



Northern Ireland
Assembly

Committee for Infrastructure

OFFICIAL REPORT (Hansard)

Decarbonisation of Road Transport in
Northern Ireland: Electric Vehicle Association
Northern Ireland

19 May 2021

NORTHERN IRELAND ASSEMBLY

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Members present for all or part of the proceedings:

Miss Michelle McIlveen (Chairperson)
Mr David Hilditch (Deputy Chairperson)
Ms Martina Anderson
Mr Roy Beggs
Mr Cathal Boylan
Mr Keith Buchanan
Mrs Dolores Kelly
Ms Liz Kimmins
Mr Andrew Muir

Witnesses:

Mr Mark Boyle	Electric Vehicle Association Northern Ireland
Dr Rónán Davison-Kernan	Electric Vehicle Association Northern Ireland
Mr Darren Henderson	Electric Vehicle Association Northern Ireland
Mr Mark McCall	Electric Vehicle Association Northern Ireland

The Chairperson (Miss McIlveen): I welcome, via StarLeaf, Mark McCall, Darren Henderson, Rónán Davison-Kernan and Mark Boyle, all of whom are directors of the Electric Vehicle Association Northern Ireland (EVANI). Thank you for participating in our inquiry. I invite Mark to lead the presentation, and perhaps your colleagues will come in after that. You can be the go-to person from my perspective.

Mr Mark McCall (Electric Vehicle Association Northern Ireland): I thank you, Chairperson, and the Committee for the opportunity to talk to you this morning about the role of electric vehicles (EVs) in the decarbonisation of road transport in Northern Ireland. Our group was formed in 2016, and, earlier this year, we became the EV Association Northern Ireland, which is a not-for-profit community interest company. Our two main aims are to represent the interests of electric vehicle users in Northern Ireland and to promote EV use here.

I am sure that Committee members are well aware that the single overriding issue that faces EV drivers here is the size and condition of the public-charging network. The roll-out of the network began in 2011, but much of the hardware has reached the end of its useful life. Our snapshot of the situation in February showed that more than a quarter of AC chargers and around half of all DC chargers here are out of order. Seeing blocked and broken chargers is a disincentive to anyone who is considering changing to an EV, but it is much worse if you already drive one.

I would like to read to you just a few of the comments that we have received from EV drivers over the past few months:

"My lease deal is up in November; seriously considering going back to diesel and, yes, it is because of how terrible the charging infrastructure is in Northern Ireland. There are now less chargers than when I got my car two years ago."

Another person wrote:

"As it is so bad here, both my father and myself have reverted back to diesel cars. You cannot rely on the charging network here. It is appalling."

Another comment read:

"We really have enjoyed having a lease. Unfortunately, we have to go back to diesel due to the unreliability of the network."

A further comment was:

"For a business looking to bring EVs into our fleet, how do we do it when the infrastructure is not supporting it? Vans would not be able to return to base if they cannot charge."

Not only is the current network stopping some people, including businesses, converting to an EV but it is forcing some drivers back to fossil fuel. In fact, a recent survey showed that 58% have considered a return to petrol or diesel due to issues with the public-charging network here.

What can be done? We published a six-point plan in February this year that identified that match funding from DFI to the Electricity Supply Board (ESB) would be the fastest and most effective way of getting things back on track. ESB tells us that it is difficult for it to identify a business case for the roll-out of replacement chargers and that it needs match funding to complete the work. Importantly, that will allow it to finally turn on pay to charge and, with that, comes the ability to free up chargers by penalising through overstay fees those drivers who abuse the current free service. That has proved successful in the South, where it has been in operation for 18 months.

The INTERREG FASTER project promises more than 20 new rapid chargers across Northern Ireland, and we certainly welcome the investment in those. However, that is still two years away, and those units may be limited to just 50 kW. That was the standard 10 years ago, but we want to see 100 kW chargers here as a minimum. As battery sizes have grown, we need to make sure that charging speeds increase, too.

A recent Ulster University study by Patrick Keatley showed that, in 2020, we dumped 465 gigawatt-hours of renewable wind energy here. That has a retail value of almost £80 million, and, in EV terms, it represents around 1.6 billion miles of carbon-free driving. To put it in a local context, that is more than 11 million return journeys from Belfast to Derry/Londonderry. We also need to make some changes to our electricity network in order to provide the consumer side with the flexibility that is required. While new technology allows for certain advances behind the meter, NIE Networks tells us that the roll-out of smart meters is needed in order to facilitate that transition. That will, in turn, require decarbonisation to become part of our Utility Regulator's remit. That change will help to promote innovation, remove barriers to competition and allow tariff reform. We expect that many of those issues can be solved in the new DFE energy strategy, which DFI is involved with, although, once again, it looks like that work may take years rather than months.

DFI is helping councils as they prepare to apply for part of the £20 million on-street residential charge point scheme (ORCS) grant. We would like to see the Department taking a much more active role in that by leading our 11 councils and fast-tracking the removal of any barriers to make it as easy as possible to add on-street charging points.

It is important to point out that, even if ESB replaced 100% of the network tomorrow, that would take us back only to where we were 10 years ago. The final step of our six-point plan is to ensure that funding is available for future growth. As we expand the network, we need to ensure that we fill the gaps on the map for combined charging system (CCS) charging and that all new sites have 24/7 access, unlike many of our public chargers, which are currently locked up at night. We need service level agreements for guaranteed uptimes, we should remove the requirements for special cards or apps, always have the option for contactless payments and generally make charging as frictionless as possible. Two green spaces should be painted at every AC charger in order to maximise the

infrastructure that we already have. Signage also needs to be improved, as does accessibility for blue badge holders.

With less expensive running and maintenance costs, EVs generally have a lower total cost of ownership than fossil fuel cars. However, the initial outlay is still too high as we are several years away from costs reaching parity with internal combustion cars. In order to help with that, Transport Scotland funds an interest-free loan of up to £28,000 for a new EV, up to £10,000 for a new electric motorbike and up to £6,000 for e-bikes, with repayment terms of up to five years. With Governments able to borrow at historically low rates, we would like the Executive to consider a similar initiative for Northern Ireland.

