



Northern Ireland
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Committee for Infrastructure

OFFICIAL REPORT (Hansard)

Decarbonisation of Road Transport
in Northern Ireland:
Northern Ireland Assembly Research
and Information Service

22 September 2021

NORTHERN IRELAND ASSEMBLY

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Members present for all or part of the proceedings:

Mr David Hilditch (Deputy Chairperson)
Mr Roy Beggs
Mr Cathal Boylan
Mrs Dolores Kelly
Ms Liz Kimmins
Mr Andrew Muir
Mr George Robinson

Witnesses:

Mr Des McKibbin Northern Ireland Assembly Research and Information Service

The Deputy Chairperson (Mr Hilditch): We have a briefing from the Assembly's Research and Information Service (RaISe). There are three research papers in members' packs, the first of which looks at the results of the Committee's online survey on electric vehicles and ultra-low-emission vehicles (ULEVs), on which the Committee has already been briefed. There is also a comparative paper on electric vehicle markets and policies across Europe and a paper considering all aspects of the Committee's inquiry. Des will brief us on those two papers. The session will be recorded by Hansard.

Mr Des McKibbin (Northern Ireland Assembly Research and Information Service): Good morning members. Has the PowerPoint screen come up OK for you?

The Deputy Chairperson (Mr Hilditch): Yes. Desmond, you are welcome to the meeting.

Mr McKibbin: If you are happy enough, you can follow the PowerPoint, because the slides follow the structure of the two papers. If there is anything that you need to check out in either paper, you should be able to follow the slides. As I said, there are two papers. They are quite long, so, if members want to ask questions after the first paper, I can stop for questions and then move on to the second presentation. If not, I can just carry on.

The Deputy Chairperson (Mr Hilditch): OK. That sounds reasonable. We will hear the first one, and, if there are any questions on it, we can split it.

Mr McKibbin: No problem. I will give the Committee an overview of the first paper.

The paper is a comparison of EV markets in Europe and the policies that have been used to increase the EV share of the total fleet. I will look at three markets — the UK's, Europe's and Northern Ireland's — and compare them. I will look at the phase-out targets that have been introduced for the removal of internal combustion engine vehicles in Europe and the regulations that have been introduced to support those targets. I will look at measures to promote electric vehicles, particularly financial incentives and infrastructure investment, and I will then look at some of the supply-side factors that have an influence on the uptake of electric vehicles.

At the end of 2020, there were around 10 million electric cars on the roads. About a third were sold in 2020, so the market has really started to ramp up, faster than ever before, over the past couple of years. The pandemic saw car sales reduce overall by 16%, although the electric car market in that time increased by 41%, which is interesting. In 2020, Europe became the largest EV market, moving ahead of China for the first time.

By the end of 2020, 1% of all the passenger cars on European roads were electric, and the majority are concentrated in Germany, Norway, the UK, France and the Netherlands, representing a 70% share of the total EV fleet. Norway has the most advanced EV market in Europe, with 16% of its passenger car fleet being either battery electric vehicle (BEV) or hybrid at the end of 2020. Norway also has the highest growth rate, with 52% of all new car registrations at the end of 2020 being fully battery electric vehicles and another 20% being hybrids. That figure on the slide shows that 75% of new cars in Norway were electric in 2020. Iceland followed with around 50%, and the Netherlands was at 25%. As you can see, there is then a significant drop-off. In the UK, around 10% of new cars are electric. Some 6% of those are fully electric. Ireland is at around 8%.

When you look at the share of electric vehicles as a percentage of the total car fleet, you will see that, apart from Norway, which has around 16%, everywhere else has less than 5% of the fleet share. The UK has just over 1%, while Ireland has less than 1%. That shows the distance that we have to go before we realise a totally electric fleet in 20 or 30 years.

The UK has one of the largest EV fleets in Europe, but, proportionally, it sits at just over 1% of the total fleet being either battery electric vehicle or hybrid and less than 1% being fully electric. That has changed over the years, but, as you can see from the figure, it has not changed significantly. At the end of 2020, of the four regions, Northern Ireland had the smallest EV fleet, with just under 0.5% of the share of the total fleet. Wales has slightly more, but, as you can see from the table, Scotland and England have significantly higher fleet shares of ULEVs.

In 2020, the largest ever number of ULEVs was sold in the UK. It represented a 125% increase on 2019 and an almost 200% increase on 2018. Among the three devolved regions — Scotland, Wales and Northern Ireland — you can see from the figure that Scotland had the fastest growing market in 2020. Some 8.6% of all cars sold there were ULEVs, compared with 5.4% in Northern Ireland.

Like the rest of the UK and the rest of the world, Northern Ireland recorded its highest-ever number of sales of ULEVs in 2020, with almost 2,000 new cars sold. That was a 134% increase on the previous year. Even now, in the first quarter of 2021, the number of EVs sold has gone up by 16%. There are therefore positive signs, but ULEVs still account for less than 0.5% of the total fleet.

Unsurprisingly, as you can see from the map, the Belfast City Council area has the highest number of ULEVs, while the Fermanagh and Omagh District Council area has the lowest. Interestingly, if you look at the table to the side of the map, you will see that the Causeway Coast and Glens Borough Council area has the highest ULEV share of the fleet, with Belfast the second highest. In a number of council areas, the share is below 0.5% or the regional average.

As for sales of ULEVs in the used car market — I will touch on the importance of the used car market later in my presentation — used cars usually account for around three quarters of annual car sales in the UK. Similarly, in the new car market, in which ordinary car sales or internal combustion engine sales fell, alternative fuel vehicle sales increased by 5.2%, bringing the overall market share to 2.1%. I should say that AFVs bring in a range of vehicles. Of that percentage, the share of BEV sales was at around 0.3% and remains quite low.

A consideration of the importance of the second-hand market is that, in 2018, it was estimated that the average lifespan of a car was approximately 14 years and that the average lifespan of a light commercial vehicle (LCV) was around 13 years. An ordinary petrol or diesel car sold in 2029 would therefore still be on the road in 2044 and possibly beyond, given new developments in technology, car maintenance and the like.

Many Governments around the world have identified the phasing out of internal combustion engines as a key policy for reaching their decarbonisation goals, and many of them have introduced phase-out targets for the sale of new petrol and diesel cars. As we know, the UK has a target of 2035. Norway has the earliest phase-out target and is well on its way to reaching its goal. Ireland, as you can see, has a target of 2030. The Netherlands also has a target of 2030, while Spain and France have a target of 2040. As you can see from the map, there are not too many other phase-out targets around the world. Some states in the United States are considering them; for example, California has introduced a target of 2035. Canada has introduced a target of 2040.

In the UK, CO2 emissions from new vans and cars were regulated by EU law until 2020, but, following the end of the transition period, vehicles registered in GB became subject to domestic legislation targets. That legislation follows the same framework as the European regulation, which was adopted into local law. The targets in the previous European regulations did not allow the UK to reach its zero-emission targets by 2035, so it has developed proposals for new regulations, and those are out for consultation.

The consultation puts forward two approaches for regulating the ICE ban: to continue with the current framework but amend the efficiency targets to make sure that they support the 2035 ban or to introduce a zero-emission vehicle mandate alongside CO2 regulations. In the Green Paper, the Government have indicated that they would prefer to go with a combination of the two: better targets and the introduction of a zero-emission vehicle mandate. That would require all car manufacturers to sell an increasing proportion of zero-emission vehicles over the next decade, reaching 100% by 2030. A few advantages to that approach are listed on the slide. The Government believe that the ZEV mandate would be revenue-neutral and would encourage manufacturers to invest in the UK by providing certainty that there will be a market for the cars that they produce. It would reduce the cost for consumers and free taxpayers from the annual £135 million cost of the plug-in car grant (PiCG). The Government believe that stimulating the market and encouraging more sales will bring down the price of electric vehicles so that they will no longer have to provide the subsidy, which they are committed to providing only up until 2023.

