HOUSE OF LORDS

Environment and Climate Change Committee

Corrected oral evidence: Electric vehicles

Wednesday 6 September 2023

11.05 am

Watch the meeting

Members present: Baroness Young of Old Scone (In the Chair); Baroness Boycott; Baroness Bray of Coln; Lord Bruce of Bennachie; Lord Duncan of Springbank; Lord Grantchester; Baroness Jones of Whitchurch; Lord Lilley; Lord Lucas; The Lord Bishop of Oxford; The Duke of Wellington; Lord Whitty; Baroness Parminter.

Evidence Session No. 2 | Heard in Public | Questions 15 - 22

Witnesses

I: James Taylor, Managing Director, Vauxhall Motors; Professor Tim Schwanen, Director, Transport Studies Unit, University of Oxford; Lauren Pamma, Programme Director, Green Finance Institute; Mike Hawes, Chief Executive, Society of Motor Manufacturers (SMMT).

Examination of witnesses

James Taylor, Professor Tim Schwanen, Lauren Pamma and Mike Hawes.

Q15 **The Chair:** Good morning. Welcome to this session of the Climate and Environment Committee's inquiry into electric vehicles. I welcome our witnesses. We have present with us Tim Schwanen, Lauren Pamma, Mike Hawes and, down the line, James Taylor. We have already had a James Taylor, but one can never have too many James Taylors, in my view.

I remind everyone that a transcript will be taken, and the witnesses will be given the opportunity to review it before it goes public. The session is webcast live and made available subsequently to view via the parliamentary website. For Members who have not yet spoken, if you have a relevant interest to declare, could you please declare it when you speak?

We have been talking about the Government's phase-out dates and whether they are realistic and achievable and what obstacles there are to meeting those targets. One thing that has come up, of course, is the need for cheaper and lighter electric vehicles and the dash for SUVs that has been happening irrespective of whether they are electric or other forms of fuel.

Can we briefly have your thoughts on the most important thing for government to tackle to make sure that the phase-out dates are realistic and achievable? We have already heard from the previous panel what the range of issues is, but we would like to hear from you on what the Government absolutely should focus on as the highest-priority actions to reduce any blockages or things that might prevent the achievement of the dates. Can you particularly also address the Great British public's love for SUVs? I declare an interest, since I have one.

Mike Hawes: Thank you very much for the opportunity. What is the first thing the Government can do? It is to provide the clarity. We all read newspapers. The narrative in a lot of the newspapers over the last few weeks has been about whether the Government are going to continue with a lot of these net zero measures. As far as the industry is concerned, we desperately need that clarity because the investment continues to take place and any uncertainty leads to consumers sitting on their hands and sends the wrong message.

First, we need clarity, because we do not have the regulation. There is clearly this proposal that we end the sale of conventional petrol and diesel in 2030 and all internal or fossil fuel-based vehicles by 2035. When I say there is lack of clarity, that is in law. We do not know what we are allowed to sell between 2030 and 2035. That has a direct impact on your investments, because you do not know, if you are putting a vehicle, a product or technology on the market, how long you have to sell that to get the return on investment.

Secondly—and the previous panel spoke about this—we have a consultation for a zero emission vehicle mandate. That mandate will come

into force in 116 days' time. We do not have the regulation; we have had two consultations; we do not know the response to the consultation. Normally, if you are defining good regulation, smart regulation, you get a couple of years to plan. So we sit here in early September. Most brands —and my colleague from Vauxhall, I am sure, will comment on this—are at the point where they have to fix their product, their budgets, which means your product allocations for next year. You have to do it now and you cannot do it on the basis of a consultation. You need to see the regulation, because that tells you what you can and cannot sell. So the first point is clarity.

The second issue, and more generally speaking what the Government can address, is consumer acceptance, cost of ownership and reassurance to the consumer. Yes, this is a new technology, so it is a higher-priced, higher-cost technology. The industry is trying to drive down that cost. We need to get government to pull every lever to encourage that. We can talk about that later, I am sure.

The third issue is reassurance. Previous panels have talked about—and you read a lot about it—the issue of recharging, making sure that recharging is as easy as refuelling and you do not have to think about it. We are a long way off that.

Those three issues are very clear about what we need. There is a lot more detail behind them that I could go into, but that is the headline.

On the issue of SUVs, the market has been moving for a number of years. Regarding segments, SUVs are what we call dual purpose, and it is the third best-selling segment behind small cars. Fiestas, Corsas, Polos and so forth are the biggest selling segment. SUVs are third. They appeal to consumers. They are bigger vehicles, there is a high driving position. They lend themselves to electrification more readily, because in a bigger car it is easier to package batteries. If consumers demand a 200, 300, 400-mile range, a bigger battery pack is needed. So they lend themselves to that.