For drivers who buy the most affordable second-hand EVs, public charging is particularly important. Those cars have the smallest batteries and are the most reliant on charging on the go. Also, between 30% and 40% of dwellings in Northern Ireland do not have off-street parking, hence there is no way to charge the vehicle at home. We all want to see a green recovery but one that is also fair and inclusive.

The Department often quotes this line in its correspondence:

"sustainable modes of transport, including public transport, walking and cycling".

We would like to see electric vehicles added to that in future and for the Department to be seen to be promoting the change to EVs. According to DFI's travel survey, 71% of all journeys here are by car, covering 83% of the total distance travelled. We encourage active travel, and public transport for all is a great goal, although it is clearly one that remains many years away here. One in three people in Northern Ireland live rurally, and that is increasing. We firmly believe in the importance of balance and choice. A car is a lifeline that brings personal freedoms that, for many, are simply not possible by any other means of transport.

We need new legislation that sets out obligations for providing minimum levels of charging in new commercial and domestic developments. For example, current plans for one Translink car park show 350 spaces, with two designated for EV charging. That is just 0.6% of the spaces. In addition, we need charging solutions for our taxi drivers and for charging at our airports, train stations and park-and-ride facilities. We need to encourage EV tourism and provide a network that makes it easy for travellers to visit the North.

To sum up, while electric vehicles are not a panacea, they are part of the solution. An EV is only ever as clean as the source of its electricity. We are already at 49% renewable energy here, and, with targets to increase that to at least 70% by 2030, every EV will become even cleaner over time, decarbonising transport and bringing air quality benefits to our towns and cities. The 2020 figures for new plug-in vehicle sales in Northern Ireland show a 290% increase since the 2019 figures. Last year, we registered almost as many new EVs here as in the seven-year period from 2011 to 2017. That transition is accelerating, and we need policy and actions to keep pace. We are around eight and a half years away from the 2030 ban on purely fossil-fuelled cars. In fact, by September this year, we will be just 100 months away from that deadline. That means that there are 100 months to expand the infrastructure that cannot cope with the 4,700 EVs that we have here today into a public-charging network to support something more like 400,000 EVs, according to the NIE Networks model.

We all know the issues, and we have the answers. We would very much like to see DFI given the resources to lead that transition by setting up an EV task force and working in partnership with stakeholders in order to create policy and targets with measurable outcomes and, importantly, with funding for future growth. Committee, it is time to be ambitious and to drive that change forward. Thank you.

The Chairperson (Miss McIlveen): Thank you, Mark. Do any of your colleagues wish to add anything at this stage?

Mr McCall: No, we will take questions, Chair.

The Chairperson (Miss McIlveen): What is quite nice about your presentation is that you not only brought us the problems and barriers but you made suggestions to try to solve part of it. I want to ask about your engagement with the Department for Infrastructure and the Department for the Economy on the draft energy strategy. Are you part of the working group that has been set up by DFI for the transport side of things?

Mr McCall: We are not part of the working group, and, in fairness to DFE, we probably took on the legal aspects of being a community interest company a bit too late for that, but we have certainly met DFE officials, and we will submit feedback to their requests for information.

The Chairperson (Miss McIlveen): OK, so you are responding to DFE. Have you met DFI officials?

Mr McCall: We met the Minister last October and put some of our thoughts to her then. For example, we mentioned to the Minister that most of our AC chargers — that is, the fast chargers, not the rapid chargers, so I mean the ones that you see on streets and in car parks — are double-headed and can charge two cars at once. However, quite often, there is only one green space. Therefore, we feel that some of the low-hanging fruit is painting the second space green and designating it for EVs. In that way, we could double the capacity of those chargers in the morning.

The Chairperson (Miss McIlveen): You highlighted a number of barriers in the infrastructure. I represent the Strangford constituency. We want to attract tourists there, but we are very poorly served by charging points, which creates a problem not only for residents but for those wishing to visit.

Another barrier is the cost of EVs. I read on the BBC website this morning a commentary on the Public Accounts Committee (PAC) in Westminster. It highlighted the issues on support for moving to decarbonisation and those on electric vehicle points. It also talked about the cost of the vehicle and the fact that only 13 models cost less than £30,000, which excludes the vast majority of drivers who might be interested in moving across to an electric vehicle. That is an issue that you highlighted when you talked about grant schemes.

The other issue is that there are no off-street parking solutions. What is the solution for those drivers who live in more densely populated areas, particularly in streets, if they want to invest in electric vehicles?

Mr McCall: Rónán or Mark, will you take that one?

Dr Rónán Davison-Kernan (Electric Vehicle Association Northern Ireland): At the moment, there are limited options here for those people. They are dependent on the public infrastructure, such as it is. In, for example, GB, the councils, which have responsibility for the roads, have worked with operators to install charge points on lamp posts or bollards at the side of the road or to put channels in the footpaths so that people can install a charger on the front of their house and run the cable over the footpath without causing a trip hazard to anyone passing by.

Those on-street chargers do not have to be rapid or even fast chargers. They can be the 7 kW units that you would have on your house if you had a driveway, because that model does slow, overnight charging. Therefore, the investment in the electrical infrastructure for that would not be particularly significant as those points would all be close to houses that already have sufficient supply for that sort of thing.

In Northern Ireland, DFI has responsibility for the roads and street furniture. DFI and Roads Service have the responsibility for making it work. That is why it is so important that DFI works with the councils for the ORCS grant that the Office for Zero Emission Vehicles (OZEV) is making available. Councils apply to that, but, because of DFI's role in looking after the roads, the Department has an important part to play.

Mr Mark Boyle (Electric Vehicle Association Northern Ireland): I will pick up on the point about affordability. A quick search this morning on a used-car website showed that 298 plug-in cars are available in Northern Ireland. The cheapest one is £5,000. The prices go to £10,000, which buys you quite a capable car. The important thing is that those older cars have a smaller battery capacity. Anybody buying one will rely more heavily on the public-charging network. It is important to support this and to build that network so that we can encourage more people to switch to electric vehicles.

