HOUSE OF COMMONS

Transport Committee

Oral evidence: Zero emission vehicles and road pricing, HC 27

Wednesday 9 June 2021

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Watch the meeting

Members present: Huw Merriman (Chair); Mr Ben Bradshaw; Ruth Cadbury; Karl McCartney; Grahame Morris; Gavin Newlands; Greg Smith.

Questions 42–70

Witnesses

II: Peter Molyneux, Major Roads Director, Transport for the North; Lucy Hayward-Speight, Transport Strategy and Planning Manager for Air Quality and Environment, Transport for London; and Andrew Hickford, Project Manager, Leeds City Council.

Written evidence from witnesses:

- Transport for the North
- Transport for London
- Leeds City Council

Examination of witnesses

Witnesses: Peter Molyneux, Lucy Hayward-Speight and Andrew Hickford.

Q42 **Chair:** For the next hour, we will focus on witnesses from local transport authorities. I ask them to introduce themselves, starting with Transport for the North.

Peter Molyneux: Good morning, everyone. I am Peter Molyneux. I am the roads director at Transport for the North.

Q43 **Chair:** A very good morning to you, Peter. Let's head straight down to London.

Lucy Hayward-Speight: My name is Lucy Hayward-Speight. I am at Transport for London.

Q44 **Chair:** Good morning, Lucy. We'll go back up north to Leeds.

Andrew Hickford: Hello Chair. My name is Andy Hickford. I am a project manager for Leeds City Council, working on a sustainable energy and air quality service.

Q45 **Chair:** Excellent. Peter, Lucy and Andy, a very good morning to you. Hopefully, you heard some of the evidence that came before from the organisations that are going to be at the forefront. You are going to be at the forefront, and indeed already are, in terms of the roll-out and the infrastructure being there in your authorities and cities. Using the experience you have gained so far, what are the main conclusions that you have drawn from the roll-out of charging infrastructure? How well is it working?

Peter Molyneux: It is a mixed bag. The take-up of infrastructure in the north is lower. Some of that will be because of the process with competitive bids, and local authorities finding the resources to put in bids.

On a more positive note, Transport for the North has just commissioned a piece of work so that we can actually come up with a strategic plan that will identify what a comprehensive network looks like. We will be working with our local transport and highway authorities on that, and also the district network operators, to make sure that we have a network system that is flexible but helps people put together the best bids, and we can spend the money wisely.

Q46 **Chair:** Thank you, Peter. Lucy, what about your experience in London?

Lucy Hayward-Speight: We have had quite a successful time, in so far as we have been progressing with two main programmes. We have been rolling out rapids. We have put in over 300 through money channelled from OZEV. We have organised that through TfL. We have had another programme for the slow to fast chargers, also using funding from the Government through the Go Ultra Low City scheme. With London Councils

and the GLA, together we have been co-ordinating that programme of roll-out, which has delivered over 3,000 slower chargers in the boroughs.

We have had quite a lot of success. We have also been supported by some strong policies, particularly with regard to private hire and taxi policy in terms of licensing requirements. There are also some of our other air quality policies such as the ultra-low emission zones, low emission zones and emerging zero emission zones.

Q47 **Chair:** Andy, what about your experiences from Leeds?

Andrew Hickford: It is fair to say that it is challenging. From a local authority perspective, the fact that the majority of funding available is by grants leads to a patchy approach in geographical coverage. We were unsuccessful as a region in getting Go Ultra Low funding, which hamstrung us for a long time. We are not alone in that.

We have tended to focus on electric vehicle uptake in Leeds and the region, as opposed to direct responsibility for charge point installation, on the basis that we see delivery of city-scale charge point networks being largely a commercial delivery. What we want to do is make Leeds attractive to investors for the installation of charge points.

We have been quite successful in that. We were able to get some funding for a rapid charge network regionally via the Clean Taxi fund. We procured it in such a way as to attract commercial investment. Through that programme, I have been working on delivery of 100 rapid charge points across West Yorkshire. We certainly see that kind of relationship with the private sector as a way to deliver city-scale charging. Schemes such as the ORCS grant funding do not lend themselves to delivering city-scale funding because the amount of money is so small. They also rely primarily on on-street charging, where we have reservations as to its suitability and its viability; how it actually fits in with broader transport strategy and the decarbonisation of transport is questionable.

In summary, for Leeds, we have had above national average numbers of plug-in vehicle purchases. We have the largest public sector fleet of electric vehicles in the country. We operate our own EV trial centre, which we have delivered in partnership with Highways England, to drive EV uptake by providing electric vehicles to businesses, the third sector, the private sector, private hire drivers and so on. We have been successful in delivering charge networks but, without wishing to appear ungrateful for the funding we have had, that has largely been in spite of the funding that is currently available.