I will move on to measures to encourage the uptake of EVs. Financial incentives have been the most widely used measure since electric vehicles came on to the market and have been used to address the price disparity between electric vehicles and traditional petrol and diesel cars. The approaches used reflect the tax structures in different countries. For example, countries such as the Netherlands, Norway and Denmark have very high taxation on cars, so they incentivise EV purchases through taxation benefits, whereas countries such as the UK, France and Germany have lower overall taxation, so they focus on providing attractive subsidies to encourage people to transition.

Providing financial incentives falls largely outside the scope of devolved powers, so the UK Government have the Office for Zero Emission Vehicles (OZEV) to support the purchase of vehicles through the plug-in car grant. Other grants are available to support infrastructure across the UK. The PiCG expenditure since 2011 has been close to £1.3 billion and has supported the purchase of 285,000 vehicles. The rate offered under the plug-in car grant has been falling over the years, going from £4,500 to £3,500 in 2018 and to £3,000 in 2020. Since 2021, it has been down to £2,500.

Eligibility for the grant has changed slightly. The grant now supports the purchase of cars up to only £35,000 in value, because the Government believe that the taxpayer should not necessarily have to subsidise people who can afford a car costing more than £35,000. Moreover, more affordable electric cars have come on to the market and become more widely available. The UK Government believe that availability will increase further, and, as it does so, the money that they will offer as an incentive will reduce. Eventually, with the zero-emission vehicle mandate, the grant will be removed. That is likely to occur around 2023.

I mentioned used cars. The House of Commons Transport Committee held an inquiry that ran almost in parallel with this Committee's inquiry on electric vehicles. One of the key findings from the Transport Committee's inquiry was the importance of the used car market in supporting the transition to electric vehicles. It stated:

"A healthy used electric vehicle market is critical to ensuring that electric vehicles are not the sole preserve of people who can afford new models."

The Transport Committee called on the UK Government to intervene by providing grants to support the purchase of second-hand vehicles. The Government's current position is that any incentives that they give to help people buy new cars will support a greater supply in the second-hand car market,

and that, in turn, will bring down prices through market forces. The Transport Committee felt that that was not the case and that even second-hand EVs were beyond the means of most families in the UK.

There are examples in other jurisdictions of incentives for making second-hand purchases. Those have been introduced only recently. The Netherlands offers a €2,000 grant, which was introduced in 2020. France offers a €1,000 grant. Germany offers a €5,000 grant for fully electric cars and a €3,750 grant for hybrids. Since 2011, Scotland has had a low-carbon transport loan (LCTL), which is an interest-free loan to support the purchase of new electric cars. Scotland extended that scheme last year to support the purchase of used battery electric vehicles up to the value of £20,000. That loan, which is administered by Energy Saving Trust in Scotland, has to be repaid over five years. That is a pretty interesting approach.

I will now move on to give some examples from Europe. I have gone into them in great detail in my paper but will not do so in my presentation. Financial incentives have been a key driver in the market. The major advantage for Norway is that it has been able to make an electric car cheaper than an ordinary petrol or diesel car. Last year, the shelf price of a Volkswagen e-Golf was almost €10,000 more than a standard petrol or diesel Golf. When, however, you add on CO2 tax, which is its import tax, VAT and other smaller taxes, that makes the petrol or diesel version more expensive, because e-cars are exempt from those taxes. That has been a major driver of the transition in Norway.

In addition to the import tax and VAT being removed, there are a number of local incentives. Norway makes it very expensive to drive, particularly to drive petrol and diesel cars. There are a lot of toll roads, bridges and tunnels. To incentivise the transition, Norway removed those infrastructure costs and, among other benefits, allowed electric vehicles to use bus lanes.

I must say that, as the market share of EVs increased, some of the benefits were rolled back slightly. For example, there was an issue with congestion in bus lanes, because so many people were using electric cars in them. Local authorities can now choose whether to have that benefit for EV users. Where it is in place, it is only for cars with one passenger or more, in order to cut down on the number of single-occupancy journeys and to reduce congestion. Local authorities now have the power to introduce charges for car parking, using toll roads, using ferries etc but at only up to 50% of the regular price. There are therefore still a lot of benefits in Norway for transitioning to an EV. Those benefits are difficult to replicate elsewhere, given Norway's unique environment.

The French Government's approach is quite similar. They have taken a bonus-management approach. Owners of the highest-emitting vehicles face a much higher tax, while owners of lower-emitting vehicles are given a bonus or are incentivised. For a new BEV, the bonus was €7,000 in 2020 and will be €5,000 in 2022, which, comparatively, is still quite generous. There is an incentive for hybrids and a scrappage bonus for used diesel vehicles to encourage transition.

Germany has a one-time bonus scheme of around £6,000. That is funded on a 50:50 basis by the federal Government and the motor industry. During the pandemic, the Government increased that to £9,000 to act as a stimulus for the motor industry, which is important in Germany. Originally, they intended to remove it at the end of 2021, but its success has encouraged them to keep it until at least 2023. German municipalities have powers to introduce local privileges for electric cars, such as preferential parking rates and permission to drive in restricted areas. For example, electric cars can use bus lanes, similar to the measures introduced in Norway.

I will now look at infrastructure. The transition to electric vehicles will depend on the roll-out of accessible and reliable charging. I looked at some opinion polls. In September 2020, the UK's AA polled 17,600 drivers, and 69% said that a lack of public charging points is a reason not to purchase an electric vehicle. The House of Commons all-party parliamentary group on fair fuel surveyed 50,000 road users. The survey found that 77% of non-EV drivers felt that a lack of electric charging points was the main reason for their reluctance to buy electric. The Committee's own survey found that a lack of infrastructure was a key disadvantage of transitioning to electric vehicles for 92% of non-EV users and that 90% of current EV users in Northern Ireland were dissatisfied with the availability and maintenance of public charging stations.

The two maps on the slide show the distribution of standard and rapid charging points across the UK. As of January 2021, Northern Ireland had 320 public charging points. That is the lowest number of any UK region of standard and rapid charging points, with 300 standard and 20 rapid charging points. That represents a ratio of 17 standard chargers per 100,000 population and a ratio of 1.1 rapid chargers per 100,000 population. Again, as you can see from the map, that is the lowest of any of the UK regions.

The next maps show the distribution of chargers by local government district here. As you can see, the distribution of chargers is fairly even across the region, but, outside of the Fermanagh and Omagh District Council area, the rate is lower than in the other UK regions. The map on the right-hand side shows that, compared with GB, the provision of rapid chargers is particularly low. There are no rapid chargers in the Ards and North Down Borough Council area. The Belfast City Council area has five chargers, which is a ratio of 1.5 per 100,000 population. The Antrim and Newtownabbey Borough Council area has three rapid chargers, which is a ratio of 2.1 per 100,000 population. That is the lowest ratio. For anybody who is interested, I have included a table that breaks down the total number of devices and the total number of rapid charging points to give the ratio per 100,000 population.

According to the current EU directive on the deployment of alternative fuels infrastructure, the average number of charging points should be equivalent to at least one charging point per 10 cars. As shown by the graphic, there is a wide variation in the number of charging points per car around Europe. Iceland has the lowest ratio, with 39 cars per charging point, with Norway next, at 24 cars per charging point. To put that in context, Iceland and Norway are the two most advanced EV markets in Europe, with high numbers of electric cars on their roads. Norway has the fifth-highest number of total charging points in the EU. Those countries also have some unique characteristics. A lot of people in Norway live in detached properties and charge their cars at home. Norway continues to invest in its infrastructure, but that is definitely not something that people in Norway point out as being any kind of an issue.