The Chairperson (Miss McIlveen): I have just one more point, which is about moving to pay to charge. Mark, you highlighted that there is abuse of the current service. Will you talk us through that?

Mr McCall: It is free vend at the moment. ESB said that it will not start to take payment until it can provide a reliable service, which it cannot do at the moment. Therefore, we are stuck in this no man's land of free charging and chargers. There is no investment, no business model and no money to

spend on replacing the chargers. We get inconsiderate people hogging chargers by parking overnight and blocking chargers. In Portrush, for example, visitors might want to stay overnight, park at 4.00 pm and come back the next morning, denying many people the opportunity to charge. Once pay to charge starts, there will be an overstay fee, so for every 10 minutes after the first 40 minutes, you might be charged £5 or something like that. ESB is operating that system in the South, and it is successful. As a result of that charge, there has been a big reduction in chargers being blocked.

The Chairperson (Miss McIlveen): What are the tariffs in the Republic?

Mr McCall: I cannot say off the top of my head. There are some private investors in Northern Ireland, and the range for their tariffs goes from 30p per kilowatt-hour to 36p per kilowatt-hour. That is the rough range.

Dr Davison-Kernan: I will jump in there. It usually depends on the type of charge that you are getting. There are fast chargers, like the 22 kW units, that will charge your car in a couple of hours, and there are rapid chargers that can charge your car in a matter of 20 or 30 minutes. The rapid chargers tend to be more expensive to use because they charge your car faster. Rapid chargers have the more onerous overstay fee because they are the equivalent of a petrol pump on a motorway or something like that. Elsewhere, generally speaking, the faster the charger, the more expensive it is to use. There are slow destination chargers, which you might find at a hotel or somewhere like that, and if they have a cost at all, it tends to be relatively low, so charging on those is not much more expensive than charging at home.

Mr Darren Henderson (Electric Vehicle Association Northern Ireland): Depending on the unit that you use, the actual cost from ESB in the South ranges from 27 cents per unit/kilowatt-hour up to 37 cents per unit/kilowatt-hour for the faster units, which is in line with GB-wide pricing schemes.

Mr Muir: Thank you all for attending the Committee today. I commend you for effectively lobbying and engaging in a very professional manner and for your constructive solutions. Many different people have come to the Committee over time, but your organisation is doing the work on a voluntary basis and has stood out because of the professional way in which it comes forward with constructive solutions. That is greatly appreciated and is a testimony to you.

I share your frustration about the state of the EV charging network and the need for Departments or someone to get a grip on it and to drive forward change and improvements. It is probably one of the best examples of things falling between different silos and of siloed departmental working. No one is prepared to drive it forward, and that is not good enough. We need someone to drive the matter forward. From my perspective, the Department for the Economy has responsibility for energy, but the Department for Infrastructure has responsibility for transport. If we are trying to encourage people to move towards decarbonised public transport and a greener and more sustainable future, the Department for Infrastructure needs to take a lead. There are so many different things that need to be done. If there is one thing that the Department for Infrastructure should take forward to address EV charging, what would it be?

Mr Henderson: That was alluded to in Mark's presentation. The current charging network is free but crumbling, and that disincentivises the public from using it. Mark alluded to people returning to diesel because the charging network is not working. It also disincentivises organisations and service providers from coming in because it is very hard to compete with a free network. The single most effective action that DFI can take is to create the conditions where progress can be made, and that is the match funding that we outlined in our six-point plan. We would need a relatively small amount of money. For example, when the Minister announced the £20 million blue-green fund, she said that there was a potential for the Department to play a more proactive role to support the improvement of the infrastructure. We are talking about using 5% to 7% of that fund to promote and build the network to, admittedly, bring it back to what it was 10 years ago, when it was one of the better networks in Europe. Now it is the worst. It is a relatively small thing. My personal feeling is that if we could prioritise some of that money towards the network, it would be a big step forward.

If there is prioritisation of the money that ESB would require in match funding, we would prioritise it towards the rapid chargers that have been outlined, which are the ones that should be on the main arterial routes and that would charge cars faster. That is where the money should be spent and directed towards. That could happen relatively quickly. ESB is primed to do that. We realise that some of the things in the energy strategy will take time. However, that is the somewhat low-hanging fruit that could really make a difference pretty quickly in Northern Ireland.

Mr Muir: I have one more question. I have had discussions with one of the commercial providers. There is a real lack of them in the Northern Ireland network. Potentially, one issue that inhibits them is that the current failing, broken network is free. What else inhibits them from coming here and being able to provide that network? When you look at and visit other countries — well, you used to be able to visit them — you could see the charging network that was in place. Why is Northern Ireland lagging behind and unable to attract those commercial providers?

Dr Davison-Kernan: One of the big issues is that, for a provider that is looking to build a rapid charger in particular here, the entire cost to connect to the electrical grid is passed on to the connectee. Therefore, if you want to build a bank of chargers, you have to pay not only the cost of installing that but the cost of any grid upgrades that are required to support it. If you go elsewhere, at least part of that reinforcement cost is socialised — it varies depending on where you go; for example, in GB, it is around 40% or 50% — whereas here it is passed on entirely to the connectee. What that means, effectively, is that it is much more expensive to install rapid chargers here than it is elsewhere.

That is because NIE Networks is obliged to pass that cost on under its licence obligations. That comes back to the issue that the Utility Regulator's remit does not include decarbonisation. The Utility Regulator's remit means that it must force NIE to do things that are the most economical for the electricity customer, but that does not take into account the investment that is required for decarbonisation, which, again, is not the case for Ofgem in GB or the Commission for Regulation of Utilities (CRU), which is the equivalent regulator in the Republic. They both have decarbonisation as part of their remit. The Utility Regulator's remit here must change in order to allow that knock-on effect downstream for connections.