As regards the pricing position, given the price of batteries, as a proportion of the total cost—to give an example—if a small car costs £15,000 for internal combustion and you put a battery pack in there, it is more likely to cost £30,000. That doubles the price, whereas on an SUV, if it is normally around, say, £45,000, it will be 25% to 30% more expensive than a petrol vehicle. So the market will accept it more readily because the step up is not so great.

There is a lot in there to unpack, I am sure, but I will pass to others.

Professor Tim Schwanen: Thank you for having me today. I agree with almost everything that has been said. I want to highlight a couple of things that we have not spoken about this morning.

One is the importance of shifting to electric vehicles for everyone in this country. There is a big question around equity and the relative ease with

which different segments of the population can do that. There is awareness about the specific difficulties faced by people and households who do not have their own off-street parking facility, but there is more to be done. In that context, getting the second-hand vehicle market to work is also very important, because lower-income households are disproportionately dependent on that part of the market. That is a really important set of questions. It is not only about the total volume; it is especially about making sure that everyone can shift.

The second thing is reliable and trustworthy information about the difference that electric vehicles make. When I say "trustworthy", I mean that there is a need across society for a source of authoritative information about electric vehicles, about charging, about what it all means to change your vehicle, from a source that is widely seen as trustworthy by the public. My sense is that the charity sector could play a very important role in that; an organisation such as the Energy Trust could play a very important role in providing lots of reliable information.

There is a lot happening in specific local authorities, especially on public charging. Also, there are large opportunities for local authorities to learn from one another. There are some that lead the way. For instance, Coventry has an excellent set of information sources about electric vehicles on its website. Other local authorities could learn from its best practice. An organisation such as OZEV could play a role in allowing local authorities to learn from one another. A lot of what needs to happen regarding infrastructure will come down to the role of local authorities. The responsibility of national government is to provide the regulatory frameworks and financial resources so that local authorities can encourage uptake of electric vehicles.

There is a broader trend of which the SUV is a symptom, and that is that vehicles have become heavier, wider and larger, more generally. Even what we now call a small vehicle was not classified as a small vehicle in the 1980s. If you look at the changes, it is quite remarkable. That is a very significant problem, because it means that more resources are required to build these vehicles. If you think about lifecycle emissions, some of the reduction in emissions due to the shift to electrification gets cancelled out by this trend. There is a broader set of questions about how that can be tackled.

Lauren Pamma: Thank you for having me. I would probably summarise it as four Cs: certainty, cost, confidence and collaboration. Echoing a lot of what Mike and Tim have said, the certainty around the ZEV mandate, not only for manufacturers but for the future supply of vehicles, is critical. It is also critical for the infrastructure. One thing that investors tell us is that uncertainty about the future profile of demand is holding them back from investing in charging infrastructure, because they are not certain how and when that charging infrastructure will become profitable and widely used. So the ZEV mandate serves two purposes for setting out that clear trajectory over the next number of years.

From a cost perspective, you have heard from the earlier panel about the price difference. Consumers need to understand the total cost of ownership more broadly. While there is a higher purchase price for these vehicles, savings can be seen through things like lower vehicle excise duty, the cost of driving around cities that have clean air zones and lower maintenance costs.

As to confidence—to go back to what Tim said—consumers need more information and a trusted source of information. There are so many mixed messages out there and confusion about making the right decision that consumers are worried about what they should do. They all remember being told that diesel was the best thing to have a few years ago. Then we had Dieselgate and the scandal around that. That has just given consumers uncertainty about whether they are doing the right thing for the right reasons. Getting that information out there on the real lifecycle emissions of electric vehicles compared to petrol and diesel vehicles is going to be critical in easing the transition.

Touching on something Tim said, there is collaboration and sharing best practice. We are seeing a lot of local authorities and others all doing their own work about the correct strategy to have in their local area. The reality is that vehicles do not just stick to one local authority area; they move around the country; they move between countries. So we need to make sure that we are building out the infrastructure so that it is where it needs to be for everyone to be able to make that transition in the future.

James Taylor: Good morning, everyone. I would probably agree with most of the points already made. The first point is that we need clarity on legislation; that is pivotal. Mike explained about lead times and supply planning that OEMs need to work to. Being less than four months away to knowing for sure exactly what the targets are for next year is a big challenge.

The second point, which again has been mentioned, is cost of ownership. Anything the Government can do that reduces the cost of ownership of electric vehicles will be welcomed, because that will obviously stimulate demand. As outlined, electric vehicles are more costly to manufacture than petrol or diesel today. Customers need to be educated on total cost of ownership. Clearly there are a number of parts to that, which no doubt we will come to later.

The third part is that taxation today around the benefit-in-kind advantages for electric cars probably favours larger SUVs more than smaller vehicles. In the small market or smaller car traditional market—Corsas and Astras, et cetera—the private motorist takes a much bigger share of that market. There is a lack of incentives for the private motorist. Obviously, we had the plug-in car grant, but that has been phased out. It really means that, for that key component of the market, there is no incentive up front to reduce the initial cost of purchasing a vehicle. That is the key point.