I think the big issue, which Peter touched on, is the lack of resource and revenue funding that is available to local authorities. Electric vehicle charging is a relatively new thing. It does not often have a natural home within local authorities. This is not just the experience in Leeds. Typically, through engaging with local authorities all over the country, we tend to find that charge point projects are delivered by someone from

environmental health, transport, highways or road safety. We do not have particular expertise. The lack of revenue funding and resource funding that supports capital funding means that it is often very difficult to deliver projects. It is also clear that no one should underestimate the type of resources that are needed to deliver charge point projects; you are dealing with procurement, commercial services, legal services, highways, TROs and so on.

That is probably a summary of where we are. I would like to think that we have been successful in what we have done, but certainly there are significant barriers that we need to overcome.

Q48 **Chair:** Thank you. I was going to come back to you, but then I realised I would be taking a section that Ben and Greg are going to cover about what local authorities may need, so I shall keep schtum.

Peter, Transport for the North evidence is that there seems to be lower take-up of the charging infrastructure within the area that you cover. We know that Scotland and London seem to be ahead. Why do you think that is?

Peter Molyneux: I think there are two parts. If you take Lucy's example, it is the integrated approach. You have an organisation that covers a large area. What Transport for the North can do is to become the conduit; we can provide the evidence base around which we can have a conversation and be the conduit between the local transport authorities, the Government and the private sector about what is needed.

The other thing is that we have massive rural areas. One of the key things there is the difficulty in pulling them together. I really want to use the jigsaw analogy. We need a network, and we need the picture on the jigsaw box about what the network requires, and then let the people with local knowledge put together the individual charging points to fit that.

To pick up points from earlier, it is about having the right charging points in the right places. The key thing is that in rural areas the visitor economy is massive, so we need to make sure that at destinations there are sufficient charging points. We have five national parks. It is crucial as part of that.

Greater engagement with Transport for the North and other subnational transport bodies working with local authorities and working with Government can give that vision and plan, and drive it forward with value for money.

Chair: We will carry on with the regional and local approach idea. I will hand over to Grahame Morris to do so.

Q49 **Grahame Morris:** Following on from your answer, Peter, I am interested to know what the barriers or obstacles are. Is it principally funding? Is it planning? Is it co-ordination? Transport for the North is particularly centred on Manchester. Does it make much difference having an elected

Mayor being able to drive forward and identify potential sites for charging infrastructure? I do not know whether Andy has thoughts on that as well, because you have one in West Yorkshire.

Peter Molyneux: We are not just centred on Manchester. I would like to correct that. We look right across the north. We have Mayors right across the north, including the Tees Valley, so it is more than that.

I think it is all three. In our strategic transport plan, we have managed to get 20 civic leaders and 11 business leaders to sign up to a 30-year vision about how we want to deliver transport in the future. I think we can play a positive role in the delivery of electric vehicle charging points right across the north. It needs to be part of an integrated offer. It is how we link with integrating smart ticketing across our bus network, and how we work with local authorities on active travel.

More importantly, we know that a substantial number of our journeys are over 10 km. That is where people are making journeys across boundaries. An earlier point was made about its being more than just the strategic road network. What we can do is provide that network, where people are probably travelling a little bit further and you start getting some of the range anxiety. Therefore, we can say, "Here is a comprehensive network," and we can guarantee that you will be able to charge when you get to your end destination, and also make sure that you can get back safely.

That regional analysis, combined with our metro Mayors and other council leaders and local highway authority knowledge, means that we can pull together a comprehensive plan. I think we can spend the money more wisely to make sure that we have a network that works for the consumer.

Q50 **Grahame Morris:** That is a good point about the number of journeys that are undertaken that are less than 10 km.

Andy, are there different challenges when we are looking at creating infrastructure within a region that would address some of the issues that Peter mentioned, as opposed to promoting connectivity between regions?

Andrew Hickford: What I would like to do in response, if I may, is to talk about the fact that electric vehicles and the need for electric vehicle infrastructure is only part of the puzzle of decarbonisation of transport as a whole.

In Leeds, our transport strategy is centred on a vision that Leeds is a city where you do not need a car. It is really important that we do not lose sight of the fact that decarbonisation of transport will be massively delivered by modal shift. We have ambitions to increase walking by 30%, cycling by 400% and the use of public transport by over 100%. Critically, we want to decrease the use of cars by 30%. All of that is central to the Leeds ambition that the city as a whole will be carbon neutral by 2030. That is not just the council, but the city as a whole.

When we talk about the barriers for electric vehicle infrastructure, it is important that we look at the factors in delivering electric vehicle infrastructure. We should not just look to replicate what we have now. We do not want to replace 20 million diesel cars with 20 million electric cars.

There are barriers to electric vehicle infrastructure, such as the challenges of putting charge points on streets and so on. Sometimes, I think those are false barriers. I question whether or not we need to put charge points on the street. We should be looking to reduce the number of miles people do in cars. We need to consider where we are with vehicles. In the previous session, I think Tanya mentioned that an electric vehicle will do 300 miles. In 2019, the average household vehicle did 7,500 miles. That is less than 150 miles a week. On that basis, you only need to charge once or twice a week at most. That means people do not need access to a charge point all the time, every day. We need to think creatively about the type of charging, where that charging is, who is using it and where it will be placed in terms of journeys, householders and, as Peter said, visitors, so that we do not exclude rural areas, areas of social deprivation and so on.