Mr Muir: Thank you. I probably have loads more questions, but other members have questions, so I will not hog the time. I have looked at how the Scottish Government are approaching this. Yesterday, they announced that there would be a Minister for net zero. It is about ending silo working and actually collaborating on the focus. That is what is required in Northern Ireland. Those are all my questions for today.

Mr Boylan: Gentlemen, you are very welcome to the Committee. I have a couple of points. I agree with Mr Muir, and we are going through the Climate Change Bill as well. This is a cross-departmental effort. If we are serious about tackling climate change and moving away from using fossil fuels, there are a number of ways to do that and a number of Departments that could be involved.

Mark, we are eight and a half years out from the ban on new cars that run on fossil fuels. The thing is that we have a regressive infrastructure network. It would be a big regression if people were to go back to using those cars. That would be a regressive step. It is concerning to hear that. I have met you. I know that, particularly last year, there was an 82% increase in registration of low-emissions vehicles. That is to be welcomed. However, do you think that the network deters people and prevents us maximising our potential for EVs? Is that one of the main factors at present?

Mr McCall: Absolutely. If you came to our group at the moment and were a potential EV buyer, you would definitely be put off because of the stories that are out there. We talked about those quotes, and one lady we quoted had a Leaf, and she said that there are fewer chargers now than there were when she got her car two years ago. The latest government figures show that our network shrunk by 19% in the last quarter. That is the official government figure.

The guys mentioned the important rapid chargers, which can fill a car up from 0% to 80% in as few as 25 minutes. We have 17 of those in Northern Ireland, which works out at 1.1 charger per 100,000 of the population. By comparison, in Scotland, there are 10 per 100,000 of the population, so 10 times the number here. It is actually worse than that because half the chargers here are out of order, so the comparison with Scotland is more like 20 to one at the moment. We are so far behind here, and, as Darren said, if we could do just one thing in the morning, it would be to get the network back up to where we were and let the rest follow. It would be such a huge benefit to everyone if we could at least get that initial step done and get things back online.

Mr Boylan: Basically what you are saying, Mark, is that the rapid chargers are not up standard to keep the modern EVs on the road. In percentage terms, how far down the road are we in keeping up to standard with the modern EVs?

Mr McCall: Are you asking about the range?

Mr Boylan: No, the rapid charger speeds.

Mr McCall: OK. The chargers that we have are 50 kW. As I said, we are meeting the East Border Region this evening, but we have heard on the grapevine that the INTERREG project will again involve 50 kW chargers, which seems to be a bit of a backward step. We have also heard that that project started maybe three years ago or more, which may have something to do with it. Chargers in GB are more like 150 kW to 350 kW. As batteries have got bigger, you want to keep the 25-minute recharge time to get a battery from 0% to 80%. Battery sizes have doubled or tripled in the past few years, so we need our charger speeds to double or triple to keep the 25-minute charge time. Otherwise, cars with larger batteries will be sitting for an hour and a half, which will mean the charger is tied up for one car in that time when we would like to see two or three cars charged in that time. Technology in general is advancing. Some of the latest cars can put on 100 kilometres — 60 miles — in five minutes. The technology is always improving, and we would like to see provision of rapid chargers being ramped up.

There are also issues with NIE Networks. We asked whether the 17 sites in Northern Ireland could be easily upgraded to 100 kW or 150 kW. The answer was no: it would be major work even to upgrade them above 50 because that is pretty much the capacity of the supply at those locations.

Mr Boylan: We are focused on the North, but, in comparison with the South, are we being left behind?

Mr McCall: Absolutely, yes. The South, because it has turned to a pay to charge system, has something of a business case. Charging hubs are starting to be built down there, which are like fuel stations in which there might be five or six rapid chargers in areas of motorway service stations. We are watching the network here dissolve in front of our eyes: there has been zero investment for years, so it is certainly something that we would like to see the Committee and the Department get involved in if possible.

Mr Henderson: It might seem a bit odd that the owners of electric vehicles are lobbying to pay for the electric that they want to use, but that is the vast majority of the feedback that we get from our members. They want to pay for it and see that as the only sustainable way forward. It does seem odd that we are lobbying to turn off free charging, but it is the only way forward.

Mr Boylan: Obviously, ESB has a big part to play. I have asked the Minister about funding on a number of occasions, and I may be able to advance those questions in the next briefing. What are the implications if ESB does not get match funding? ESB is the organisation that can provide the service. What are your views on that?

Mr McCall: Mark, do you want to take that one?

Mr Boyle: Yes, we have had meetings with ESB and said, "Look, take the payments". There is a reluctance on its part because of the reliability of the network. It says, "How could we market this when we have so many charging points out of commission?" The equipment is ageing, so it is having trouble even with getting spare parts. This is the way I look at it: you have a business model, but you are giving away your product, which is costing you money that you could be spending on buying and investing in new equipment, putting in new services, and improving the reliability of the network. We are all for ESB taking payment for charging and investing that money in the network.

Mr Boylan: Is that best way of getting the match funding in through ESB?

Mr McCall: As a group, we have identified that as the first thing that we would all like to see. Getting the existing network back on track is the only way forward. As Rónán has explained, there are issues that are putting off competition, such as the connection charges and all those things that will take years rather than months to change, including the Utility Regulator's remit and changes to the NIE network. We need to bypass all that.

EV sales almost tripled here last year compared with 2019. Lots of new people, when they looked at a map and saw loads of chargers around Northern Ireland, bought a new electric vehicle and the first three chargers that they went to did not work and they were devastated. We need to get that initial match funding for ESB. It received that in the South and in the three cities in GB that it has worked in. We are not asking for something here that it has not had previously. We just need to find a way to get

that funding for ESB. It is talking about a figure between about £750,000 to £1.5 million; that is the sort of money that it is looking for to get the other half in.

Mr Boylan: Thank you very much for the presentation and we look forward to working with you. Hopefully, we will make rapid progress. *[Laughter.]* We are looking forward to the next presentation, but no doubt we will meet again.

