

Transport Committee

Oral evidence: [Decarbonising transport](#), HC 698

Wednesday 15 September 2021

Ordered by the House of Commons to be published on 15 September 2021.

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Members present: Huw Merriman (Chair); Mr Ben Bradshaw; Ruth Cadbury; Simon Jupp; Robert Langan; Karl McCartney; Gavin Newlands; Greg Smith.

Questions 1–144

Witnesses

I: Rachel Maclean MP, Parliamentary Under-Secretary of State, Department for Transport; and Richard Bruce, Director of Environment and Future Mobility, Department for Transport.



Examination of witnesses

Witnesses: Rachel Maclean and Richard Bruce.

Q1 Chair: This is the Transport Select Committee's one-off oral evidence session on the transport decarbonisation plan, which was published in July 2021. I ask our two witnesses to introduce themselves, starting with the Minister.

Rachel Maclean: I am Rachel Maclean, Minister for Transport Decarbonisation and Future of Transport.

Richard Bruce: I am Richard Bruce, director of environment and future mobility in the DFT.

Q2 Chair: Thank you very much for being with us. I should explain at the outset that originally this session was going to be held with the Science and Technology Committee and a number of representatives from other Select Committees. We were to hear from you, Minister Maclean, and the COP 26 president, Alok Sharma. He was unable to be with us, so we have turned this purely into a focus on the transport decarbonisation plan. I believe that he will appear before us and the other Select Committees next month.

In this session, let's focus on the Government's decarbonisation plan. We have a whole series of sections to go through with you, looking at the transport sectors and at wider issues, including our presidency of COP 26. This is obviously a big challenge, because transport has been the largest emitting sector of the UK economy since 2016. It accounts for 27% of UK greenhouse gas emissions. More worryingly, the share for transport has risen from 18% in 1990 to 27% in 2019. Clearly, it is a big challenge to turn transport around. With that in mind, can I ask you to describe and explain your projections for decarbonising transport?

Rachel Maclean: Thank you, Chair, and thank you for having me back. This is the first session that I have done with everybody being here in person.

Q3 Chair: That's right. It is nice to be all together.

Rachel Maclean: It is very nice. I have brought a copy of our plan. This is hot off the press. As you say, it is the most pressing environmental challenge that we face. I am very proud of the plan and, of course, of Richard and the team of officials who put all the work into it. It is genuinely world leading, because we are the only nation to have set out so clearly how we plan to reduce emissions from all modes of transport by the all-important date of 2050.

There is a lot of detail in the projections. Members can check to see what we have set out for each different mode. We have tackled the challenge modally. Obviously, with a lot of the projections, there is significant uncertainty around something that goes so far—up to 2050. When you look at the individual projections, you will see that there is a band, but



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we have set out what we want to do with the projections and the emissions reduction targets. We have committed to reviewing our plan every five years to check that we are on track. That will be a formal review.

Q4 Chair: As you say, this will be the first plan. There will be more plans to come, where you will no doubt audit what you said you would do. With that in mind, where do you see the bulk of transport emission reductions coming from by, say, 2030?

Rachel Maclean: Obviously, road transport is one of the most challenging sectors at the moment. That is 91% of today's domestic transport greenhouse gas emissions. You asked about 2030, didn't you?

Q5 Chair: Yes, just to take 2030 as a benchmark.

Rachel Maclean: Okay. I have quite a lot of detail in front of me, with various measures that we are already introducing. For example, by 2025, we should reduce emissions by between 4% and 29% and international emissions by between 0% and 26%. That will be through quite a long combination of measures, including 25% of the Government car fleet being ultra-low emission by December 2022, agreeing ambitious global aviation emissions targets through ICAO, plotting a course to net zero for maritime by 2022, a low-carbon fuels strategy and a number of other measures. Those include, of course, our commitments around making active travel the natural first choice for half of all journeys by 2030. There is quite a lot of detail in the numbers, the years and the periods.

Q6 Chair: Do you have a straight-line graph that takes us up to 2050, when we have to get to net zero? For example, we know that the aim is to decarbonise rail by 2040 and to get aviation to net zero by 2050. Do you have a straight line that tells us where we should be next year, as well as where we should be in 2050? If so, does it work on the basis that the line has to go up more sharply towards 2050, or are there some ambitious targets over the next couple of years?