Q51 **Grahame Morris:** I get that, and if I lived permanently in a big city such as London or Leeds I do not think I would have a car, but not everyone has that option. If people live in a rural community that is poorly served by public transport, they must not be forgotten.

Lucy, could you answer that, and can you also address the issue about designating charging locations as critical national infrastructure and what the implications would be we were to do that?

Lucy Hayward-Speight: I also want to build on the point just mentioned around the merits of more on-street charging versus alternatives. One of the things that has been emerging from our work and understanding of all of this is the importance of moving towards hubs, rapid hubs in particular. That will really support those who need to be on the road, such as the commercial users, the taxis, the PHVs and those sorts of users. One of the constraints we have, particularly in London but obviously in lots of other cities too, is space for that. We are currently looking at what land opportunities there are from GLA group land and in other areas where we might put rapid hubs. Private operators are looking at rapid hubs as well, and there may be opportunities for us to work together on that.

We also understand the point about on-street chargers. We understand that the street clutter effect has meant that lots of authorities have been questioning the desirability of having lots and lots of charge points along close residential streets. I definitely want to flag the point around hubs being the way forward.

On your other point around the designation of the charge point, we did not put that in our evidence. We have not been lobbying for that.

Obviously, the higher the importance of the infrastructure, the better. In particular, if there were larger groupings of infrastructure such as hubs, they might merit that sort of classification. Hopefully, with that would come, potentially, extra funding and other sorts of support.

Grahame Morris: Thank you.

Chair: We are going to move next to charging access for all. I will first of all hand over to Ben Bradshaw.

Q52 **Mr Bradshaw:** Andy, I completely understand your concern that we are going to just replace a generation of petrol and diesel vehicles with electric ones. I personally have not owned a car for more than 25 years. I always use a car-sharing scheme, a co-operative in Exeter that has a fleet of electric cars.

I do not understand how we are going to deliver this revolution in terms of fairness of access and equity if we do not have more on-street charging for residents. You have lots of people living in flats and in terraced housing in Leeds. We heard from the earlier session that we are facing a situation where, if you can charge your car on your drive, it is potentially five times cheaper than having to use on-street charging. Are you not feeling that that is an inconvenience? Are you being realistic in your opposition, if I can put it as strongly as that, to on-street charging?

Andrew Hickford: I would not say it is opposition to on-street charging, in that we would say, "We will not have any on-street charge posts." What I would say is that it is about where that on-street charging is best delivered.

Lucy made the point about street clutter. Clearly, we need to balance the needs of all road users. For example, areas such as Harehills and Kirkstall in Leeds are characterised by small, terraced properties, and they typically have very narrow paths and narrow roads. They also lack off-street parking. Those are locations where, exactly as you say, it would be very difficult to charge a vehicle.

That is where we feel that the hub approach would be a support. We have existing issues with parking and we have very limited resource for things like enforcement. Yes, it would absolutely be challenging to put on-street charge points in that area. What we would want to do, and what we are trying to do through the ORC scheme for example, is deliver hubs that will very much support those particular locations.

What we feel is that, on the basis that people will only need to charge once a week or so, we do not want to have a kind of unofficial ownership of charge points outside people's homes, whereby people informally adopt a parking space and therefore block it from other users. We would prefer a hub approach because that leads to high utilisation. It also delivers a sustainable charge infrastructure because there is revenue to cover the ongoing maintenance costs and so on.

As you say, there is a massive challenge in terms of equity, both in where charge points are located and in areas of social deprivation. They are often typically, but not always, ignored by charge point operators because they do not see the value of a return on investment there. I challenge that. For example, in Leeds our areas of social deprivation are typically where our licensed taxi and private hire drivers live. We see them very much at the forefront of the adoption of electric vehicles, both because they will see a huge return on investment because of their high mileage, and because we want to support them in moving to zero emission vehicles. It is those areas that suffer in terms of air quality, and we want to improve that.

There is a challenge. I think on-street will be about where it will be convenient for people to charge—

Q53 **Mr Bradshaw:** I was going to ask you and Lucy about that. Do you have any research or evidence as to how far people are prepared to walk daily, or twice or three times weekly, to pick up their car? Are you not worried that people who have to do that will feel discriminated against, in terms of not just convenience but price, in contrast to people in the leafy suburbs of Leeds who can park their car and recharge it overnight cheaply on their driveway? Lucy, is there a silver bullet?

Lucy Hayward-Speight: I think we are still finding out about this at the moment. The London Borough of Barnet recently launched a hub that has mixed speeds. The idea is that it is a hub for residential use. They will be monitoring, and we will be looking closely to see how that works out.