If you look at the likes of Ireland and Northern Ireland, which have 19 and 18 cars per charger respectively, you must consider that that is with very low numbers of EVs on the roads. That needs to be addressed. The most chargers are in the Netherlands, but that reflects the conditions there. Most of the population live in urban areas with no off-street car parking. Municipalities in the Netherlands will provide public charging points at the request of any electric car owner. That explains the high number of charging points in the Netherlands.

I will now look at some supply-side factors. The recent increase in registrations strongly correlates with the introduction of new models, improved range and more affordable options. Much as the incentives are well received and popular, it is noticeable that the number of EV sales has accelerated very quickly in the past three years, just as a number of new models and, I guess, better models have come out. The biggest increase in the number of models has been in Europe, where they more than doubled, and the average driving range is steadily increasing, as you can see from the graphic. The average driving range is approaching 400 kilometres now, and almost 400 models are available. At the end of 2018, BMW introduced the i3, and the Renault ZOE was greatly improved. Moreover, 2018 saw the launch of the Tesla Model 3, which is already the most popular EV in the UK and the most affordable Tesla. There has been an influx of new battery SUV models, making the transition more attractive for families who are going to have to carry a few passengers more than the smaller models previously on the market can.

Another supply-side factor is a change from manufacturers. They have already begun to respond to the Government's plans to phase out internal combustion engines. For example, Volkswagen has said that 2026 will be the last time that it launches a new ICE vehicle and that, by 2029, it will have 75 fully electric vehicles and 60 hybrids on the market. My paper contains a table that goes through a range of manufacturers that all have similar targets in place.

One of the critical issues in supporting mass transition will be the price of an electric vehicle compared with that of a standard petrol or diesel car. Industry research indicates that price parity will occur between 2025 and 2027. Its report expects about 4.3 million plug-in vehicles to be sold in Europe in 2025, representing about 28% of car sales in that year. That is a significant jump from where we are now. That report states, however, that price parity and market measures are not enough to encourage full transition and that it is still important for Governments to tighten the emission rules, which the UK Government have plans to do, to invest in infrastructure and to continue with financial incentives that will help achieve customer buy-in.

That is the end of that presentation, and I am happy to take questions.

The Deputy Chairperson (Mr Hilditch): Desmond, thanks very much for that. We have a few questions. A number of areas of concern are raised in some of the papers that I have looked at. I will point out two of them, and perhaps you will comment on them. The first concerns the reliability of the vehicles and the second is to do with depreciation, which seems to be a cause for concern. Do you wish to make any additional comments on those two issues?

Mr McKibbin: I have not looked at the issue of reliability in the past, but, from my general reading around the subject, I know that there are a lot fewer moving parts and fewer things that can go wrong with an electric vehicle, so that makes maintenance, servicing and upkeep cheaper than for traditional vehicles. One of the major issues is charging on the go and whether people, when out and about, will have the ability to access a charger in a timely way to make sure that they do not run out of charge. That is almost a separate issue. Sorry, Chair, what was the other one?

The Deputy Chairperson (Mr Hilditch): The depreciation of electric vehicles seems to be quite rapid.

Mr McKibbin: Depreciation is based on the life cycle of the battery. The battery is the most expensive thing in the car. Some of the more expensive, top-of-the-range models, such as the Tesla models, hold their value very well, whereas some of the older models really lose their value because of the battery. Battery technology is evolving rapidly, however. It is improving all the time. Some tests have been carried out that suggest that the time taken for degradation of the battery — the amount of power that the battery loses over periods — is extending all the time. That will obviously have a big impact on depreciation. As more people enter the second-hand market, that will stimulate the market. When more people buy electric cars, they will be able to charge more, and the cars will hold their value slightly better. I have not looked at that in great detail, but I am happy to prepare something for you if that helps.

The Deputy Chairperson (Mr Hilditch): It was certainly one of three or four issues that caught my attention when I looked at some papers. Des has another presentation to make, but we will take questions on this one at the minute.

Mr Beggs: Thank you very much for the report. I found it very useful. It is interesting to understand what is happening elsewhere and just how far behind we are. One of the issues that I noticed in your report, which the Chair did not pick up earlier, was the UK Climate Change Committee's recommendation to have 150,000 publicly available charging points in the UK by 2025. We do not have a functioning, operational, reliable charging point network, but there are aspirations that we can go in front of the UK. Are you aware of a plan? How many charging points would be required to be installed in Northern Ireland to achieve that target?

Mr McKibbin: First of all, looking at the target, the Climate Change Committee suggested, in its report on Northern Ireland in 2019, that around 35 to 50 rapid chargers and 850 to 900 standard chargers would be needed on the network here. It pointed out that it had based those numbers on its assessment of travel behaviour in GB, using the same kind of methodology as it used to estimate the number of chargers that are required in the UK. It said that a better assessment should take place of local needs, thinking about where people travel and what they need to access — for example, the main services and work — to get a better idea of the road network and geography in order to inform that decision. As a very rough estimate, the target that exists at the minute is, as I said, 35 rapid chargers and 900 standard chargers.

I was going to talk about the plan in the next presentation, but, briefly —.

Mr Beggs: That can wait.

The Deputy Chairperson (Mr Hilditch): It can wait until the next one, Des. That is fine.

Mr McKibbin: Are you sure?

The Deputy Chairperson (Mr Hilditch): Yes.

Mr McKibbin: I am happy to come back to it, but, as I say, it will be dealt with in the next briefing.

Mr Beggs: OK. A second aspect of the move towards electric vehicles is the target to reduce carbon emissions. That will require not only public chargers but chargers to be widely available in people's home. Are you aware of any plans to alter building control regulations so that those chargers can be widely available in private homes and garages, and in car parks? Again, we seem to have aspirations without actually taking concrete steps towards achieving them. It is much more efficient to install something like that when you carry out building work or a new build, than having to go back in to fit it specifically.

With regard to renewable energy, there is little point powering those cars using electric that is generated from power stations. How will we ensure that electric cars will actually be powered by renewable energy? Otherwise, we might increase emissions if the electricity is simply produced by burning fossil fuels in power stations.

Mr McKibbin: Going back to the first point about building control and planning, recently, the Minister introduced legislation that removed the requirement for planning permission to retrofit charging points at public buildings. There is also no requirement for any kind of permissions to fit charging points in homes. I do not believe that building control or planning requires those on new builds, and I guess that that could be addressed during the inquiry. I will look more into planning laws and see if there are any proposals to bring that forward.

I will move on to the electricity mix and the amount of our electricity that is produced by renewables. That is one of the major advantages that countries like Norway have because, basically, their entire electricity supply comes from renewables — from hydropower — and that makes their transition to electric vehicles very clean. The energy strategy for Northern Ireland is being consulted on at the minute. The issue of enhancing our supply of renewable energy is discussed in that paper, and plans will be brought forward. Our energy supply mix will, hopefully, be adjusted so that we can achieve our commitments around net zero by 2050. While we are not yet at that point, it will be addressed and brought forward in the future.

The Deputy Chairperson (Mr Hilditch): I remind members that there will be a second presentation on the decarbonisation of Northern Ireland's road transport. This one is on electric vehicle policy across Europe, so we should stick to the issues and then tidy up at the end.

Mr Muir: Thanks, Des, for the presentation, which was really useful. I do not know whether you can share the slides with us, but the maps and everything else were fantastic. Some of the questions, as Davy said, are probably for the next presentation, which is about charging policy in Northern Ireland and stuff like that.

I will pick up on some of the stuff that Roy mentioned in relation to charging at homes. Some of us are lucky enough to have a driveway. Other people live in terraced houses in town and city centres. You probably do not have the answer to this, but I will ask it anyway: are there any examples of good practice from Europe on charging at homes or on street in residential areas? The Norway examples that you gave are really good. It is really good evidence to help build a case for change.