Rachel Maclean: I will show you just one example. This is the standard format. You can see that it tracks the emissions reductions so far. Then there is a range of uncertainty. This happens to be for reductions from bus and coach travel, but it is replicated for every mode. The blue one is the baseline. The green one is our projections, based on all the interventions that we are going to make. You can see that there is uncertainty in these projections. That is why the lines are slightly fuzzy. Obviously, there is a massive amount of uncertainty around both the behaviour change measures and the technology.

Q7 Chair: I was going to ask about that. For example, if green hydrogen comes on to our range and is able to pull and move at speeds that it cannot do at the moment, I guess that that could change the game. How much are you taking the unknowns into account when making your predictions?



Rachel Maclean: It is a very challenging thing to project. We have been very ambitious already about the reductions that we expect to see from the measures that we know can deliver—for example, cycling and walking and electrification of the whole road fleet. There is quite a lot of certainty on that, and we can chart a path on it. There is more uncertainty around some of the other technology bets such as hydrogen. Obviously, we will be delighted and very happy to see that creating more reductions than we have currently projected. What we have done is a sensible and credible projection. We do not want to be wildly ambitious, which would have no credibility, but we want to place very significant bets and have ambitious targets. It is always a balance.

Q8 **Chair:** Mr Bruce, maybe I can turn it around. Are you working on the basis that your straight line to 2050 doesn't really take into account anything that we do not know is possible and that, therefore, if those things come in as an additional win, we have done even better?

Richard Bruce: There are a lot of variables determining the level of emissions year by year. Obviously, the biggest is road traffic levels. Another is the buying habits of consumers of cars and of fleets of vans and trucks. If people hang on to old, dirtier cars for longer, that affects the emissions performance. If they move to EVs far faster, that affects it as well. If they drive more or less, that has a massive bearing on the level of emissions. That is the uncertainty.

The Department is always forecasting traffic levels, but, given Covid and other stuff, that is even more uncertain than it has ever been before. That is why there is a range between high, medium and low. What is certainly the case is that we have predicted those ranges for every mode. You may overachieve on one mode and underachieve on another, which is why there is a range at the end.

Rachel Maclean: It may be helpful if I draw the Committee's attention to page 45, which sets out the overall modelling. Again, you can see that that uncertainty is built in. There is also the period of Covid uncertainty we are currently in and emerging from. Any analysis has to take some account of that.

Q9 **Chair:** I was going to ask how you take the effect of Covid into account for the projections. It sounds as if it is too early to tell.

Rachel Maclean: We have done our best to plot our best take on what that would look like. You can see that the team has done that, based on the analysis that we have. As Richard said, we know how many people are taking public transport, how many people are driving and so on, so we can use that. That is why we have highlighted it as an inherently uncertain period. We do not know where we are going to be when we emerge from it because we are still in it. We have not come out of Covid yet.

Q10 **Chair:** Have you set a target for the reductions in transport emissions by,



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say, May 2023? I was going to say by the end of this Parliament, but we do not know when that will be.

Rachel Maclean: I do not think that we have set it out in quite that way. What we have done is set out various other commitments we will deliver on by the end of this Parliament. I am sure that we all know what those are. We have roughly chunked it into five-year stages. We will have a clear sense of where we are at the end of those five years.

Q11 **Chair:** You are looking more at five-year blocks.

Rachel Maclean: Yes. It is pretty much five-year blocks.

Q12 **Chair:** Are you looking at interim targets for reducing transport emissions to be included in the forthcoming net zero strategy?

Rachel Maclean: Are you referring to the Treasury's net zero strategy?

Chair: Yes.

Rachel Maclean: I do not have any information on that strategy, I am afraid.

Q13 **Chair:** A final question from me, before we start to look at the various sectors and areas, is about monitoring progress of the plan. The plan is very ambitious. It talks about what needs to be done and what we will be looking to assess, do and scope. How will you monitor the progress of delivering the plan? What is set up to do that?

Rachel Maclean: Basically, that is the entire work of the Department, across all the different workstreams. It is not one single piece of work. I am sorry if that is—

Q14 **Chair:** For example, will you be audited externally as far as this is concerned? If so, who will do that and what metrics will be used? Are you marking your own homework, effectively?