You are right. We do not want people to think they have to walk a very long way to go and charge. On the pricing front, one of the ways that we have learnt through our experience here is to set up framework procurement contracts that have various standards and specifications in them that allow pricing ranges to be set by us. If we have been involved in putting in the rapid chargers and, similarly, the slower chargers through the GULC scheme, we can have some degree of control over the pricing. That then allows us to try to address the equity issues.

Q54 **Mr Bradshaw:** Andy, let me push back on the street clutter issue. Haven't we always over time objected to windmills, lamp posts and parking meters? Now we are objecting to on-street charging points. Do you not feel that in the end, when someone realises they are going to have to walk a mile to recharge their car, they would rather have a charging point outside their front door?

Andrew Hickford: To be honest, I think the issue is less about street clutter. That is an issue, and clearly my colleagues in highways and transport have to liaise with disability groups on the challenges of street clutter.

Fundamentally for me, the main issue with on-street charge points in residential areas, as opposed to on-street that would serve multiple

users, is the fact that it comes down to utilisation and resources. Slow speed on-street chargers that will be used very infrequently do not offer value for money. Fundamentally, as a local authority, we need to look very much at bang for buck, at where we put our charge points and how well they are going to be used. We have limited funds and we need to put the charge points to serve the greatest number of potential users.

If we put a charge point on a residential street, it might only be used once a day, whereas if we put a charge point—much as Lucy suggested—in a hub area, where through the GULC scheme we have locations with three dual 7.5 kW charge points adjacent to a dual 50 kW charge point, people will have the option. We are seeing utilisation of those 50 kW charge points of up to 10 charge events a day. The 7.5 kWs next to them will offer a different option.

Q55 **Mr Bradshaw:** Are you basically all saying that the existing Government grants that are directed towards on-street residential charge points are misdirected and that you would rather have Government funding to create more hubs?

Peter Molyneux: It is a start, and we are starting slowly. The key thing at the moment is that we are concentrating on outputs, where we need to be concentrating on outcomes. At the moment, it is just about getting X number of points in, rather than what that delivers for the customer.

As we start to go forward, and once the transport decarbonisation plan is produced, hopefully with the leadership there, we will get guidance about how to look at outcomes. It is all well and good looking at electric vehicle charging points, but that is only one part of the solution towards the ultimate outcome. We need to move away from outputs to outcomes.

We are learning. It is the first time we have done this. To take Pareto's rule, can we get 80% of this right for 20% of the effort? It is the final 20% that is going to take us. If we try to get it 100% right, we are going to miss the boat. It is a messy solution. Let's get on. We haven't got time. Time is against us. I would say let's keep the money coming but move towards something more outcome focused. I think that will help local authorities, the DNOs and the digital suppliers in how we make a difference to the customer and get greater take-up.

Q56 **Mr Bradshaw:** Lucy and Andy, is there anything we have missed on how the Government can make your lives easier in delivering those outcomes?

Lucy Hayward-Speight: In response to your last question, I think a more flexible approach would be welcomed by everyone. On-street charging will still be useful. I think the last panel also agreed that we need different types of charge points for different types of users. We definitely still need that, but we also want to explore the hub approach. As other people have said, it is still early days. We need to work out how we will do it and how they will work best, and learn from that. We need further funding towards those sorts of solutions.

Shared hubs is another idea we have been trying to progress, sharing the hub with the private sector. They would use it at nighttime, and it could be used for the public in the daytime. Those sorts of things sound like a fantastic idea, but how do we get them to happen? That sort of thing would be very useful.

Q57 **Mr Bradshaw:** Andy, do you have one more thing to add?

Andrew Hickford: I want to follow on from Lucy's comment and echo the fact that there should be flexibility in the funding so that it is suitable to support on-street. When we talk about hubs and on-street, I do not necessarily think they are exclusive of one another. You could have an on-street hub, for example, for taxi ranking. Within that, there is a really clear opportunity. We are not there yet in addressing things like mobility as a service, shared EV or vehicle access, micro-mobility or flexible mobility type services. It is much as you described using yourself, but in the electric vehicle sphere there is a good opportunity for access for people excluded from car ownership to have use of vehicles on that basis. If funding was flexible to support that as well, it would really be helpful.

Q58 **Mr Bradshaw:** As a matter of interest, do you have a car-sharing scheme in Leeds?

Andrew Hickford: Yes, we do. We have a partnership with Enterprise, and we are currently introducing electric vehicles to that.

Mr Bradshaw: Thank you.

Chair: We are going to stay on charging access for all. I will go to Greg Smith.

Q59 **Greg Smith:** Good morning, witnesses. I want to dig in a bit more around the rural question and how we ensure that there is fair access to charging facilities for rural communities, not least because I buy the point that was made earlier that probably average mileages on cars, if you take the country as a whole, are quite low, but rural communities use cars much more disproportionately. Take my own circumstances. Our daily school run, when you add them all up, is 40 miles a day. That is not unusual in a rural setting.