The second part of my question is about Norway. You quoted the different taxes that, if you have an EV, you do not have to pay. I am interested to know when those taxes came in. Were they developed in line with the EV charging strategy? I know that the VAT one was there before, and obviously that is being forgiven in relation to EV. I am interested to hear a wee bit about the history of those taxes, which now allow the cost of EVs in Norway to be on a par with fossil fuel vehicles. I also want to hear about charging at homes and on street in Europe.

Mr McKibbin: Thank you. You asked about charging on the street. As I touched on very briefly in the presentation, the Netherlands has a system of on-street charging in place. A large proportion of its population lives in the urban areas around that hub of cities, the names of which escape me right now. Anyway, a lot of the housing there does not have off-street parking, so the Netherlands has legislation that says that anybody who lives in an urban area and does not have off-street parking or access to charging at work can apply to their local authority or the municipality for charging infrastructure to be installed on the street. As a result, the number of public charging points per EV in the Netherlands sits, as I showed earlier, at around four, which is the highest rate. It is also one of the more advanced markets, albeit that, in terms of real numbers, it is, relatively, still emerging. However, when compared with the rest of Europe, it is one of the better markets. The Netherlands has a system in place that allows people without access to off-street parking to get their local municipality to install that, and that is probably the best example that I have seen of that. Obviously, the UK has the on-road charging scheme, whereby local authorities can apply for funding, but that relies on the local authorities, whereas the Netherlands scheme relies more on individuals.

Before the introduction of EV policies, Norway had a high level of tax on internal combustion vehicles. As Norway wanted to encourage EV from 1990, it made decisions on import tax and VAT. Additionally, Norway has many islands with ferries and road tolls for tunnels and bridges, and it recognised that the cost burden that placed on drivers was high. To encourage EV, the removal of that burden was a massive incentive. However, people in Norway did not start buying electric cars straight away. It is

only in the past five or six years that the numbers have started to reach the critical mass that Norway now has. Again, as much as the incentives have been, and are, important for the people, the availability of new car models such as SUVs, higher-quality models and larger EVs have also been critical.

Norway is an interesting place to look at because there are high levels of car ownership, and the overall fleet share is 16%. However, my research identified that most families in Norway have two cars. One of the cars will be an EV that is used for most of their daily travel, but, if they are going exploring or to a rural area, they will use their internal combustion engine vehicle. Norway has issues with extreme winters, and I am not sure what level of 4x4 access the EV market provides. I imagine that the need for 4x4 vehicles is why there are such high levels of second car ownership. The tax breaks in Norway have been in place for a long time, but other factors have increased the number of EVs in more recent years.

Mr Muir: Thank you, Des.

Mr Boylan: Des, you are welcome back to the Committee. Thank you for your presentation. I have three questions. Can you expand on the zero-emission vehicle mandate that the British Government are considering? The Committee received correspondence from the Mineral Products Association about HGVs. Clearly, it is looking at affordable vehicles that are up to the task of replacing fossil fuel vehicles. Can that mandate be used to prepare the HGV sector? Can something be brought forward from that mandate?

Mr McKibbin: The Government have a cut-off date of 2030. However, they realise that to make the significant transition to ZEV, people need to start buying EVs now. The Government does not want people to wait until 2030 or 2035 because that raises the issue of many petrol and diesel cars still being on the road in 2050, and that will impact their ability to reach net zero by 2050.

The Government will introduce an increasing requirement for manufacturers to sell a share of the annual total car sales as ZEVs. As I said, the regulations are being consulted on. There may be a step model for sales — 20%, 30%, and so on — until 2030, when all sales have to be EVs. Obviously, manufacturers will have to introduce their market measures to ensure that they reach those targets by reducing the price of cars, and that is the ultimate aim of the policy: to bring down the overall cost for consumers and bring more people into the market. The House of Commons Transport Select Committee supported the idea in its analysis, and it suggested that bringing down the cost is the only way to realise the 2035 ambition.

On the HGV situation, the transport decarbonisation plan proposed that the sale of new petrol or, I suppose, diesel HGVs should be banned from 2040. That is only just out for consultation and has not been decided in the same way as the car ban. That is obviously a very short turnaround. One of the major issues that have been identified by HGV bodies to the Committee is the availability of technology, whether it is even there and, if it is there, whether it is prohibitively expensive. In the consultation document, the UK Government stated that they are working with the main manufactures, such as Scania, to make sure that products come forward within a proper price range to replace current models. It will be really interesting to see the outcome of that consultation and whether the UK Government go ahead with that proposal. Obviously, the sector will be able to advise them whether it is feasible.

Mr Boylan: I appreciate that. Clearly, we are going down that route with cars. We received that correspondence, and it is important that we look at HGVs as well. I appreciate your answer.

I have two other points. You indicated that the likes of Germany, France and the Netherlands have introduced used car grants. Has there been any suggestion of having those here? Was there any discussion of that?

Mr McKibbin: As I said, that was one of the things that came out of the House of Commons inquiry. The Committee there asked the Government about those grants and was adamant about them, given that second-hand car sales make up a large amount of the total market for car sales. The Minister spoke to the Committee and said that the Government's position was that they were doing enough by stimulating the new car market and getting more people to buy new cars. She also said that more used cars would come on to the market as people changed or upgraded to newer cars, which would bring down the cost of second-hand cars, and that the Government have no plans to follow suit. There

are no plans for that to come in here. Any grant would be led by the Office for Zero Emission Vehicles, and its policy is that there will be no support for that.

That Committee report was just published during the summer, and the Government have not yet responded to it. Something may come out of that when they finally respond. As I said, in other countries, there is a growing recognition of the importance of supporting second-hand car markets. The low-carbon transport loan in Scotland is an interesting development, and the Scottish Government obviously recognise its importance. One of the drivers of making that loan available for the purchase of second-hand vehicles was to make it more equitable. People on lower incomes or who cannot afford to buy new cars may want to access the EV market for various reasons. If there is a loan to support them, they can do that.

Mr Boylan: I appreciate your answer. I know that you will make another presentation shortly. Other members mentioned EV charging points and everything else, but, if we are serious about tackling it and reaching the targets, a grant would encourage and incentivise people to buy those cars.

This is my final point. I think that you mentioned the Welsh strategy for electric vehicle charging in 2020.

Mr McKibbin: Yes.

Mr Boylan: Could that be replicated here? Could we learn from it? Would you like to expand on that a wee bit, please?

Mr McKibbin: You will have seen some of the statistics. The Welsh are in a similar position to Northern Ireland with uptake and infrastructure. Those are at a low level and need to be greatly improved. The Welsh Government took the initiative in 2018 and produced that strategy. The strategy is a really detailed assessment of the current infrastructure, which is then modelled to their targets for increasing the modal share and amount of EVs on the market. They also assessed what infrastructure will be needed over the next five to 10 years and actioned that.

That very much could be replicated here. One of the issues that I will look at in the next paper is the plan to develop an infrastructure strategy for Northern Ireland. That was a recommendation that came out of the energy strategy consultation. The Climate Change Committee also touched on that point. You need to have an assessment of the specific transport needs of Northern Ireland. It gave a really high-level estimate of the number of charging points that were needed, but it said that you have to take into consideration local geography, roads, travel patterns and such in order to have a really targeted strategy. That is what they have done in Wales. It can, and should, be replicated here.

Ms Kimmins: Thanks, Des, for the presentation so far. I have a question about the low carbon transport loan. Scotland has had it in place for 10 years, and, last year, it was extended to cover the purchase of battery electric vehicles up to the value of £20,000. Is there any information on how successful the uptake of that loan has been? Has it been replicated anywhere else that you know of, and do we have any idea of what the cost was for those Governments?