Mr K Buchanan: Thank you for your presentation, gentlemen. I want to go through some of the figures. You said that there are 1.1 charging devices per 100,000 people in Northern Ireland. If you compare that with Scotland, what is that like for cars? What is our charging network like based on cars? Let us say that, in Northern Ireland, there are approximately 4,000 electric vehicles, if I am right. What is that like in the Scotland model — charging per car, not per head of population?

Mr Davison-Kernan: I do not have a specific figure for Scotland. UK-wide, however, there are — what was the figure again, Mark? We have a disproportionately low number of EVs in Northern Ireland.

Mr McCall: There are about 500,000 plug-in vehicles in the whole of the UK at the moment, and Northern Ireland has roughly 2.8% of the population so, pro rata, that would mean that we should have around 14,000 or 15,000 EVs here. However, our latest figures are 4,700.

Mr Davison-Kernan: We have about a third of the number of vehicles that you would expect us to have, based on that UK-wide figure. Even if you take that into account, assuming that Scotland is broadly the same as the rest of GB, that 1.1 figure, compared with the 15 in Scotland, is still one fifth of what they have in Scotland. That does not take into account those rapid chargers that do not work.

As well as that, a lot of our rapid chargers are of a design that is not really compatible with most modern EVs; they are not capable of CCS charging. For example, my car takes CCS rapid charging, so I cannot charge it at a lot of those rapid chargers at a fast speed. I have to use them as if they were fast chargers, which means that I only get 11 kW rather than the 50 kW that it is supposed to.

Mr K Buchanan: OK, thanks for that. Your bar chart of the total charger network in Northern Ireland shows that about 280 are working and approximately 100 are not working. So, we have roughly 380 or 400 chargers in Northern Ireland, a quarter of which, let us say, are not working?

Mr McCall: We have 160 double-headed AC chargers and about 320 fast chargers and 17 rapid chargers.

Mr K Buchanan: Do you call the double-headed charger a single charger or a double charger? Is that two chargers or one?

Mr McCall: That is two chargers; we refer to that as two.

Mr K Buchanan: OK, fair enough. I have a couple of technical questions. When you are charging a battery, does the use of a slow charger, a fast one or a rapid one affect the battery life?

Dr Davison-Kernan: If you were to charge your car exclusively using a proper rapid charger such as the 150 kW or 200 kW rapid chargers, it would have a detrimental effect on your battery, but it is very unlikely — certainly here, even if we had them — that you would be doing that all the time. Most charging will be done at home, as it is now, but even if you are using those fast chargers and rapid chargers all the time, you will not have a significant impact on your battery. Modern batteries are designed with safety margins. Unless you are making long journeys all the time, you might not charge your car 100% all the time, and that will help to extend the life.

Originally, these came on stream 10 or more years ago and are still on the road. The batteries are small by modern standards, but the vast majority still have 70% or 80% of their original capacity, and that is after 10 years on the road and with technology that is behind what we have now. Millions of miles are possible from batteries without much difficulty.

Mr Henderson: There was a fear of that many years ago when the first cars came out. The first electric cars came with leases on the battery so that you had some protection. That has long since disappeared. No manufacturers issue leases any more, except on second-hand cars that already have the leases in place. That is because the evidence has shown that the batteries will outlast the physical

elements of the car. Charging to 100% every day on a rapid charger could lower your percentage stated charge, but that is extremely rare. Most people just charge to 80% in that 20 minutes on a rapid charger, as Mark talked about, and that keeps the battery healthy. The cars are set up to do that.

Dr Davison-Kernan: Even those batteries that are finished in cars still have applications elsewhere, such as in energy storage schemes etc, where the weight versus storage capacity is not as much of an issue.

Mr K Buchanan: You said that electric vehicle purchases increased by 80% last year. Is that correct? Did you say 80%?

Mr McCall: There was a 290% increase in EV sales in Northern Ireland compared with the previous year, going from about 580 EVs to 1,600-odd last year.

Mr K Buchanan: Given the poor charging network, what has driven that rapid increase? Would the people who bought those cars think that they had made a mistake?

Mr McCall: Darren can probably tell you a little bit about that from his work.

Mr Henderson: The incentives are there. People are becoming more aware of the running costs of electric cars, but it is also about the benefit in kind for company cars and lease cars through companies, particularly in the health service, where we have access to an organisation-wide lease scheme. I get my car through that scheme. The benefit in kind is 0%, rising to 1% and then to 2% over the next few years. That is a massive change from an internal combustion engine. I work in the health service at the Ulster Hospital in Dundonald, and, in one month, you will see 40 owners coming in with new cars. It is self-perpetuating. The more people see more of these cars, the more they tend to come in. If you were allowed to do this, I would take people for a run in my car, and they might say, "My goodness, this is fantastic" and want to get in on it. They then see that the costs, through the lease schemes and with benefit in kind, are so low. We are very fortunate in the health service that most of the locations have workplace charging, so we can charge at home and at work.

The benefit in kind is probably the single biggest incentive that has led to the increase, but there are disincentives. It could have been a lot more if the charging network had been better. We have talked about some of the items in your decarbonisation strategy, such as the cost of the vehicle, range anxiety and charger issues. However, range anxiety is not really the issue any more. The cost of vehicles is coming down. Not fast enough, but that will change as the industry changes. Range anxiety has been replaced by charger anxiety. That is where the range issues are, because if you can get to a good charger, you can charge and range is no longer a problem. Charger anxiety is the main thing that is holding us back.

Mr K Buchanan: Thank you, gentlemen. Thank you, Chair.

Ms Anderson: Thank you for the presentation. I have raised my concerns about the deficits that we have in the charge points network in Derry. The limited charge points in Derry are routinely broken down, as you know, and in need of repair. Listening to you, we realise how important this is. We are all on the same page to promote sustainable transport and the decarbonisation of the public transport service. However, given that the charge point network is literally falling apart, like you, we do not simply want to fix what is broken and then hail it as a success, so that we can go back to the future, where we were 10 years ago. We need a strategy and a plan to expand the infrastructure and to future-proof the charge point network.