How will we avoid what I might badge the broadband problem where, over the years, broadband has been delivered very easily to towns and cities but now it is panic stations as to how we get broadband to places it is difficult to get it to? How are we going to avoid that with EV charging so that, as Ben was alluding to earlier, some people do not end up being left behind? How can we make sure rural communities are at the absolute heart of this?

Andrew Hickford: Part of the challenge of charging electric vehicles comes down to where you are able to charge. The difficulty in city centres is that, often, households lack off-street parking. I recognise that that still can be an issue in rural areas in small villages that perhaps have older cottage-style housing and so on. In the Cotswolds, many areas lack

off-street parking. From my knowledge of where we are in Leeds, with our rural areas, typically the proportion of households with off-street parking is much higher. I think the first solution is that people will be able to utilise the home charge grant and charge at home. Following on from comments in the previous session, similarly, workplace charging will be a significant solution. The Government's position through OZEV is that the bulk of charging will be at home or in the workplace.

Following on from that, clearly there will be people who are not able to satisfy their charging requirements through that. I think it very much comes down to the kind of analytical work that needs to happen to address what type of charging is needed. It is not just based on the demographics of where people live, but on the journeys people make, where people travel and how far they travel. At the moment, we are probably not there yet in terms of that work being done. That will be critical because it will identify the hotspots where people's charging requirements are not being met.

I suspect there will be a combination of those in city centres and those in rural areas who do not fall into the home charge or workplace charging categories and who do not have off-street parking, and that will be a challenge. The problem is that at the moment commercial operators will not see villages as viable for investment until they look at that kind of data. I may be stitching myself up as typically representing an urban district, but there might possibly be a need for specific rural charging funding. That might be something Peter could pick up on more. Clearly, a lot of the north has significant rural areas.

There is a real issue. There are going to be different solutions. I agree that what is needed is a really good look at the details of how people travel, how far people travel and matching charging requirements or charging gaps to that. That is where the solution will be, but it is a question of who funds it.

Q60 **Greg Smith:** Thank you. Peter, what is your take on that? If you are going to look at miles driven, rural communities drive significantly further than urban communities. It is half a mile to the shops in a city, or whatever, and 10 miles to the shops in a rural community. How do we ensure that they are not left behind?

Peter Molyneux: I fully agree with the point you are making, which is why the piece of work that we have just commissioned to give us an evidence base has been informed by colleagues from Cumbria, North Yorkshire and various other places like that. It is crucial. It is about taking a whole systems approach and a whole network approach. Once we have that evidence, we need the ability to be flexible because the way the world will change over the next 10 years may change the way we need to charge vehicles.

Very importantly, we must ensure that charging points that are not economically viable are somehow still installed to make sure that we have

equity right across the range. What we know from our evidence—you are right—is that rural people are not only more reliant on the car, but their journeys are longer. With more people working from home, with our rural economies and our visitor economy, we need to make sure that there is the right network. It needs to be a whole systems approach. If we do first come, first served, there is a danger that the urban areas will be treated first because they may be the most economical to do. That does not work, because if we are to give people confidence to move to electric vehicles, we need to make sure that the network covers everybody.

Q61 **Greg Smith:** To pick you up on that a little bit, from your research and evidence, how much of the country—it does not necessarily have to be rural to fit into this category; it could be small towns—is not economically viable to have electric vehicle charging points at the moment?

Peter Molyneux: We have not completed the research yet. It will be done by the end of the year. I cannot give you an actual fact there, but again, based on the comments earlier, it depends on whether VAT is charged on public charging points and whether it is a community rate or a private rate. I think there are still a number of things to be taken into account as we move forward.

Some of the more rural areas will have visitors who, when they have travelled quite a long way to that particular area, will want to charge while they are visiting the area and then come back. There might be seasonal improvements. We need to be smarter. As I said, what we want to do by the end of the year is to show what the comprehensive network is for the north. That will enable the Government to make better decisions on how to allocate funding to make sure that a comprehensive network is in place.

Q62 **Greg Smith:** The last question on the rural question is a very open one. Do you think that technological innovation is the answer there? Nobody likes street clutter, but in a city environment, in a very urban environment, you can get away with charging posts, if I can put it like that. For example, in London when the Boris Bikes were introduced, people just accepted the docking stations across London in a way that they would not in a conservation zone or a village full of thatched cottages. They would not accept it. Do you think the technology is close enough for non-visually invasive charging stations to be put on the street in villages, under the road or however it works, in a reasonable enough timeframe?

Peter Molyneux: It is something that can be delivered quite quickly. Look at what you can do now, where you can change your central heating in each room from an app. The big culture change will be the point that was made earlier about not waiting to get empty. If people in rural areas are nipping to the supermarket or are going somewhere else, the app will enable them to make better informed decisions about when to charge. We will probably be working on the situation where you want at least 50%, and then you will be topping up because that will keep you going.