Mr McKibbin: The uptake was relatively slow at the start, but the information that I looked at showed that, over the past two or three years, the uptake has really increased. I think that the expenditure was £11 million in 2020, which was before the loan was introduced. The uptake of the loan has coincided with new models with longer range and lower prices coming on the market. Those are major factors in the increase in uptake and sales in recent years, certainly as much as any incentives have been.

No figures are available yet for the uptake of the low carbon transport loan for the second-hand market. I have written to a colleague in the Scottish Parliament to ask him for some more information. He said that he will look into it for me, but I do not have that information yet. If you are happy enough, as soon as I get that information, I will forward it on or even include it in the report.

Ms Kimmins: That would be very useful. Scotland has a similar set-up to us. They initiated a scheme. Is that something that we could do here in the North?

Mr McKibbin: One of the questions that I asked was about where the main funding source was. The scheme is being administered by the Energy Saving Trust in Scotland, but the funding comes out of

Scottish Government expenditure. I think that that is an issue that the Committee will probably need to discuss with the Department. I have not been able to clarify whether that could be replicated here.

Ms Kimmins: That is grand. We can maybe write to the Department for information on that. Thanks very much, Des.

The Deputy Chairperson (Mr Hilditch): Des, that takes us to your second paper.

Mr McKibbin: The second paper is a summary of the evidence that was gathered during the inquiry. The terms of reference of the inquiry were to explore the future pathway to decarbonising road transport in NI by identifying current transport policy for the transition to a carbon-neutral transport system; identifying potential barriers to ULEV adoption; and exploring the role of public transport, walking, cycling and reduced demand for travel in decarbonising road transport.

The evidence came from three main sources. There was desk-based research that considered policy proposals, factors in EV market development, infrastructure development and supply side factors. There was the online public survey, on which members had a presentation before the summer, and there was a call for evidence from stakeholders with significant fleet management functions, including Departments, councils, public transport operators, and freight logistics operators. The report brings together all three pieces of evidence and provides some analysis for the Committee to allow it to draw its own conclusions and to inform recommendations of the inquiry.

By way of some brief background, transport is the second-largest sector in Northern Ireland in terms of emissions, behind agriculture. Most sectors have shown a decreasing trend over the last 20 years, whereas transport emissions have increased by 21.5% — that sets out the challenge. Clearly, Northern Ireland is a very car-dependent society. Journeys by car account for around 75% of journeys and have done over the last 20 years with little change. Walking accounts for around 18% of journeys, public transport accounts for 5%, and cycling accounts for 1%. There has been little change in those figures over the last 20 years. Despite various policies, measures and interventions to achieve modal shift, it has not been delivered.

There has been a lot of criticism of modal shift policy in the past, primarily based on the lack of investment and innovation. There has always been a disparity between expenditure on public transport and active travel and that on roads. While there has been more spend on public transport in recent times, active travel expenditure is still very low by comparison. Investment in quality infrastructure, such as the bus rapid transit (BRT) system, shows that modal shift can be achieved. The main issue, however, is that flagship projects like that have a limited impact because of their concentrated nature and the fact that they affect people only on that one route in Northern Ireland.

The paper goes into more detail, which I am happy to expand on. However, finding 1 of the inquiry is that flagship projects such as expanding the railway and BRT networks will require significant investment, long lead-in times, short-term investment in the existing network and enhancements to active travel infrastructure, and that a greater focus on behavioural change programmes can deliver more immediate impacts. Evidence examined during the inquiry indicates that the current regional transportation strategy is outdated and needs to be replaced by a green transport policy that reflects the aim of a carbon-neutral transport system in Northern Ireland, and that this strategy should clearly map out how modal shift to public transport and active travel will contribute to achieving this goal.

The Department for Transport's transport decarbonisation plan was published in the summer, so since the last time that the Committee received any briefings on this issue. The number 1 strategic priority in that plan is that public transport and active travel will be the natural first choice for all daily activities. The plan sets out how to do that by providing high-quality road design, dedicated routes and networks to make people feel safer and more confident to walk and cycle, and a cohesive, integrated and affordable net zero public transport network.

Any future transport decarbonisation plan for Northern Ireland will be heavily influenced by the Department for Transport's plan and the outcome of the forthcoming energy strategy for Northern Ireland, which is being led by the Department for the Economy. That strategy will address a number of strategic energy issues in response to the net zero policy. The consultation ran from April to June of this year and is due for publication in November. As you probably remember from the briefing that the officials gave before the summer, DFI was heavily involved in looking at the role of transport in achieving net zero. It has said that the forthcoming transport decarbonisation strategy will be based on a hierarchy of travel that focuses on, first, reducing travel; then, promoting active travel and public

transport; and, finally, where driving is essential, switching to low-emission and zero-emission vehicles to replace ICE cars.

The working group used evidence from a massive call for evidence and developed a number of Northern Ireland-specific policy proposals. The policy proposals are: to develop a transport decarbonisation strategy for Northern Ireland; to develop a charging infrastructure plan, which we discussed; to run an EV communication campaign; to run demonstrator projects for alternative vehicle fuels, which, again, would apply as much to the HGV sector as any other; and to take steps to help consumers to reduce travel and move towards active and public transport. The Department has also commissioned four pieces of research. Its suggestion is that it needs some expert input in areas where it does not have expertise. That research is on active travel and modal shift, the electrification of transport, greening the public transport fleet, and alternative fuels in the transport sector.

Data evidence supports the second finding. While there is a great deal of evidence being gathered with regard to bringing forward the transport decarbonisation plan and associated plans, such as an infrastructure plan, finalisation of these could take some time, particularly given the amount of engagement required with stakeholders. The Committee may want to seek assurances on the timeline for the policies and plans to be in place. In its evidence to the Committee, departmental officials suggested that there is a lack of expertise in certain key areas. The Committee may wish to ask whether the Department has the resources in place to deliver these plans. The Committee may also want to give consideration to whether a new branch, dedicated to transport decarbonisation and built around experienced personnel, could be set up to deliver these proposed measures.

I addressed the issues around EV uptake and used cars in the previous presentation. I do not really want to repeat that, so I will move on to finding 3. If anyone needs any clarification or anything, please jump in.

The House of Commons Transport Select Committee has highlighted the important role that a healthy used electric vehicle market will have in widening access to EV. There is also growing recognition of that fact in some of the more advanced EV markets in Europe, with the provision of grants or loans to support market entry. The Committee may wish to consider the value of work being undertaken to explore the potential for support measures to be introduced in Northern Ireland. That is a bit vague, which is recognition of the fact that they do not yet know everything about the low-carbon transport loan in Scotland. When we find out more information, I can make a more concrete recommendation.

As part of the inquiry, the Committee undertook a survey, which has already been considered. In the survey and the written submissions, there was consensus that the public charging infrastructure in Northern Ireland is inadequate for current demands, and is only a fraction of what will be required if there is to be significant EV uptake in coming years. Some 92% of respondents to the survey identified a lack of charging stations as the main barrier to ULEV adoption, while 90% of current EV owners are dissatisfied with the availability and maintenance of charging stations. In evidence to the Committee as part of the inquiry, the Electric Vehicle Association stated that:

"the single overriding issue that faces EV drivers here is the size and condition of the public charging network."

The public charging network in Northern Ireland is maintained by the Electricity Supply Board (ESB). It states on its website that it is aware that there are reliability issues with part of the charging network, but that many of the chargers were installed more than 10 years ago and, basically, cannot be fixed. ESB plans to replace 30 fast or 22 kW chargers with a number of rapid chargers in the near future. However, it stated that a much larger replacement programme is required to ensure a reliable and modern network that meets the needs of users. The Electric Vehicle Association pointed out that, even if it replaced 100% of the network tomorrow, that would really only take Northern Ireland back to where it was 10 years ago, with no real advancement.