The last part, which comes back to this confidence point, is the charging infrastructure. We have moved away from range anxiety, because technology has moved on and the range of vehicles is now 250 miles, if you take a Corsa. That is less of an issue; this charging anxiety is a key point. You may know that Vauxhall launched its Electric Streets campaign a few weeks ago because most charging today—80%—happens at home. That is the most cost-effective way of charging a vehicle. It also helps to balance the grid and it reduces your total cost of ownership, so it is more aligned to a petrol or diesel vehicle. But 40% of households in the UK do not have off-street parking. We need a clear plan from local councils for residential on-street charging. As we outlined, 70% today do not have a published strategy for how that will be provided.

I would say that charging points and access to affordable, convenient charging in terms of stimulating consumer demand is the biggest barrier today. Again, anything we can do on that will also help the private motorist, which will help the traditional segments of cars rather than SUVs.

The Chair: Thank you.

Q16 **Lord Lilley:** The last time I looked in the UK market, which may be out of date now, three-quarters of the cars that we produced were sold abroad and three-quarters of the cars we consume are made abroad. To what extent do the UK rules have any major effect? Even if we had no rules, our exporters would have to phase out petrol, if they are going to be phased out in their export markets. To meet their domestic markets, importers would have to introduce these rules. It would be nice to be certain about British rules, but even if the British rules did not exist, they would still have to conform to what is happening abroad.

Mike Hawes: The first point to make is that the figures are broadly correct. About 80% of what we produce is exported and about 84% to 85% of vehicles sold in the UK are imported; so they are kind of in balance. It is a global industry, but all major markets are shifting towards electrification. It started with the Chinese market. Europe has broadly similar deadlines; it has a slightly more flexible approach. The US Biden Administration have proposed, through the EPA, some significant reductions in fleet average, which will effectively again drive an EV take-up in the US market. So there is global shift taking place across major markets.

The issue for the UK is that we are an important market in Europe; we are the second biggest new car market in Europe. Obviously that makes us attractive. You do not want additional cost. You do not want to develop a car just for the UK market, because that will not be feasible and there would be a reduction in consumer choice, but it does matter what the framework is here, because you want to make sure that you can align with it.

What is being seen—and this is generally supported by the industry—is an understandable ambition to get there as quickly as possible to address

climate change. That aligns with what the industry is trying to do. We have made those investments as an industry. We need to make a return on them. You need the major markets to shift. The UK is a major new car market, but geographically, in global terms, we are relatively small, densely populated and relatively affluent. We embrace new technology and we should be in the vanguard of this transition. The framework, the encouragement and the ecosystem around it should be helping that transition.

Lord Lilley: You said they are more flexible on the continent. If we were equally flexible in our rules here, would that help or hinder our manufacturers?

Mike Hawes: It is hard to say. If you are looking at Europe as a whole, in the EU, for instance, Denmark and the Netherlands are far ahead in electrification, but Greece and some eastern European countries are much further behind. There is greater disparity here. As I alluded to earlier, the charging rollout, certainly in London, is expanding but is less available in other parts of the country. So there is that dimension.

One other point I should make, as I do not know whether this will be resolved before this inquiry finishes, is on the rules of origin and the trade deal between the EU and UK—the TCA—which get tougher purely for electric vehicles on 1 January. The UK Government fully support what industry on both sides of the channel says it wants, which is that, basically, the battery industry has not been able to develop capacity to meet demand and align with that. There is a danger that a levy of 10% purely on EVs—the very vehicles you want to encourage people to buy—will make them more expensive going both ways on 1 January. Trade and the terms of trade matter.

The Chair: Mr Taylor, as a manufacturer would you like to comment on the points that have just been raised?

James Taylor: Again, I agree largely with what Mike said. At Vauxhall, we are committed to being fully electric by 2028. As you know, Vauxhall exists only in the UK, but in the wider Stellantis organisation we are committed to being zero emissions by 2030 across all brands. Clearly, the legislation in different markets drives the product strategy going forward. To a degree, they are interlinked. We are also concerned about the near-term and trying to plan for 2024. That is why we need clarity. We are talking about production decisions and allocations by product, by market, et cetera, today. That is why it is important to have that clarity.

On country of origin rules, again I echo what Mike said. Clearly, anything that will add cost and increase the total cost of ownership for electric vis-à-vis petrol or diesel will further dampen demand for electric vehicles. Again, a solution to that would be much welcomed.

Q17 **Lord Whitty:** I have two quick questions, one of them to be provocative. Is it not true that the only way we could meet the 2030 absolute target on new sales and at the same time make it available to lower-income

consumers is to import large numbers of small Chinese electric vehicles? That is my first question, which you can come back to.