The apps will be able to get an idea of when you travel and how far you travel, and will start to give you personalised information on when is the best time to travel. We are starting to see that more and more across a number of apps. I think that will enable the customer, not in terms of value for money but for the journeys they are making and the best time to travel, and give greater possibilities for car sharing. It is endless, as people make their personal data available. It will make their lives easier and more cost-effective.

Andrew Hickford: On your question about the aesthetics of charging, I think there will be a solution in technology. However, I do not think it will be something that we see very quickly. As an example and a flavour of that, I am part of an Innovate UK trial on wireless charging. I am optimistic about that in less intrusive charging. As you suggest, it is embedded in the ground. It would seem to be a very easy-access way of charging. You are not plugging in. You charge as soon as you park.

However, we have found that in order to meet regulatory standards for transmission of power, if we are to deliver sufficient power remotely and contactlessly—it is not massive; only 11 kWs in this case—we have to have object identification protocols in place. That is basically posts at each corner of the parking bay that transmit a beam of light and identify when anything passes through. For example, if a cat passes underneath the vehicle, it will stop charging to avoid the risk of frying the cat, which is a tiny risk. That is something of a flippant example, but it demonstrates that we are not quite there yet.

There will be solutions and there are some interesting ideas on things like charge posts located within kerbs, whereby an artificial kerb pops up and you can plug into a charge point. When it is not in use, the kerb drops down again. Things like that will be a solution. It is about support through things like Innovate UK for trialling, funding and testing those things. I would not expect it to be overnight. Unfortunately, we are still at a stage where the bulk of charge points will be somewhat unattractive, although I know that the Government are looking to identify an innovative design for charge points that are seen as iconic. Maybe we will see something through that.

Q63 **Greg Smith:** Thank you very much. In sentences we never thought we would hear in the Transport Select Committee, talk of the risk of frying cats neatly segues into our next section about public awareness and common myths about electric vehicles in the shift of public attitudes to get the outcomes that I think all of our witnesses this morning would want to see.

As an opening question in this section, what do you perceive to be the most common myths that are standing in the way of greater take-up of EVs at the moment? Perhaps I could throw in one point on this at the moment for you to reflect on in your answers.

When the Secretary of State appeared before us a few weeks ago, one of

the points he made about electric vehicles—he drives one—was that he leaves his house every day with a full charge, whereas if you have a petrol or a diesel engine in your car you probably leave with any amount of petrol or diesel, knowing that you can just fill up at any time during your journey. Given all the things we have talked about in relation to some people not having that access all the time, what are the common myths and barriers in people's minds perhaps about take-up of EVs? Lucy, as you were left out of the last section, we will come to you first.

Lucy Hayward-Speight: On the charge point infrastructure theme, in London in particular there is a bit of a myth in some areas that there are not enough charge points. If you look at the plain numbers and the utilisation figures, they are not fully utilised all the time. Someone mentioned—possibly Andy—that you might have one that was used 10 times in a day. That is not fully utilised. There are not queues outside them. In peak times, we had queues outside some of our rapid chargers. There are particular ones that are very popular.

Coming back to the theme of public awareness—where they are and whether they are going to be available when you get to them—there are various apps and information. It is not always 100% correct and it is not always easy to use. There is a way to go in improving awareness of where they are, how many there are and that they are sufficient. It is a very important concept that people feel that there are enough of them. I think they do not feel that there are at the moment.

Andrew Hickford: I completely agree with what Lucy has just said about perception and reality. There is a gap between those. Our infrastructure is well utilised in parts and underutilised in others. There is the factor of locating charge points in the right place.

Fundamentally, the other myths about electric vehicles include the cost issue. There is a perception that electric vehicles are very expensive. If you purely look at the up-front costs, they are, although the differential between the internal combustion engine and electric vehicles will shrink. As the number of electric vehicles being produced increases, we will see that cost shrink even more. What people do not really understand is just what good value electric vehicles are based on the whole life cost. They are the cheapest vehicle to own. It is fundamental to get that across.

There are still perceptions of range anxiety and charge anxiety. People say, "What if I wake up in the morning and my battery is flat?" That is a perception. People do not worry that they will wake up in the morning and their car will not have any petrol, because you just don't let that happen. It is the same with electric vehicles. You learn how to drive them.

There needs to be some education on the fact that an electric vehicle is not really that different from an internal combustion engine. In fact, at the risk of sounding biased, they are better. They are quieter and cheaper to run. Range is going to be pretty much the same very soon.

The speed of charge, albeit probably longer than putting petrol in, is getting shorter as we move towards batteries that are capable of accepting a faster charge and charge points are able to deliver a faster charge. The amount of time you need to spend charging will reduce, and the frequency at which you need to charge will reduce. Those are really important things.