Looking back at the research, analysis shows the importance of a comprehensive network in stimulating EV adoption. It was a prerequisite in all the regions where there was a high level of early adoption. The Committee survey reflects that, with respondents identifying the network as a major concern. While it is acknowledged that DFI has commissioned research that will define the charging infrastructure that is needed in NI, including where it should be located and what type of charging points should be used, and while there is a proposal for an EV infrastructure plan in the energy strategy consultation, the Committee inquiry has highlighted the importance of engagement with EV owners to inform this research. The outcome of the research and the consultation needs to be processed in a timely fashion and a plan brought forward to address the condition of the current

network and the extent of the required expansion up to 2030. That will be critical to both ensure the operation of the network for existing EV adopters and allay doubts held by prospective new users.

Northern Ireland Electricity (NIE) Networks suggests that the most significant barrier to rolling out public electric vehicle infrastructure here is funding. It says:

"It is too early in the life cycle of electric vehicles for commercial investment in charging infrastructure."

Basically, there are not enough electric vehicles to make it profitable enough for private sector investment. In its evidence to the Committee, NIE said that the options for public investment are for it to come directly from the Department or through increasing electricity bills. NIE says that it could implement that but that it would not be popular. NIE does not believe that the private sector on its own will take on the network in the short term, as there are not enough electric vehicles on the road to justify it. Evidence from the more advanced markets such as Norway and the Netherlands and even GB confirms that, as EV uptake increases and a critical mass of EV drivers emerges, more private sector operators will enter the charging market and less government support will be required. In all cases of advanced markets, however, early government intervention has put in place the necessary infrastructure to support early transition.

Looking at one of the funded mechanisms that are available, the on-street residential charge point scheme (ORCS) is open for application to local authorities across the UK to introduce a number of roadside, residential electric charging stations where off-street parking is not available. Since the scheme started in 2017-18, there have been no successful applications from local authorities in Northern Ireland. Looking at the evidence that was submitted to the Committee, three councils responded to point out that there is no statutory duty for councils to intervene in this area and suggest that they do not have the necessary expertise. One of the respondents commented:

"It would seem more appropriate that applications for funding and roll-out of such on-street charging infrastructure is taken forward by DFI."

That the scheme is open to local authorities in GB makes sense, as local authorities in GB are also local highway authorities — they have ownership of the road network, on-street car parking, footpaths, street lighting and all the other street furniture where retrofitting electric charging infrastructure would be easy — so you can see where the councils here are coming from. The DFI stated in response that it is supporting councils to access the money, rather than putting in extra money from the Department, although there was no sense of that in any of the responses given by the councils. There was a general sense that councils were not engaged with the scheme. Really, they wondered why they were given the responsibility when it is not something that they would normally deal with.

We come to finding 5. While the principle of maximising drawdown from OZEV-funded schemes is sound, it is clear that there has been a failure to do so over the years, with confusion over which public body should lead on the issue and questions around knowledge and experience in local authorities. It may be that DFI would be best placed to access the funding, rather than the responsibility being passed to council officials who have little or no experience in this area. It is important to note that the window for drawing down funds from the ORCS is limited. Therefore, DFI should re-engage with the OZEV, the Energy Saving Trust and councils to ensure that the unique circumstances in Northern Ireland are considered.

Again, evidence from the advanced EV market shows that early public investment in infrastructure is necessary to stimulate EV uptake. It is only when this is at a sufficient level that a shift to private-sector operation, with decreasing public support, will occur. The Committee may wish to consider whether DFI should engage with ESB and other partners to agree a funding package that would bring the NI charging network to a suitable condition.

The Committee also sought the view of a range of stakeholders with a significant fleet management function. That included public transport operators, road haulage operators, Departments and local councils. It sought their views on a range of issues, which included the main challenges to ULEV uptake in their sector, the main benefits of ULEV uptake, whether they think government support for uptake should be made available, whether official targets should be put in place, what the impact on the sector will be, and the current viability of plans for the transition to ULEV.

The Committee received 19 responses to its call for evidence. I have listed the respondents in the paper for members to look at if they want. I will go through some of the responses. In the public sector,

Translink has taken significant steps towards building a zero-emissions fleet. It received funding for three new hydrogen buses, with an overall capital investment of around £4 million. Some of these buses are now operational. It has also allocated funding of almost £66 million for the purchase of 144 zero- and low-emission buses that will enter service in 2021-22; 100 of those will be zero-emission battery and hydrogen-powered vehicles. In Translink's decarbonisation strategy, it states that it will move to a zero-emission bus and rail fleet by 2040, with the fleets in Belfast and Derry achieving this by 2030. Translink estimates that the full cost of decarbonising its bus and rail fleets is likely to be in the region of £1 billion between now and 2040.

The Northern Ireland Prison Service has replaced over 80% of its road-going fleet, and 92% of its fleet is either Euro 6 diesel, hybrid or fully electric. Other Departments that responded have been slower in their transition, but there are some examples of limited adoption and pilots that are either under way or planned. For example, the Environment Agency purchased two fully electric vehicles, which are used by staff travelling between country park sites across Northern Ireland. The Department of Education has a fleet replacement strategy in place. That includes sourcing two ULEVs in 2025, which it will trial against diesel vehicles. NI Water has also recently introduced a number of electric vehicles to its fleet and is keen to explore the possibilities in hydrogen.

The barriers to uptake are really the same for these bodies as they are for individuals who are looking to make the transition to electric vehicles. Fleet managers face the exact same issues. Cost is, obviously, one of the main barriers. Translink pointed out that the capital cost of an electric bus is 1.8 times that of a diesel alternative, while the price of a hydrogen fuel cell bus is approximately 2.4 that of a diesel bus. It also pointed out that significant outlay is required to install charging infrastructure for the fleets. The fuel is comparatively expensive and there is cost associated with retraining staff in how to maintain the new technologies. A number of councils also addressed the issue of the cost of vehicles in their fleet. For example, a fully electric 26-ton refuse collection vehicle costs around £500,000 compared to the £170,000 of a diesel equivalent. A number of the councils pointed out that they have already carried out trials that pointed out the issues with range and efficiency, suggesting that, if they have to return to the base many times during the day, they lose too much time and that it is just not suitable.

The Department of Justice noted that it had carried out a significant fleet replacement throughout the Prison Service in recent times, and that it has moved to electric or hybrid vehicles where possible. However, it pointed out the limitations of the type of vehicles that are available. For example, it looked at changing the custodial vehicles to electric vehicles, but the best available model can only travel 80 miles, which does not provide enough range to enable the Prison Service to provide secure transfers to local courts.

The taxi sector, through Fonacab, also responded to the consultation. The challenges identified by Fonacab are not unique; they are the same challenges as are faced by fleet managers and individuals. Those challenges include the lack of suitable working charging infrastructure, the high cost of vehicles and the range anxiety with the available models. Unique to that sector is the challenge of the availability of models with suitable cabin space, etc to enable them to operate. Fonacab said that it is looking at EVs on an ongoing basis. It provides hybrid vehicles to drivers, where requested, and also sells hybrid vehicles in its other retail businesses.

The Road Haulage Association and Logistics UK also responded to the consultation. The main challenge for the HGV fleet is technology. They said:

"There is significant uncertainty over which technologies will be the most commercially viable to deliver zero emission HGVs, with different views around the potential of hydrogen fuel cell, battery electric and electric road systems."

Logistics UK pointed out that, to be widely adopted, all new technologies must be able to deliver a commercial business case, which, initially, may need to be facilitated by government support. As I said, the UK Government's transport decarbonisation plan introduced an indicative target for banning the sale of petrol or diesel HGVs. They will probably bring forward some incentives for that. They are working with the manufacturing sector to ensure that models are available, but that will have to be looked at.