I will ask the second question now, which was provoked by Lauren Pamma making a reference to Dieselgate. Much discussion of ULEZ is about air quality and not carbon. What are the manufacturers' views on the relative effectiveness of non-tailgate emissions, which are about 30% to 40% of the air quality problem? Do electric vehicles help in that regard?

Mike Hawes: First, on China, I represent the SMMT and we represent the automotive industry pretty much in its entirety, whether you make, import or sell. We have Chinese brands in our membership. I declare that interest.

China has, by definition, lower production costs than Europe. Perversely, it has higher embedded carbon costs than what is often made in Europe, because we are further along the line in decarbonising the grid. That is part and parcel of this whole transition, and we must not lose sight of that. However, the cost of raw materials and batteries is still significant. Some of the price positioning of new entrants can be at a slightly lower price than European ones, but it is not significant.

There are internationally set prices for raw materials. Looking at the geopolitics of the last year or so, the price of raw materials and batteries has plateaued instead of coming down and is starting to go up again. That is before the demand impact if, for instance, the US market is electrified in a big way. I would argue that a competitive market is the most effective way to drive down costs—that is globally or, in our case, certainly in the UK and Europe.

Secondly, on ULEZ being focused on air quality, as you replace tailpipe emissions of particulate NOx—Euro 6 technology is demonstrably able to do that, which in diesel is what qualifies for ULEZ exemption—you put more focus on other forms of emissions. Tyre wear, brake wear and road erosion will have increasing proportions, because you reduce everything else. Vehicles are not the only contributor to air quality in an urban area; there are also households, industrial and commercial, and so forth.

The industry is absolutely focused on this. I know that the tyre industry is looking at how to reduce tyre wear over the lifetime of a vehicle without losing grip. Certainly, we need to understand how big that issue is, and how to measure and develop solutions to address it.

A lot has been spoken about EVs recently increasing potholes, car parks falling down and so forth. I do not have a lot of truck with much of that. But, by definition, the batteries in electric vehicles are at the moment heavier than an internal combustion engine, because people demand 200 or 300 miles capacity. If you had the confidence of being able to recharge anywhere—let us say allowing capacity of 100 or 150 miles—the battery put into a vehicle could be that much smaller and lighter. So the two are inextricably linked.

Lauren Pamma: With Chinese manufacturers, we need to remember that, although we are trying to make this a just transition for everyone, the majority of people are not buying new cars. The phase-out date of 2030 is focused on new cars. A lot of what we need to do to help lower-income families to get into electric vehicles is, as the previous panel said, to focus on the used market and what we can do to support that market, and how quickly we can get vehicles coming through on to the roads and into that used market. That will be equally as important as driving down the cost of new vehicles.

The Chair: I am conscious of time, and it is likely that we will be interrupted by a vote in about 15 or 20 minutes. I will suppress the subsidiary questions and move on, because the ZEV mandate is clearly a pretty important topic and we have not talked about it in detail.

Q18 **The Lord Bishop of Oxford:** Thank you very much. You highlighted the imminence of the ZEV mandate and the difficulty of planning for that, which I appreciate. In effect, it brings forward a target from the distant 2030 or 2035 to the very immediate, and sets increasing targets for each year to come. There are fines, presumably for all manufacturers, for cars sold outside that mandate. What is your assessment of the uptake trajectory set out by the mandate? Are the targets achievable for manufacturers' UK sales? Can you talk a bit about how this will affect the market overall? What are the unintended consequences of the mandate? It seems a very radical—from my perspective very welcome—set of initiatives, but it is also a major issue for industry.

The Chair: Perhaps, Mr Taylor, you could kick off since you are in the firing line.

James Taylor: No problem. On the ZEV mandate, as I said before, the important thing is clarity. At Vauxhall, we have welcomed the ZEV mandate and have committed to build all electric brands by 2028, well ahead of the current target of 2030. Clearly, our product plan has been put in place to make sure we achieve that. We have been on a journey from 0% electric if you went back three years and we need to be 100% by 2028. From that point of view, the product plan is in place. As people know, the general lifecycle of a vehicle is six or seven years. As vehicles are replaced, the replacements will be electric. Even by next year, every vehicle in our range, whether car or commercial vehicle, will have a fully electric variant. Many will run alongside petrol or diesel as an alternative choice.

Yes, the ZEV mandate is achievable, but what is really important is that we have the infrastructure. As we have outlined before, we should also have mandated targets for infrastructure. The biggest barrier to consumer demand today is charge anxiety. As a manufacturer, we obviously want to give customers the vehicles they want, so we need to make sure that at a market level the demand is there to achieve those targets holistically. We do not want to force people to have electric. That comes back to charging points and the total cost of ownership. Particularly pertinently, it comes backs to incentives being needed for

private retail customers in the smaller, family car area to help that transition and total cost of ownership equation.