Fundamentally, where I am trying to move us in Leeds is to normalisation of electric vehicles, and get away from the fact that electric vehicles are anything special, or other. They are great and they have lots of benefits, but at the end of the day they are still cars. Part of our EV trial centre objective is to make people realise that once they get behind the wheel of an electric vehicle it is just another vehicle. They can use it much the same as any other vehicle. There are benefits to it. At the moment, for early adopters, there might be some slight disadvantages as we develop charging infrastructure and so on. Fundamentally, they are not that different. It would be really great if we could get some of that messaging across through myth busting or some kind of national conversation about electric vehicles.

Q64 **Greg Smith:** Before we come to Peter, maybe I could channel the next question off the back of that. I grant you that some electric vehicles have pretty phenomenal acceleration, which might bring other problems, but there are a lot of genuine questions that people have about them. Are we nearing a tipping point where take-up is going to start outstripping charging availability, particularly on long journeys for people? If more and more people are buying them, are we going to hit a point where, if you are on a long journey on the interminable half-term drive down to Cornwall—I was stuck in that and it took nine hours, which I admit I happily did on a single tank of diesel, but I am not sure I would have done it on a single electric charge—there will be queues in motorway service stations? On long journeys at peak times in the half-term holidays and summer holidays, are people going to be queuing even for rapid chargers? Does that argument have any basis in reality?

Peter Molyneux: It was the point I was going to add. Most people have two or three very long journeys a year, but that is what they are always thinking about. The other thing they always fear is, "What happens if I have to go to hospital and my car is not charged?" Those are the kinds of things, but it is the same as if you did not have enough petrol. These are things that you face.

A big concern, particularly for Highways England and the service stations, and for the major road network and the A roads that we referred to earlier on, is to make sure that you have them. If you look at the kind of vehicles that we have, if everyone pulled off the motorway to fill up because they were stuck in a traffic jam, there would not be enough petrol filling station places for all those vehicles. What we can do is enable the customer to make better decisions. It is about not getting to nearly empty. It is about saying that if you are on a journey where there

is a delay, first, there is an alternative route but, secondly, there is an alternative route with a charging point because you are getting relatively low and you have so far to go.

I think the digital solution will improve the customer experience a lot more. As we move forward, if we go down a greater car-sharing route and less car ownership, there may be fewer vehicles on our roads and therefore more reliable journeys and fewer delays as we go along. We probably need less than 10% of all the vehicles that we own for all the journeys we need to do. As we move away from the car, that will become even greater. Cars are parked for 95% of the time.

As I said in my earlier point, if it is part of an integrated solution, with electrification of the railways, better buses, e-scooters and e-bikes, I think we will see a shift in modal use and also modal interoperability. When you put that all together as a recipe, I am very optimistic for the future.

Q65 **Greg Smith:** Optimism for the future is very commendable. As we look at this public perception question though, are we better to put our hands up today and say, "Look, it isn't perfect"? It is clearly the way things are going, with the 2030 ban on new petrol and diesel, but there are going to be bumps along the road when you have a change as fundamental as this, just as there were bumps along the road when you had a change as fundamental as the shift from horse and cart to internal combustion engine all those years ago.

I am enjoying watching Ewan McGregor and Charley Boorman's latest show where they are trying to take electric motorbikes all the way through South America and up to Los Angeles. If you watch that, you actually see that it is a very mixed picture. If they did not have quality chargers, they were getting 150 miles a day. The minute they were in the United States and had fast chargers, they were doing 300 or 350 miles a day on a single charge. Are we better to be honest about that, and that it is not going to be perfect for adopters of EVs right now but better times are coming, or are we better just sticking to some of the more environmental arguments?

Lucy Hayward-Speight: The picture has always been a bit mixed. Those sorts of shows have occurred before, and it is true that in some places it will be much easier to charge than in others, but the situation is continually improving. It will still be a few years before people will be able to drive anywhere they like and charge up without a care. As Peter was saying, as behaviours change and we do not necessarily expect to be fully charged all the time, because we know from our app or from other technology that there is another charger not far away, we can be reassured by that. It is still the case that we need to admit that it is not perfect right now, but it is very close and things are constantly improving.

Andrew Hickford: I agree with Lucy. On the one hand, I would say there is probably not much interest in a programme when you are watching someone who does 7,500 miles a year comfortably using an electric vehicle. I wouldn't watch it.

In Leeds, we are aiming to have a rapid charger so that you are never more than a mile away from one. We are not there yet. Clearly, some people will find it more difficult to access than others. Going back to your point about making long journeys, clearly if you are going to do a journey of 300-plus miles, it might currently be more challenging in an electric vehicle, but you have different options available.

There are a couple of things worth mentioning on the difficulties and barriers to EV uptake. A significant one that we have not really covered today—partly because we are talking about infrastructure as opposed to vehicles—is access to vehicles. At our EV trial centre, we have many successful trials, and people want to go out and buy a new electric vehicle, particularly in the small van range, but they cannot. They are just not available. They are not manufacturing enough of them. As a local authority, we have 330 electric vehicles on fleet. The biggest challenge in increasing it is access to vehicles. We have huge timelines for delivery, and that is frustrating, especially when we are promoting electric vehicles.