In your briefing, you pointed to statistics indicating that 71% of all journeys are done by car. Can you elaborate on the implications for connectivity? Our charge point network is falling apart; listening to you today, any impartial observer would concur. If our network does not get turned around without the ambition that you talked about, I am concerned for the north-west. I do not see how we can tackle regional inequalities if we cannot service EVs. Can you elaborate on concerns that you might have about connectivity implications?

Mr Davison-Kernan: There is a real reputational risk, now, as well. As we said, we conducted a survey of our members earlier this year, and 58% of them said that they were considering going back to petrol and diesel.

Ms Anderson: That is very alarming.

Mr Davison-Kernan: They love their EVs, but the stress and anxiety of trying to charge is putting people off. There is a real risk that it will not be possible to ban the sale of fossil-fuelled vehicles here by 2030. At that stage, there will not be that many of them on the market. We will be stuck as people think their only option is to buy fossil-fuelled cars. However, such cars will actually be more expensive, because everybody else will be driving electric vehicles, and we just do not have the infrastructure for that here. That is a real concern.

Ms Anderson: From your presentation and the information that you sent us, it is clear that even if you had the money to buy an EV because you were keen to contribute to the decarbonisation of the public transport system, the stress and anxiety of getting from A to B might put you off. When you say that it might be impossible to ban the sale of fossil-fuelled vehicles by 2030, that is really alarming.

Previously, you called for a cross-departmental task force, and some of my colleagues have already mentioned the need for cross-departmental working. Can you provide some focus on that? It is clear that the issues that your association has highlighted are cross-cutting and include the Department for Infrastructure, the Utility Regulator and NIE Networks. Are you engaging with those bodies? Are the DFI Minister and her officials working with you to give you confidence that DFI will take the lead? We all need someone to take the lead when there are problems like this that need to be addressed.

Mr McCall: I go back to the need for charging points. As many as 40% of people in Northern Ireland live in dwellings that do not have off-street parking. That is a big issue. Those with off-street parking who can install their own home charger are fine. If you have a car with a range of 200 miles, you can leave your home every day with 200 miles in your tank, so to speak. Not everyone is affected here. However, if you do not have off-street parking, an EV is very difficult for you at the moment.

We have engaged with NIE and the Utility Regulator several times and had great meetings with both organisations. NIE Networks are particularly worried about the pace of change. At some of our meetings, they have said, "If we do not get going on it now, next year is too late. If we are going to get to 2030, we must start now. Enough talking; it is time for action." We echo that. As an organisation, we have been talking to people since 2016 and have seen things go backwards from then. We took a strategic decision earlier this year to ramp up our lobbying to raise awareness of the issue. Hopefully, meetings like today's have come about because of that. Again, thank you to the Committee for having us today.

Ms Anderson: Thank you for coming today and giving your presentation. I have just one other issue, Chair. It was touched on earlier about potential low-hanging fruit. It might seem like a contradiction, given that the network is falling apart, but your association previously pointed to the potential quick win for both spaces to be painted green at all charging points. You said that this could double the availability of our existing infrastructure overnight, if it were working, of course, which it is not. I agree that the pace of change in the North on a lot of things is too slow, but we certainly need ambition injected into this. You previously said that you were unaware of any progress on the issue of both spaces being painted green. Do you know whether there has been any change to that approach?

Mr McCall: I can give you an example of one space. A lady contacted us about a space in County Down. We wrote to DFI Roads in February 2020. A year later, we got a letter agreeing to it in principle. The letter said that it now has to enter consultation with the police about changes in legislation, and that usually takes a minimum of a year. That will be two or two and a half years to get one space painted green. We contacted the Minister to ask whether there was a way to batch-process these or speed them up. Apparently, however, one of the problems is that a lot of the chargers in the initial roll-out were on private ground and in council car parks. DFI can only make a change on-street, but as little as 20% of chargers are on-street. The rest are in hotel car parks, retail car parks and that sort of thing.

As with all these things, there is no easy answer, but we would love to get involved in any way that we can to speed this up. That is where we need a cross-party, cross-departmental approach and an overriding group that brings stakeholders like ourselves together. We could get a lot of work done if the political will was there.

Ms Anderson: The Committee could discuss a cross-departmental task force, led by the DFI Minister, to ensure that there is co-design so that organisations like yours are engaged with to shape what

needs to happen. You have not just identified problems but brought forward solutions. Thanks for the presentation and for the information that you sent us. Hopefully, this will help to move things along.

Mr McCall: Thank you very much.

Mrs D Kelly: Thanks for your presentation. This might come across as a rather stupid question, but are we looking at chargers being universal, not only across these islands but across Europe, or will we have to cart around different adapters, as if we were going on those blessed holidays? Have you to bring two or three chargers with you? *[Laughter.]*

Mr McCall: There are a couple of standards. Mark, do you want to talk about CCS being the new standard?

Mr Boyle: The original cars, and most of the network that was deployed 10 years ago, had a standard called CHAdeMO, which is a large connector that you plug in to the front of the car. Technology has changed since then, and there is now another standard called CCS. That is what we are seeing as the more common standard in modern cars. Basically, it can cater for much faster charging speeds. As has already been said, not all the 17 chargers that we have are equipped with CCS. Over time, we will see that CHAdeMO standard being phased out and most cars coming with the CCS standard. Hopefully, we will not have all those different connectors that you have to carry around in your boot. *[Laughter.]*

Dr Davison-Kernan: That is a Europe-wide standard. It is not just for the UK and Ireland; it is across Europe and the rest of the world. All of the car manufacturers are on a committee that signed off that standard, so everyone is working towards it. Tesla cars, which are made in America, now come with CCS on them. That is definitely the way forward.

Mrs D Kelly: I am delighted and somewhat relieved to hear that.

Ms Kimmins: Thank you for your presentation. Just a couple of questions from me. In your conversations with ESB and the Department, have you identified a strategic gap for planning our charge point network? Every time we ask the Department about charge points, it tells us that ESB is responsible, but it seems that it is a struggle just to maintain the network. Other members have mentioned it, but, in my constituency of Newry and Armagh, I am constantly getting issues about charge points not working and things like that, and I know that that has been discussed.