Mike Hawes: First, the target is very ambitious. Industry is generally supportive. However, no two companies have exactly the same strategy, timing and so forth. They all have the same end goal. You heard James say that it is 2028 for Vauxhall, for others it is 2030, and for some it is 2035. Everyone will get to the same place. They have to, because you will not get to net zero unless you decarbonise road transport. I know the focus is on cars, but we must also not forget that the mandate affects vans, which is a different market. We must also look at HGVs, buses and so forth. It is ambitious.

Last month, EVs represented 20% of the market. That was August, when the market is small. You might say that 20% is not far off 22%, but you must remember that it is 22% by brand and everyone is at a different trajectory. That is why there need to be certain flexibilities. I can give examples. The UK has a fantastic array of luxury, premium and sports vehicles produced by small companies. They do not have the benefit of a global footprint and investment portfolio. They need a slightly different approach. As James said, the bottom line involves two things. First, the infrastructure must be there. Secondly, we can and have put these cars on the market, and vans are increasingly coming to market, but you cannot compel sales of them. You need to pull every single lever to make that trajectory a reality. What we see is no levers being pulled.

Professor Tim Schwanen: If we take a longer-term historical view, mandates have generated the biggest changes in the actions of the vehicle industry. Whether you look at American air quality standards or fuel efficiency standards—the CAFE—or the Euro standards, overall, those have produced probably the biggest reductions in CO_2 emissions from the whole sector. It is very important that these mandates exist. What the ZEV mandate does, and does very well, is to provide a trajectory from here to where we need to be in 2030. Until recently, that was lacking. It is ambitious, but it must be because there is no other way to get there.

The 2030 and 2035 targets are particularly ambitious for the van sector. It is important to recognise that the van market has a very fat tail. With commercial vehicles, there are a relatively small number of very large fleets and then many small or medium enterprises that have one or a couple of vehicles. It is in that last group that some of these issues are coming to a head going forward, because the price difference between a conventional van and an electric one is likely to remain a barrier to this group of potential customers for longer than in the passenger vehicle market.

From some of the work we have done at the University of Oxford, it is also clear that many small and medium enterprises do not have the ability or resources to do proper fleet management. What they do is often off the cuff. They have little understanding of total cost of ownership. They do not know how to calculate that for those vehicles. A range of actions could be undertaken to make resources available for free on how

to calculate total cost of ownership. Trustworthy providers would be very important in that sphere. The van market in particular needs special attention and has not been brought up in discussions this morning. It is important that we take that into account.

The Chair: On the individual ownership market, does the mandate have any risks in making the just transition less likely?

Professor Tim Schwanen: I would say less so. Again, this comes back to some points raised this morning about getting the second-hand market for electric vehicles to work. That market is where most lower-income households would be looking at. Other issues need to be addressed in the private vehicle sector. Yes, cost is a very important factor, but it is not everything. There are questions about information and trust, and there is a need for with adequate information about emissions and costs being circulated by influential and trusted individuals beyond the state. With what is happening on social media, it is important that we get that information out and it is seen as credible by the whole population.

Mike Hawes: To add to the point about communication, we used to have something called Go Ultra Low, an initiative funded by industry and government through match funding. Every brand put in £250,000 and the Government matched that. It was a communication campaign aimed at addressing some of the myths. It had that independence, accuracy and so forth. That was cut in 2021, and I totally agree that there is now a gap in that independent advice to consumers.

Lauren Pamma: On the ZEV mandate being achievable, Norway is a smaller market, but it took eight years to go from 16% to 82%, and we were at roughly 16% by the end of last year. That suggests that it is achievable for us to reach 80% by 2030. I disagree about needing a mandate for the number of charge points in the ground. What is important is having the right chargers at the right speeds in the right places. That does not necessarily mean that we have a fixed number to target in the same way. It is about making sure they are in the right place when they are needed.

Professor Tim Schwanen: In general, the discussion on chargers is too focused on numbers. Many public chargers do not always function well. There are a lot of issues with reliability. The quality of the charging experience is what really needs to be brought up in discussions and the policy sphere.

The Lord Bishop of Oxford: Who should have primary responsibility for that? I noticed that James earlier talked about mandating local charging networks as well. Should that be local authorities? I completely agree with you on this. I tried to charge my car in Torbay on holiday this year and there were only two high-speed chargers in the whole of Torbay. One was not working when I went to it. It seems to me that this is very much in the interests of local authorities and that they have the co-ordinating role over and above what Tesco or other chargers might do.

Professor Tim Schwanen: I think local authorities are generally very aware of these issues. Probably more creativity is needed in the processes of procurement, concessions and in performance and quality criteria. That is what the state can do in this regard.