The other thing to mention about long-distance travelling is the fact that hydrogen might be the solution in that sphere, particularly for heavy goods vehicles transporting heavy payloads for long distances. A consideration of a blend of alternative fuels might be part of the solution to long queues for electric vehicle chargers. We need to recognise that maybe electric vehicles are not the solution for every type of vehicle.

That is a bit of a mixed response, and perhaps not all of it is directly in response to your question. Hopefully, it is relevant.

Q66 **Greg Smith:** That's all right. Peter, do you have any thoughts before we move on from this section?

Peter Molyneux: My colleagues have covered it well. There is always a danger that, if you take a small issue and make it a bigger issue, that will only put people off. I think we should be talking about the positive things such as the environmental benefits. There are also the legal requirements. The more we can tell people the positives rather than the negatives, the more we can start to overcome some of the fears.

Greg Smith: Thank you.

Chair: The subject we will finish on is local decarbonisation of transport. We have strayed into it a fair bit, which is understandable. Grahame Morris will take us to the end.

Q67 **Grahame Morris:** Lucy, you have touched on some of these issues. I am sure you heard Graeme in the first panel telling us not to lose sight; it is

not just about cars but about vans, lorries and buses. You mentioned air quality, taxis and so on. In terms of this section on the local decarbonisation of transport and our inquiries about infrastructure, how important is the roll-out of the charging infrastructure to the overall plans to decarbonise transport—particularly in London, but I want to go to the other witnesses as well?

Chair: I should just throw in that it is a pretty wide question, but we only have a few minutes left. Give us a short answer, if you can.

Lucy Hayward-Speight: There is a very direct response I can give on the roll-out of EV infrastructure. As we move in London, and everywhere, towards lower emissions and then zero emissions, we are helping to push that along in London in many ways, through things, as I said, like the licensing requirements for taxis and PHVs, which specify zero emissions capability. There is the ultra-low emission zone, and I mentioned at the beginning that we are promoting and want to continue with zero emission zones. The roll-out of infrastructure is going to be absolutely fundamental to people being able to comply with those sorts of requirements. I will stop there.

Q68 **Grahame Morris:** Thanks. Andy, I will come to you next and put the same question. Is there anything specifically you want to see in respect of the national transport decarbonisation plan that would help us in the regions in local co-ordination?

Andrew Hickford: I would echo largely what Lucy said. There is clearly a need to support EV uptake, and that will largely be delivered through significant infrastructure. In terms of the national decarbonisation plans and the drive to remove internal combustion engine vehicles from the fleet, that is absolutely something we want to echo in Leeds. We are aiming at that. We have moved half of our licensed private hire and taxi vehicles to petrol hybrid or above. That is critical because they are such high mileage vehicles.

What is really important is the fact that this needs to be part of the delivery of wider transport modal shift. It is also about delivering inclusive growth and the fact that we need to make sure that we are lowering the cost of mobility to ensure that transport is affordable for everyone. Key factors are improving the living environment through air quality and reducing our carbon footprint—for Leeds, we are aiming to be carbon neutral as a city by 2030—but critically bringing everyone along with us and making sure that we look at social deprivation, inclusivity and economic growth around that. We will look at the opportunities for economic growth delivered through transport decarbonisation as well.

Q69 **Grahame Morris:** Thanks, Andy. I think the clock is going to beat us, so I want to give Peter the last word and the chance to reply. Peter, 2030 seems a very ambitious target for the phase-out of conventional diesel and petrol engines. Are we going to achieve it? Is there enough in the plan to allow us to do that?

Peter Molyneux: Transport for the North started consultation on Monday on its decarbonisation plan, and electric vehicles are a crucial part of it. I am happy to send the Select Committee a link to that. It needs to be part of an integrated solution. I think we can do it, but we need to move from outputs to outcomes, as I said before. There needs to be greater involvement of the strategic transport bodies. Moving away from competitive bids means that we can deliver this quicker.

Q70 **Grahame Morris:** Lucy, we have 30 seconds left if you are burning to raise a point.

Lucy Hayward-Speight: Thank you very much. I wanted to mention buses and the relationship with bus infrastructure for electrifying them and other vehicles as well. There is a huge opportunity when you electrify a bus garage to use that power upgrade to roll out other sorts of charging infrastructure around it for taxis and other people to use.

In London, we very much want to electrify all our buses. We have a target of 2037 for that. We would like to bring that forward. Obviously, the infrastructure is tremendously expensive. I just wanted to promote that opportunity as well. Thank you.

Grahame Morris: Thank you very much for your evidence.

Chair: We always want to talk about buses as well, Lucy, so you did well to throw that in. Thank you to all the Members and the team. It has been a fascinating session. A big thank you to Lucy, Andy and Peter for all of the evidence you have given us. You are right at the cutting edge of this, and we wish you all the very best. We will certainly be making recommendations that we hope will help to get it delivered. Thank you again.