Moving on to finding 6, throughout this inquiry, stakeholders expressed views that the public sector must take the lead and commit to decarbonising their own fleet. As a result, the Committee may wish to recommend that a commitment should be made that, where possible and practical, zero-emission vehicles are the first choice for public sector bodies.

That is the end of the presentation. Thank you. I am happy to take any questions.

The Deputy Chairperson (Mr Hilditch): OK. Thank you, Des. That was a substantial presentation. I remind members that we have the deadline of midday to be out of the room, so we should move along.

Translink seems to be making a fist of moving forward on emissions. However, there is such low uptake of public transport system. Should the inquiry be pushing towards greater uptake of public transport?

Mr McKibbin: Definitely. The transport decarbonisation plan in the UK, on which the Department will probably largely base any plans, identifies public transport, walking and cycling as the main factors in achieving decarbonisation. The energy strategy also recommended a hierarchical approach in which public transport and active travel are above driving. That should be the key focus of any plans or recommendations for transport decarbonisation.

There has been a long-term issue with achieving modal shift in Northern Ireland. As I touched on briefly, there has never been a sizeable shift. There have been really good examples. The BRT system has greatly enhanced modal shift on that network. The number of people using that service compared with usage of the previous bus services has gone up significant. There have been schemes where the rail network service levels and new rolling stock have seen massive increases in passenger numbers. Public transport needs a sustained level of investment that will be able to deliver those flagship projects on a more widespread basis around Northern Ireland. If that is achieved, you will see a greater modal shift. There are other issues, such as working from home, as I am now. More walking and cycling will also be important factors.

Ms Kimmins: Thanks, Des, again for a comprehensive briefing. The state of the charging network in the North is one of the biggest issues that we hear. It is definitely one of the biggest disadvantages to buying an EV, in addition to cost.

You said that the Department could have been best placed to access the funding that was being delivered through councils. It sounds like an opportunity might have been missed. Could more consideration have been given to the North's governmental structures regarding this scheme in trying to encourage drawdown?

Mr McKibbin: Yes, I definitely got a sense of that. In their responses, some councils pointed to the fact that they did not have any statutory responsibility for it. In the UK, local authorities are also the local transport authorities. They own the street furniture, the street lights and the roads. They have the power to intervene. They have a statutory responsibility to maintain the roads. Those are functions that are carried out by the Department for Infrastructure.

Whilst the thrust of the UK's policy is that local authorities should be getting this funding, it would not have been a massive stretch to say, "Well, the local transport authority in Northern Ireland is the Department for Infrastructure, which is a central government body, and it should be able to access that funding in the same way".

Ms Kimmins: From speaking to councils, you get the sense that they probably needed direction and support with that. What funding did we, in the North, receive for charge-point investment in comparison with Europe?

Mr McKibbin: When the e-car NI programme was launched in 2010, Northern Ireland and the Republic received a large amount of funding to create the charging network that we still have. They received funding for that from Europe. I do not have the exact figure to hand, but I can send it to you. At the time, there was talk of the island of Ireland having one of the most advanced charging networks in Europe. Instead of expanding that, it has gone backwards. We have fewer operational charging stations than we did then, as many EV drivers have pointed out.

There really has not been any funding drawn down or investment from the Department since. ESB took over responsibility for the network in 2015. As far as I know, it has not drawn down any funding. We have not received any funding from the ORCS. Individuals have received funding for private charging points at their homes. There are figures in the paper. Looking at the level of infrastructure investment that has taken place across Europe, even leaving out the likes of Norway, it goes into hundreds of millions of pounds. As I mentioned in the paper, the charging infrastructure in Ireland fell

behind to the same extent as in Northern Ireland, with the lack of uptake of vehicles. The Irish Government have recently committed €10 million for an upgrade and replacement scheme in conjunction with the ESB. The ESB is putting forward €10 million of match funding. The €20 million fund will make significant improvements to the charging infrastructure network in the South over the next number of years. The ESB gave evidence to the Electric Vehicle Association Northern Ireland (EVANI). EVANI made a presentation to the Committee before the summer, and it recommended that at least match funding should be provided to enable the ESB to carry out a substantial replacement and maintenance programme to bring the network up to standard.

Ms Kimmins: You mentioned the South. Over the summer, we were in the west of Ireland. We noticed a significantly higher number of EV charging points in comparison with here. A new Lidl supermarket has opened in Newry, and it has provided a charging point, which is interesting. Maybe we can encourage that to bridge some of the gaps that EV owners are experiencing.

I have a question on the issues expressed by the taxi and freight sectors about moving away from fossil-fuelled vehicles. Some councils in England have introduced grants for licensed taxi drivers to transition to electric vehicles. Has any consideration been given here to sector-specific schemes to help with the transition? Is there any indication of how successful that has been?

Mr McKibbin: On your comment about the supermarket, the ability for private-sector organisations to put in retrofit charging infrastructure or for new businesses to establish charging infrastructure has been made easier by the removal of the requirement for planning permission. To encourage that even further, changes may be required to planning legislation, for example, to require that a minimum of four parking bays in a new car park have electric charging points available.

On your question about specific schemes here, there are no funding mechanisms for councils, taxi drivers or HGV operators. The Department's position is that it does not provide any additional funding outside of that provided by the Office for Zero Emission Vehicles. The Department has provided no additional funding for purchasing cars or improving infrastructure. The only money available for taxi drivers is the standard plugged-in car grant that is available for all drivers here. There are no specific schemes for HGV operators.

The UK Government are considering new schemes for the manufacturing sector to pilot technologies. The trialling of technologies is suggested in the energy strategy. Again, when that strategy is published in November, a great deal of work will need to be brought forward very quickly on the role of the transport sector in achieving net zero. That will be one of the areas to be addressed.

Ms Kimmins: That is great. Thank you, Des. Certainly, how we move that on is food for thought for the Committee.

The Deputy Chairperson (Mr Hilditch): Three members want to ask questions, and we have about 15 minutes left. If any questions remain outstanding, they can be submitted to the Committee Clerk, who will forward them for an answer.

Mr Boylan: Once again, thank you for the presentation, Des. I have one question. The briefing paper suggests that a new branch dedicated to transport decarbonisation should be set up with experienced personnel to deliver on that. Do other jurisdictions have similar branches? What would be the implications for the Department if it did not have the expertise to address, challenge or deliver on those issues? Thank you.

Mr McKibbin: The UK obviously has the Office for Zero Emission Vehicles, which is the main lead party. In the UK, the larger local authorities, the unitary authorities and the passenger transport groups in some of the larger cities all have dedicated teams for decarbonisation and develop their own plans, so there is a great deal of expertise in transport planning and infrastructure development in those bodies.

As for the implications for Northern Ireland, the Audit Office published a report in 2015 on the implementation of the regional transportation strategy between 2002 and 2012. The Audit Office was not critical of the Department, but it highlighted the fact that the Department did not have the expertise in a number of the areas to implement the plan properly. As a result, none of the targets on modal shift was achieved. The Audit Office was of the opinion that the Department needed a specific focus on modal shift.

This is another issue. Obviously, transport decarbonisation is a huge issue, and a number of areas need to be explored. The Department, in evidence to the Committee before the summer, indicated that it does not have the necessary experience or expertise to develop policies on electrifying transport and modal shift. The major risk to Northern Ireland is that, if those people are not given the necessary resources and if people are not put in place to deliver those plans when they are published, the Department may fail to deliver on what is needed, as has been shown to happen in the past, because the resources were not in place to deliver on the regional transportation strategy. As I said, the modal shift targets that were introduced almost 20 years ago still have not been achieved.

Mr Boylan: So what you say — obviously, we need this — is that we will fall further behind if we do not establish a branch to deal with it. Yes?