Mike Hawes: You cannot focus just on that. Local authorities are being pulled from pillar to post on any number of things, and I am not sure they would welcome another burden. This is about the whole ecosystem. I have a lot of sympathy for charge point providers who want to invest. Their biggest obstacles are planning and grid connections. There is also local authority inconsistency. You need to address all of those. There are targets. The case in point is motorway service areas. The ambition for every MSA to have six high-speed chargers by the end of the year will not be met. That is not a local issue: it is to do with the strategic road network. It needs that whole approach, and I totally endorse what James said. Look at how Norway responded to this: it was much more co-ordinated with incentives for the new buyer and infrastructure being there. All right, it can afford it with the oil-based wealth fund, but you need to find a solution that works for the UK.

Lauren Pamma: So far, we have seen infrastructure going in where it makes commercial sense, because that is where the EVs go or where the cost of connecting to the grid is lower. Government and local authorities have a role to play in future in making sure that charging infrastructure goes into areas where it does not make commercial sense today, but if it does not go there, people will not be able to make that transition. That is probably where public funds need to support this. The private sector will step in and sort out a lot of the rest of the charging infrastructure. The ZEV mandate helps because it sets out that trajectory of what future revenues will look like from those charging points. We can see the number of vehicles that will turn up every day, which makes it much more predictable and foreseeable.

James Taylor: I fully agree with that last point. Linking that to the point on vans, 40% of currently owned commercial vehicles are also charged at home. It is very important to have that residential on-street charging. It is not just to solve the passenger car issue but to support LCVs. I agree that this is an even more ambitious target than for cars, given the feasibility of those vehicles.

The Chair: Lord Grantchester has a question. You will need to be very quick and to project. Bring out your inner Gielgud.

Q19 **Lord Grantchester:** I return to the subject of hybrids, which was touched on this morning by Baroness Bray in view of the difficulties of co-ordinating strategic fashions. As well as all the infrastructure and the nuances of the ZEV mandate, should it not also include hybrids in a fashion? Flexibility could well be provided through hybrids to a lot of people. Yes, it might fit people's particular needs, but it also fills a lot of other people with concerns. A large percentage of road usage crosses over the boundaries of range, especially where—I speak personally here—the beginning and end of most journeys is in places where there is

no public transport.

Mike Hawes: We may disagree here. As I said, we represent most brands; we support all brands. There are a range of views on technologies such as hybrids and plug-in hybrids. It is important to make the distinction between the two. I go back to one thing I said at the beginning.

The mandate takes us to 80% zero-emission vehicles by 2030. Then there is that last 20%, although it will be less than that because some manufacturers such as James will be at 100%. We do not know what we will be able to sell between 2030 and 2035. It is likely to be some sort of hybrid. Given where we are with the infrastructure, that would lend itself to supplanting those areas of poorer supply. We need clarity here. For some manufacturers, electrification is the only way. Others have a more nuanced approach.

We got a sense of that coming out of the Munich Motor Show on Monday and Tuesday because, looking across the European spectrum, different countries are moving at different speeds. As I said, we should be among the fastest for the reasons I outlined earlier, but, for that, you need a solution that is, at the end of the day, right for the consumer. They will determine this. If, for whatever reason, they do not want or cannot afford an electric vehicle, they will sit on their hands and keep the vehicle that they currently have for as long as possible.

Lauren Pamma: Hybrids have a role as a short-term transition fuel, but the reality is that, if a hybrid is suitable for you because the majority of your journeys are 30 miles a day or fewer and you can charge somewhere maybe once a week, you are suited to an electric vehicle. What does the engine really add to your solution? Anecdotally, when I worked in a leasing company we found that a lot of the plug-in hybrids taken came back with their charging cables intact, still in the boot in their wrappers. They were not plugged in. In such cases, you have an engine driving round effectively towing a battery and so emitting more than a standard diesel or petrol vehicle would. Hybrids have a role, and they have a role in consumer confidence, but we also need to make sure that consumers really understand what a hybrid is and what that means. A lot of them have seen adverts on the TV for self-charging hybrids and believe that they are driving round in something much more environmentally friendly than it may be.

Lord Grantchester: I will speak up for taxi drivers. A lot of them find it very hard to be all electric.

Lauren Pamma: We know.

Q20 **Baroness Bray of Coln:** I agree with Lord Grantchester that hybrids provide confidence and get people used to the whole idea of driving electrically. I speak as somebody who made that step, because I felt that it was gradually introducing me to something that I hoped to move on to. To get the level of confidence needed for people to make that big step,

we have already touched on the fact that they need to know that when their electricity runs out they can easily recharge. That is not the case at the moment.

We have talked about who might be responsible for it. Local authorities are obviously one example. Should any other organisations be brought in and allowed to make the case for introducing extra charging facilities in certain places? Is there any room for new organisations to take that sort of role? You said you did not think that local authorities would be necessarily delighted by the idea of yet another responsibility. Do you have any other ideas?

Mike Hawes: As I said, we are under a mandate and will have a better chance of fulfilling that if the infrastructure is alongside us. A mandate on charging would be part of that. There are organisations that represent different parts of the ecosystemz, such as charge point manufacturers. They would say they have money to invest and want to release that investment, but I think they would argue that the right conditions for doing so are not there.

