EV's, while will need greater reassurance about the quality and reliability of charging infrastructure. This should enable more seamless charging experiences where consumers are less likely to need to queue and also with the potential to book chargepoints also being developed by some CPOs there will be a better utilisation of chargepoints overall leading to more people being able to charge their vehicle.

24. In terms of charging infrastructure, are there unique barriers facing consumers in areas of low affluence and/or multi-occupancy buildings, such as shared housing or high-rise flats? Do you consider public EV charging points to be accessible and equitable compared to home-charging points? What can be done to improve accessibility and equitability?
There is a wider issue with public charging infrastructure that currently van drivers and wheelchair users are less likely to be able to charge their vehicle in public. Although PAS 1899, an accessibility standard, was introduced in 2022 which acts as guidance to CPOs and car park operators who wish to ensure their chargepoints are wheelchair accessible, this is not applied to all chargepoints or locations and therefore contravenes the 2010 Disability Act.

Furthermore, no such standard currently exists for vans and BVRLA data suggests only 3% of local authorities have engaged with fleets when designing their charging plans, highlighting much of the public charging infrastructure available will not be it for van drivers. Van drivers will make up the highest energy demand for public charging of any vehicle type in 2030 and therefore its of paramount importance that charging infrastructure is available to them.

25. Is there a financial benefit to the consumer of choosing an EV over an ICE vehicle? Are there further benefits, aside from financial, that a consumer may gain from EV use?
Yes. Please see our answer to Q19.

Q's 26-28. Not answered.

29. What are the challenges or concerns around grid capacity in relation to significantly increased EV adoption?

There are concerns at present. However, we are confident that the grid will have enough capacity to support significant EV adoption in the future, indeed the Government have been planning on it, particularly since the release of the 2020 Energy White Paper. However more needs to be done more urgently and at a local level to improve flexibility on the system and reduce peak demand there is a need to ensure that on larger charging sites particularly that there are solar and battery storage facilities available which will reduce the need for extensive grid connections and reduce peak demand.

30. What is the role of distribution network operators in ensuring EV infrastructure can be rolled out sufficiently to meet 2030 target?

DNOs have a significant role to play in ensuring that chargepoints are connected to the grid quickly to meet a rapidly growing demand for EV charging while balancing their responsibilities to provide connections to solar, battery storage, heat pumps etc. DNOs must be given more funding to ensure they can hire enough skilled workers to fulfil the

increasing volume of connection requests which will exceed efforts to be more efficient which are underway at the moment.

31. What are the requirements, challenges or opportunities for the development of public charge point delivery across the UK? How will the development of EV charging infrastructure in the UK interact with existing planning regulations?
There is a significant opportunity to accelerate the deployment of charging infrastructure in the UK by modernising laws set in the 80's and 90's which currently apply to EVs. In our report we spoke about a number of these laws and regulations which currently impede chargepoint deployment. We are grateful to see reforms to permitted development rights which was recently announced by the Department for Levelling Up, Housing and Communities in conjunction with OZEV which reduces waiting times by up to 12 weeks.

There could be similar benefits by reforming Traffic Regulations Orders and Section 50 Permits. Traffic Regulations Orders currently take up to 2 years to complete and are required when there is a change in the use of the highway, for example installing a chargepoint and making a parking space EV only. However, some local authorities are using experimental Traffic Regulation Orders which enable a trial to immediately commence for 18 months while public consultation is taken and a verdict delivered on whether the new site can stay. We prefer this method and see this as a more streamlined approach which will deliver a quicker deployment of charging infrastructure.

We would also like to see reforms to the Wayleaves process to speed up granting of permission for connecting cables across privately owned land. Renewable energy, energy storage and EV infrastructure should be given the same rights here as afforded to the Telecoms industry, as key enablers for Net Zero.

32. What are the issues facing rural residents, urban residents, and sub-urban residents and how do they differ?

Rural residents specifically have the challenge of finding it harder to find charging infrastructure and often will not have off street parking. There could be a number of reasons why this occurs, but weaker grid connections and limited charging demand making investment cases more difficult being often the underlying reasons for this. Meanwhile urban and sub-urban residents without off street parking may find their charging options limited if off street parking hasn't been rolled out already. This means they can find it difficult to charge when they are close to home. They may also have to compete for access to charging hubs or car parks where there may often be long queues and higher prices for charging than they could otherwise pay at home.

33. What role do you see local authorities playing in the delivering the 2030 phase out target, particularly in relation to planning regulations, charge points and working with District Network Operators? How can government best support local authorities in their roles?

Local Authorities will have a significant role to play in delivering adequate chargepoint rollout in time for 2030. Local authorities should be mandated to have charging action plans to ensure that charging infrastructure is available in every part of the UK. Without a commitment from local authorities to do this we could see areas that simply will not have adequate charging infrastructure to support the growth of the EV market. A recent freedom of information request has revealed 70% of local authorities do not have charging plans, far greater than thought by industry, highlighting despite the significant funding available to them from the LEVI fund that, there is a lack of willingness or capacity to do so – most likely due to lack of suitable resource internally in the authorities due to repeated budget cuts.

34. What are the successful approaches to the rollout and uptake of EVs in other countries, and what can the UK learn from these cases?

Norway is the world leader in EV adoption who achieved this feat through tax and other incentives which levelled the cost of purchasing an EV vs an ICE equivalent vehicle. With Norway so far ahead of the UK, we can learn from them and tailor similar approaches to fit to the UK at the right time. For example, in 2015 they introduced 0% VAT on leased EVs. With leasing becoming an increasingly popular form of car ownership in the UK, a policy like this would help level the cost of an EV vs an ICE vehicle and accelerate EV adoption. In 2017 Norway introduced the 50% rule which meant EVs would pay half the parking charges, road tolls and ferry charges.

The 'Right to Charge' also opens up EV ownership to those in rented properties by requiring landlords to agree to the installation of charging kit (at the tenants cost). Once more adopting similar policies which do not directly require additional Government spending could be a strong way to encourage EV adoption going forward.

End