I also share the concern about the fact that none of the 11 councils has applied for any of the £20 million in funding for the on-street charge point scheme. I just want to get a wee bit of feedback on that. Why do you think that it has not been taken advantage of? Could the Department have done more to show a bit of leadership and work with councils to encourage them to apply for the funding?

Mr McCall: In most of our engagement with stakeholders, all roads lead back to DFI. In almost every case, it seems to lead there. ESB and DFI between them hold the levers here that can fix all of this. In response to Assembly questions, DFI always seems to reply that the network is the responsibility of ESB and point us towards Dublin. However, as far as I know, DFI is still involved in ecarNI, so there is possibly a bit of an identity crisis there. Darren can maybe talk about what the other devolved Governments are doing about decarbonisation in their transport Departments.

Mr Henderson: If we take a cursory look at the other Departments, *[Inaudible owing to poor sound quality]* has, as a headline directorate, low-carbon economy, which is about promoting the uptake of ultra low emission vehicles (ULEVs) and chargers. Obviously, there is OZEV, which is part of the Department for Transport in England. In Wales, as part of Transport for Wales, they have an environment department, which is decarbonising, and a focus on that. In the South, the Department of Transport has a focus on public transport sustainability and climate change. However, none of DFI's list of 15 or 16 responsibilities are specifically related to decarbonisation, which stands out as a difference.

This comes back to resources. DFI needs to put more resources into its focus on this area. It should take leadership and start to create the conditions for taking it forward. We said that all roads lead back to DFI, but it is not to fix everything; it is to provide some leadership and direction and to create the conditions to take things forward. We are pointing at DFI in some ways, but we are also looking to

support it by saying that it needs to focus more resources on this. We are one of the stakeholders that is willing to help in that area.

Mr McCall: I wonder how many staff DFI has in this area. Can we get more resources into that Department? It is quite like fibre broadband, for example, where the Government helped the roll-out of that. We are in the early stages here, where it is hard to identify business models. We need public-sector involvement here in order to break the chicken-and-egg cycle.

Ms Kimmins: That is exactly what I was going to say about broadband. It is very much a chicken-and-egg situation where you have to go where the demand is, but you cannot create demand until you have it there. I totally take that on board.

I welcome the news about the new charge points coming from the INTERREG project. However, they will not be completed until March 2023. When we put that to the Minister, she said that the responsibility for delivery rested with the consortium that is led by the East Border Region group. I take it delivery does not have to take that long? That is not an average delivery time for installing chargers. As I have mentioned, I think that it will be more impactful because of the state of the current network. What are the implications of the prolonged delivery? Can we do anything to speed that up?

Mr McCall: As I said, we are meeting East Border Region tonight for the first time. It is one of the stakeholders we have identified, and it has taken a while to set up a meeting. We have heard from a third-party source that it will be 50 kW, but we are not sure about that. Yes, it seems a disappointingly long period of time, especially with the urgency that we have here.

Again, we would like to know the locations of these chargers. The rumour is 20 to 23 chargers, and possibly two per council region; that would give us 22. It sounds like that is what it is going to be. As yet, we have no information other than what we have heard on the grapevine. As far as I know, it has to go out to tender. ESB may end up being the operator. I assume that ESB will put in a tender for it, and perhaps that can be rolled into the ORCS thing as well; I am not really sure. The problem there is that only local authorities can apply for the ORCS grant. In GB, the local authorities have jurisdiction for on-street charging, but that does not apply here. We are in a strange situation where the council must apply, but then DFI holds control over where the chargers can be sited. There is some scope to put them in car parks near residential areas that have no off-street parking. Again, OZEV and the Energy Saving Trust talk about a car park that is within five or 10 minutes' walking distance from a residential area without off-street parking. However, that throws up another issue. We talked to Derry City and Strabane District Council, and it had identified a car park, but it is a pay-and-display car park. Again, the council is saying that it needs to talk to DFI, as a resident cannot park in there overnight without paying and displaying. They need to park there for seven hours overnight, and it is back to DFI again. There are so many nuances that need to be solved.

Ms Kimmins: Mark, did you say that it is two charging points per council area?

Mr McCall: On the grapevine, we are hearing that more than 20 DC rapid chargers will come from the INTERREG project. We wanted to know whether that was just in the border region, but we have been told by an early contact with people in the marketing department of East Border Region that it is probably going to be more like two per council area.

Ms Kimmins: OK. It does seem very complicated. There is a lot of red tape that will make it difficult. My last point is about the decrease in grant funding from the British Government for purchasing EVs. That is obviously going to make it less feasible for some people to purchase them. What are your concerns in relation to that? I am worried about the British Government's commitment to making EVs more accessible for everyone. I just want to get your views on that.

Mr McCall: It seems like early days for that grant reduction. Rónán, do you want to talk about that?

Dr Davison-Kernan: Yes, it seemed premature. Not only was it premature, but it was a very sudden decision, to the extent that people who had already ordered vehicles and were due to take delivery within days suddenly had to find a couple of extra thousand pounds to cover the cost. As Mark suggested, it is too soon for that reduction. We understand that, in the long run, they have to pay for themselves, and they will: the price is coming down every year. More models are coming onto the market every month at this stage. This transition is so important that it needs to be supported in the

right way. To scale back the grants so drastically so early in the process is getting too far ahead of ourselves.

Mr McCall: We have heard that the grant for chargers at home will end next April. I am not sure whether that is correct. We are members of the Alliance of EV Associations for the UK and Ireland, and that issue has been discussed. The English Electric Vehicle Association has heard that the grant will stop next April.

Dr Davison-Kernan: The loss of that grant poses a problem for NIE Networks, because that is one of the main mechanisms by which they find out how many home chargers have been installed. It helps NIE to plan the needs of the electricity distribution system. If they lose that grant, they will lose sight of what is happening with EV charging, which is a problem as well.