From 2035, every single new car has to be zero emissions, whether you live in the Orkneys or Orpington. It is everywhere. That is essential. To achieve that, we need the infrastructure but also the confidence of the consumer. That is one of the things that is perhaps lacking in that regard.

Baroness Bray of Coln: Particularly in rural communities, which are not close to big petrol stations.

Mike Hawes: Exactly. If there is just a laissez-faire approach to the rollout of infrastructure, understandably you will go where you get the quickest return. That will obviously be London, first and foremost, and other provincial cities. With rural communities, it will be about going to the supermarket. Consumers go with what is convenient.

Baroness Bray of Coln: Then what are we going to do to increase this?

Mike Hawes: You need that plethora of offerings. You have high-speed charging in certain locations. You have domestic charging and charging at the supermarket, in the workplace and at the cinema. Where the vehicle is stationary, people like to graze. People charge these things whether they need to or not because they want the reassurance that it will be there. This involves something of a mindset change but visibility is key. I think everyone agrees that the charge points need to be built ahead of demand.

Baroness Bray of Coln: And then promoted locally, perhaps.

Mike Hawes: Absolutely.

Lauren Pamma: And not built so far ahead of demand that it is not going to be used, and therefore investors think, "Why have I got this here?", it rusts or it is vandalised. I do not think there is one solution that

will fit everyone. The private sector is coming in and building charge points, without local authorities.

There are solutions such as Co Charger where, if you have a home charger, you can register it on an app and share it with people living near you who do not have access to off-street parking. That gives you the ability to book it in, either as a regular event or a one-off if you are visiting somewhere. Being able to book charging, such as a slot in a car park, would be really helpful in future to get over that charging anxiety. You are right: the worst thing is to drive somewhere, get there, discover the charger is not working or that someone else is on it and you have to wait. I think this will come. As Mike said, there are lots of different options and people want to charge where it is convenient. New business models are evolving that will help that.

Baroness Bray of Coln: Of course, the other big question is whether the national grid will be ready to provide.

Mike Hawes: That is one of the biggest obstacles for all sorts of things. We are talking predominantly about cars, but if you have an HGV fleet you need a lot of power to run it.

Lauren Pamma: Again, there are solutions that will look at load balancing. The national grid is building capacity. There are solutions such as Agile Streets where you charge overnight, load balance or use battery storage. A whole number of solutions are emerging out there.

Professor Tim Schwanen: It is about not just the national grid but the DNOs that must be brought into this. Over the last decade, I have been involved in various demonstration projects around charging. We have come across a range of different hurdles, some of which were legislative. The role of DNOs, who work in a particular way with organisational and institutional routines, is not aligned with what the transport sector needs. These two sectors need to learn to work together. That is a difficult process. It is not one where you can do a lot as a state, and it will take time. Some kind of encouragement for DNOs to prioritise action in this space would be very welcome.

Baroness Bray of Coln: When you charge at a public charger, are all the plugs the same? At one point, you could go somewhere to charge your car and it would not work with your particular model.

Lauren Pamma: There are still two types. The CHAdeMO is being phased out but is still used on some older Nissans. I think that CCS Type 1 chargers are now standardised across all manufacturers.

Baroness Bray of Coln: So that will become the universal standard.

Lauren Pamma: Yes.

Q21 **The Chair:** We will leave charging as we will focus on it next week and press on with other points. I know that Mr Taylor has to go at midday. I have two questions for him. First, do you worry about the impact on your

brand of people not being able to get adequate charging in that you are forced by the mandate to produce electric vehicles, some of which may prove problematic for their owners with charging or other hurdles? Secondly, is there anything else you want to say before you go at 12?

James Taylor: To tackle your first point, research overwhelmingly shows—we see it in our own research—that once people have chosen an electric car they would not go back to petrol or diesel. In general, the ownership experience is good. Clearly, there are challenges in charging, but early adopters usually have their own off-street charging and have put in their own off-street connector. From that point of view, there is no issue. It is very positive for our brand because we are leading the way in the segments where we have launched fully electric vehicles today. From that point of view I am not concerned.

Going back a year or 15 months when the cost of electricity was much lower, and there was more clarity on the total cost of ownership compared to a traditional petrol or diesel car, consumer interest in electric vehicles was quite high at that point. It comes back to these two fundamental points that Mike and I have covered. The product portfolio is there to deliver the ZEV mandate, certainly from Vauxhall's perspective, but we need to make sure that consumer demand also runs at or above those levels, so that for customers who want to choose an electric vehicle those barriers are removed that stop them doing so.