Mr McKibbin: That is just a suggestion. It is not necessarily about having a branch. There needs to be recognition of the important role that transport will play in achieving net zero. It is not a criticism in any way of the Department. There just needs to be recognition of the fact that the Department needs to be given the resources to implement that. Transport is, arguably, one of the most critical factors in delivering that target, so the resources allocated should reflect that.

Mr Boylan: Des, I appreciate that. That is why I am trying to tease this out. It is something for us as a Committee to look at and to ask questions about with the Department. If the Department comes with suggestions for how it wants to move forward, that is 100%. It is not a criticism. It is clearly recognised in the research. Thank you very much for your time and your answers.

Mr McKibbin: No problem.

Mr Muir: Deputy Chair, I will be brief, because I know that this is last orders before we finish at 12.00 noon. Thank you, Des, for your presentation. The evidence in your presentation proves that, if you build it, they will come, and, if you provide good infrastructure, people will use it.

You touched on the expertise in Departments. My frustration is that this falls between a number of Departments, and no one really takes a grasp of and leads on it. The expertise issue also came up in the PAC in relation to capacity and capability in the Civil Service and in the Department for the Economy, around energy. That is no surprise.

The main frustration for electric vehicle owners in Northern Ireland, who have a great user group now set up, is that, although the system for charging infrastructure in Northern Ireland was top-class when it was installed, that is no longer the case. A key issue is that the ESB infrastructure does not have charging associated with it. In response to a recent Assembly question for written answer, the Minister said:

"I have encouraged ESB to introduce charging as soon as possible".

Are you aware of anywhere else that has a completely free-of-charge charging infrastructure? What would be the benefit of introducing commercial charging and a commercial network in Northern Ireland to address the issues?

Mr McKibbin: There have been examples all over the place, such as in Norway, of free charging. That was one of the early interventions used to encourage people to move to electric vehicles. The number of free chargers in Scotland is still high as well. The key issue is that there needs to be a market to encourage the private sector to take the lead, to come in and to start developing the infrastructure. Clearly, the major advantage is to create the conditions in which the private sector can be profitable while making a substantial investment.

There is a mix in Scotland. Free chargers are available in local authority areas, but most of the strategic road network is owned by the private sector, and there is private-sector charging infrastructure at many public buildings. There is a mixed approach, and, as I said, Scotland has one of the fastest-growing EV markets in the UK. I do not think that there is any evidence from Europe that charging for the service puts people off. ESB has said that to introduce charging, which it wants to do, will not be possible with the current machines. It will need to replace most of the machines before charging will be possible.

There are other advantages to introducing charging. For example, it increases driver responsibility. If drivers are not being charged for the service, they can plug their car in, leave it for the day and not

come back, whereas, if there were a charge, drivers would be keen to come back to end the charging time so that it would not cost too much. That can be more closely monitored when it is in place. Ultimately, charging for the service is fair, and it creates the market conditions necessary for the private sector to take over the investment from the public sector. That is the major advantage.

Mr Muir: Thank you, Des.

Mr Beggs: It is a very useful report. Clearly, we have a long way to go. I visited Scotland over the summer and was struck by seeing charging points at petrol stations and on the North Coast 500 route. In remote villages, there were two double chargers, providing security for the vehicles.

I go back to my earlier question: is there evidence elsewhere of using building control to drive the change? It is most efficient to put in the additional wiring when modification is being done, whether it is to a commercial building, a supermarket or a home. Is there evidence elsewhere of driving that change by requiring the new standard to be adopted when building work occurs, as happened with home insulation?

Mr McKibbin: There are examples in Europe and the UK of requirements for a minimum number of charging points to be included in new-build apartments and new-build public buildings such as leisure centres and supermarkets. The numbers in the UK are quite low. They are significantly higher in places such as Germany, Norway and Denmark. That requirement has been introduced elsewhere, and a number of stakeholders, including the Electric Vehicle Association, have called for it in their submissions.

Mr Beggs: To go back to Andrew's question on charging for the service: if ESB provides free electricity, it has no income stream; in fact, it loses money the more customers it has. It therefore has no money to maintain the service. That is what has gone wrong. Will the new model that is being considered with INTERREG funding be sustainable and maintained? Are you aware of that?

Mr McKibbin: I am aware of the model. The chargers that will be introduced as part of that will be new enough and, I suppose, of a high enough quality that, when the rest of the network is brought up to scratch, it will be able to introduce charging. However, the major barrier that ESB has at the minute is that, as it says on its website, the chargers that are in place are 10 years' old and are not maintained by the manufacturer any more. It cannot make the changes to them that are necessary to introduce charging. I do not think that it will introduce charging on some of its chargers. It will wait until the entire network is up to scratch before it introduces charging across the board.

Mr Beggs: Another aspect —

Mr McKibbin: Then —

Mr Beggs: Sorry?

Mr McKibbin: I was just going to say that it would have been beneficial for ESB to contribute to the inquiry. Maybe the Committee would find it beneficial to write to ESB and to ask for its point of view. The information that I am referencing from ESB is basically from its website and information that it passed to the Electric Vehicle Association. Perhaps, the Committee would consult ESB before it draws its final conclusions. It would be able to provide the Committee with the best possible insight into the issues that it faces at present.

Mr Beggs: I was also struck that one of the respondents to the report indicated that there had been no engagement or investment by the Northern Ireland — they say Assembly — Executive regarding the development of the public charging infrastructure. Are you aware that any Department, rather than using rhetoric on climate change, actually encourages that and has made a practical change to invest capital funds in that area?

Mr McKibbin: Initially, there was an e-car branch in the Department. It was well run and well regarded by a lot of the consultees. I think that the Department provided match funding back then. It has also provided funding as part of the INTERREG programme that you mentioned. However, apart from that, the Department has not invested any money — nor, as far as I know, has any other Department — in improving the network. I think that, recently, a Member asked the Minister that very question in the

Assembly. The response was basically that, no, the Department is focused on accessing those OZEV funds for that and is not investing any additional departmental funds.

Mr Beggs: It appears that battery technology is not at a level that is capable of powering heavy goods vehicles, particularly with heavy loads over long distances, and that hydrogen appears to be more promising in that area. Are you aware of any experiments going on, other than Translink's two buses, in the use of hydrogen for fleets of vehicles in Northern Ireland?

Mr McKibbin: I am not aware of any in Northern Ireland. As I said, the transport decarbonisation plan has proposed banning the sale of diesel lorries from 2040. It indicates that trials will be brought forward. I imagine that Northern Ireland's HGV operators would be eligible to apply to take part in those trials. The Department should probably look at that with the sector to ensure that it is aware of that and is able to access those funds if they come forward. One of the energy strategy's recommendations is that the Department look at some kind of alternative fuel piloting scheme. It may be that the Department will deliver a project like that itself in the future. However, again, it is only really when the energy strategy is published in November that we will get the full outworkings of what will be proposed.

Mr Beggs: Will that strategy take care of transport energy requirements as well as simply electricity generation?

Mr McKibbin: No, not necessarily. Obviously, the Department was heavily involved in looking at what role transport should have. The Department has framed a number of questions in the consultation document to ask whether Northern Ireland should create this strategy. It is really going to lead to the Department having to then go ahead and produce a number of strategies. One of the issues that I addressed in the paper was that of how long all this will take. The outworkings of this will be protracted, when you think that that strategy will come forward in November and will lead to a number of different strategies. As I said, there is a charging infrastructure strategy, a transport decarbonisation strategy and, possibly, an alternative fuel strategy for the HGV sector. As I said, a massive body of work will come out of the energy strategy consultation.

The Deputy Chairperson (Mr Hilditch): Thank you, Roy, for doing that research while you were in Scotland. That was very useful.

Des, thank you for your attendance this morning, for your presentation and for taking questions. Thanks very much for your input.