Mr McCall: Often, I listen to American stories about EVs. They have a federal grant and then a state grant as well. That is something that I think that we should consider. There are national grants here, but there is nothing to stop Northern Ireland doing the sort of thing that Scotland does and topping that up or adding on. We particularly like the idea of the interest-free loan. I am sure that you know that, with interest rates at the moment, that is probably quite an easy win for the Executive.

Dr Davison-Kernan: Compared to a lease scheme, that is the equivalent of a grant, in some respects.

Ms Kimmins: Thank you very much. That is quite concerning. Obviously, we are trying to move towards zero carbon and all of that, and this is putting up barriers to that. It goes back to Mark's point about that chicken-and-egg situation. Fewer people are going to move to electric vehicles if barriers like that are going to be put up. That is my sense of it, anyway. Thank you very much for your answers. They have been very useful. We look forward to continuing to work with you on this.

Mr Beggs: Thank you for your presentation and, indeed, for forming the Electric Vehicle Association Northern Ireland. You give a reasoned voice to electric vehicle users. You have highlighted the problems, but you also suggest very practical solutions, and many of them, I think, should be taken up quickly. The UK is aiming for carbon net zero, as is the EU. Frankly, I find it embarrassing that there is failure to act on cross-cutting issues like this. Clearly, a number of Departments have a role to play, and it is vital that Northern Ireland starts to move in this direction, because it is coming down the line, and the sooner we start, the better.

In terms of repairs to the existing network, can you clarify what is stopping it from being operational? This is one of the things that, as you say, gives comfort. If someone misjudges their travel capacity, they have an option to recharge. The fact that the electricity is given free means that nobody is making any money from it, and therefore there is no financial incentive to repair the network. Are there any other restrictions that prevent a new, modern network being put in?

Mr McCall: The main problem is that the equipment is a decade old. In many cases, the manufacturer has gone out of business or the parts are not available. ESB is literally, we believe, taking parts out of these machines and soldering components onto them to try to keep them alive. They will not spend the money on repairing them. Some of these chargers cost £20,000, £30,000 or £40,000 to replace. ESB has made a commitment to do some work this summer; it is replacing 30 double-headed chargers, around 60 AC chargers and five rapid chargers of the 17. They will be replaced this summer, it tells us. It is doing that at its own expense but, to do the complete job, it needs this match funding.

Mr Beggs: Is there anything in the tender that they may have won that is stopping them putting in a charger facility and ensuring that people do not hog those spots?

Mr McCall: To solve the hogging issue, we need to turn on pay to charge. At the minute, there is no way to penalise somebody who overstays. However, ESB will not do that. It will not turn on pay to charge until it has a reliable network. Then we get back to the fact that it needs the money to upgrade the network.

Dr Davison-Kernan: There was a perceived barrier to that several years ago, but it was resolved by the Utility Regulator in 2019.

Mr Beggs: Are you aware of whether there is anything in legislation, or in the conditions that allow it to set up the charging points, to go to a billing system, so that it will self-manage?

Mr McCall: That is what Rónán referred to. There is a maximum resale price. There was legislation that said that you could not effectively resell electricity. That was solved in March 2020, when the Utility Regulator made a change. There are no longer any barriers holding it up.

Mr Beggs: Is the barrier at the moment purely that it does not make economic sense for any company to put in new equipment?

Mr McCall: Exactly.

Mr Beggs: Thanks for that clarity. In expanding the network, there are considerable costs in putting in the new connection. I am also aware, from previous work in industry, that when you have a heavy-duty electrical load, there is a higher monthly tariff for having the ability to pull in 50 kVA, 100 kVA or even higher. Are you saying that, to enable the network to grow, SONI needs to take a look at its pricing structure so that some of the initial set-up costs might be shared, even temporarily, to create a critical mass that will then be self-sustaining?

Dr Davison-Kernan: That comes down to the distribution connection charging by NIE Networks. It is the point about the socialising, or at least the partial socialising, of the connection cost so that the entire cost of distribution grid reinforcement is not passed on to whoever is looking to install the chargers. That is the point that ultimately comes down to the remit of the Utility Regulator and whether it can allow NIE to pass that element of the cost on to the wider consumer, as happens in GB, ROI and elsewhere.

Mr Beggs: Thanks for that. Finally, on developing the network and giving greater confidence to electric vehicle owners, is our motorway network, and the service stations or garages that are on it or surround it, being targeted in a way so that those who take longer journeys can have a degree of confidence in the future that they will be able to access one of these rapid chargers?

Mr McCall: Yes, definitely. Darren, do you want to talk about what it is like in GB?

Mr Henderson: Yes, that is the direction of travel. As we have already said, there are multiple types of chargers, including the standard — some call them slow — chargers that you have at home and the destination chargers. The home ones are 7 kW, the destination chargers range between 7 kW and 22 kW, and then there are the rapid chargers, which range from 50 kW to 350 kW. The rapid chargers are meant to be on main arterial routes that people travel on. Across GB, Ireland and Europe, that is the direction of travel. BP has started putting them in at their stations and Maxol in Northern Ireland has just put a test one up in Antrim. That is the kind of thing that needs to happen here. That is why we would like to influence the positioning of the 22 chargers from INTERREG to ensure that they go into the correct positions and locations. Some influence from DFI on the position of appropriate chargers will be essential. You are quite correct that, to enable long journeys, they are needed on main arterial routes, such as motorways and A roads.

Mr Beggs: There is another point that just struck me on developing the network. You mentioned that you have engaged with the Department for Infrastructure but that there are lots of other places on private property or council property. It would be worthwhile engaging with NILGA or all the local councils, because it might be a very easy win to convert the one parking space that a charger can access into two. That in itself will increase the viability of introducing the new technology and the new investment that we are all seeking.

The Chairperson (Miss McIlveen): No one else has indicated that they want to ask a question. Do you have anything further to add that you do not feel has been covered in the session?

Mr McCall: No, Chair. I think that we have covered it well today. We appreciate everyone's time. We have had a really great conversation this morning. Again, thanks to everyone.

The Chairperson (Miss McIlveen): Thank you very much. It has been very informative. Thank you all.