The first of those is infrastructure, which we have talked about extensively. Secondly, there is the cost of ownership. For the private motorist, the removal of the plug-in car grant subdued demand in the smaller car segments where we have vehicles available today. Anything that can be done to reduce cost of ownership, whether it is supporting installation of charge points or taking VAT off public chargers, et cetera, will make it attractive to the customer to choose an electric vehicle. There are lots of benefits to the driver from electric. There is no noise, it is smooth and automatic with no gears, as well as all the environmental benefits. From that point of view, it is about making sure that the whole infrastructure and supply chain across electric is there to support consumers to be able to choose electric vehicles. That is the key point I would like you to take away.

Q22 **Lord Lilley:** What likely costs will consumers face in the transition to EVs? Can you put any value on the costs that they will not face—for example, in not paying fuel duty, vehicle excise duties, parking fees, congestion zone fees and so on? There is also the advantage of lower maintenance costs for EVs. Are there any policies or initiatives that the Government could use to specifically target barriers arising from unpredictable costs to the consumers—for example, significant fluctuations in the cost of electricity or changes to road taxes? Is there a role for scrappage deals linked to the sales of EVs? I tag on to this: is it actually feasible—I imagine it is—to reduce VAT on charging in public places from 20% to 5%?

Lauren Pamma: I think the industry would be absolutely delighted to see that reduction of VAT on public charging.

Lord Lilley: Is it feasible administratively?

Lauren Pamma: It should be. It does not seem beyond the realms of possibility that some form of technology can facilitate that. It is certainly seen as an unfair pavement tax if VAT is charged 5% at home and 20% out on the road. That is where things such as Co Charger, which allow you to use someone's home electricity, can play a role.

On putting a number on some of those other costs, you have listed the main ones. It will be things such as vehicle excise duty, although that is coming in for electric vehicles in a couple of years. It is difficult to put numbers on the cost of operating in clean air zones, but there are total cost of ownership calculators out there.

The other area where it would be good to have clarity, or where there is some nervousness that perhaps impacts consumer confidence, is the future of road pricing. There has always been a big debate about what will happen if fuel duty disappears and how we will be charged instead. Consumers are thinking, "Okay, if I take this now, I understand the costs for the next year, but what if in 12 months something else comes in?" The longevity of policy certainty is critical to giving consumers the confidence to make this transition now rather than wait to see what might happen in three years' time.

Mike Hawes: On scrappage, I do not think that would be effective, because people who buy new cars tend not to have a car that is 13, 14 or 15 years old. They will not be in the market for a car of that expense. What can be done? Certainly, in terms of current costs, we know that vehicle excise duty, perhaps correctly, is coming in on EVs from 2025. I think we have an issue with the premium supplement, which was designed so that if you have an expensive car—let us say a premium vehicle—you pay more. You pay more on insurance, which has gone up significantly this year by some 50% to 60%. Can we do something to incentivise that or make it more affordable?

Lord Lilley: Why is insurance higher for EVs? I would have thought it would be lower.

Mike Hawes: It is partly about risk. Insurance companies do not have all the data about the cost of repairs and they tend to write off EVs much more readily than they would another vehicle. They would argue that the cost of repair, because it is a more expensive vehicle, is likely to be higher, so it is a higher degree of risk and uncertainty. That is one area you could look at.

You are right that at the moment, if you drive an EV, you often benefit from cheaper parking and other things. In the future, when everyone drives EVs, that will not be there. At the moment, on fuel duty you do not pay the equivalent for your transport, so at some stage, as a society, we

and the Government need to look at this and have a grown-up conversation about how we manage that transition, making sure you are not punitive to either early adopters or those least able to afford this.

You can do a number of things. James made the particular point that, if you look at demand for EVs across Europe, we are not dissimilar. We accelerated to around 20% and it is plateauing somewhere between 16% and 20% in the UK so far this year. That is not dissimilar to other parts of Europe. Where it is different is where there are incentives still in place. Norway maintained its incentivisation. Consumers do not always respond to sticks. They like a carrot. You have the potential to reduce VAT on a vehicle, for instance—not waiving that entirely but reducing it, as has been done before. As I said, you need to look at every single lever, because you are trying to shift a marketplace familiar with one/two types of technology for 120 years, and this is very different.

Professor Tim Schwanen: To add to what has already been said, it is important also to think about whole trajectories when considering financial or any other incentives. What happened in Norway is a good example. It is currently going through quite fierce debates about turning back some of the goodies it gave out to electric vehicle drivers to encourage early uptake. One example of that is that, if you allow EVs access to bus lanes, at some point you have so many vehicles that—

The Division Bell sounds.

The Chair: I will have to suspend the meeting just as we were getting into something very interesting. We are quite close to the end of our time anyway, so we should probably finish the meeting. If the panel members were in full flow, please send us a written note on the points you wanted to make.

Baroness Bray of Coln: What you said about taking off the goodies and what other Europeans are doing was really interesting. We have already removed that thing about paying for your home charger.

The Chair: I am suspending the meeting. We need to go to vote. We thank the panel members for their evidence.