Rachel Maclean: I do not want to characterise it as marking our own homework. We have a number of interlocutors who hold us very closely to account, such as the CCC, our advisers. There is a lot of work going on with them to crunch through the numbers that are used to inform our analysis. We have committed to reviewing it formally every five years. I am sure that your Committee and others will be keeping us held very closely to account. Of course, we will also be doing a lot of internal work to see whether we need to do course corrections within the five years. I am sure that people will say, "Five years is too long." That is absolutely right, but it would be counterproductive to produce the whole plan again more often than every five years. We need to focus on delivering some of these targets, which are incredibly challenging, as I am sure you will agree.

Richard Bruce: We will be tracking the commitments in the document, of which there are many, but the actual carbon emissions are published as Government statistics, broken down by mode. Transport is very clearly



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identified there. Triple C will be all over transport, as it is currently the biggest mode. There are available measures in the public domain on things like EV charge points, EV numbers and zero-emission vans and trucks. Those are really good measures of how successful the core parts of the policy are.

Q15 **Chair:** I suppose that I would draw parallels with the National Audit Office. We rely on them. They do great work. I hope that the Government also rely on them, because they have great recommendations on spend and value for money. I was wondering whether there could be a similar office, but looking from a net-zero perspective, that could have a valuable role to play in the same vein.

Rachel Maclean: Of course, the National Audit Office looks at our policies in a number of domains. As Richard said, there are other bodies. There may well be other bodies set up in future, but I am afraid that I cannot comment on those at this point.

Richard Bruce: The NAO did a report on EVs only a few months ago. I appeared at the PAC with our perm secs to talk about it. The NAO is on this agenda, and we would expect it to look at this as well.

Q16 **Chair:** I do not mean this in a negative way, but they will look at the plan with their particular mindset, rather than looking just at how your commitments are being delivered.

Richard Bruce: The triple C will be the body to look at that. It is entirely independent and will hold us to account pretty firmly, I imagine.

Chair: That is enough from me to start with. I move now to our next section, which is on reducing global emissions from transport. We will look at COP 26 and the impact there, as well as some other points. Karl McCartney will take us through.

Q17 **Karl McCartney:** It is great to have everybody back, Chairman. It is a very weighty tome that you have there, Minister. Are we all likely to be sent a copy?

Rachel Maclean: You are welcome to have a copy.

Q18 **Karl McCartney:** That is very good. I am sure that it is on recycled paper and has been done in a carbon neutral way.

Rachel Maclean: Absolutely. It is already available on gov.uk, Mr McCartney.

Q19 **Karl McCartney:** Super, but I think that we would all like to have a hard copy, if that is possible.

To take you back, you used some quite large stats for transport and pollution. About five years ago, I asked one of your predecessors about the pollution in this country. Do you know the actual percentage that cars and road transport create pollution-wise at this point in time in this country, compared with other forms of pollution?



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Rachel Maclean: Are you referring to emissions?

Karl McCartney: Yes.

Rachel Maclean: It is 91%.

Q20 **Karl McCartney:** No. I am talking about all pollution in this country. You are not including aviation, shipping, construction or agriculture. I am just asking about cars that people use on the roads.

Rachel Maclean: If you are talking about pollution, that is a larger term. I am talking about greenhouse gas emissions. I am totally aware that pollution includes other particulate matter and so on. We have policy on that. What I am referring to here is the greenhouse—

Q21 **Karl McCartney:** Okay. So you are aware that over 50% of the pollution in this country is caused by domestic boilers heating people's homes.

Rachel Maclean: As a layperson, I am, but that is not my specialist area. That is an MHCLG lead, so I do not have stats on that for the Committee.

Q22 **Karl McCartney:** The research that I have done shows that about 10% to 12% of pollution is caused by people's private cars—the 33 million vehicles on the road. Do you know the reduction in that level over the past five or 10 years?

Rachel Maclean: Are you talking about greenhouse gas emission reductions from cars?

Karl McCartney: Yes.

Rachel Maclean: Not pollution? Not particulate matter?

Q23 **Karl McCartney:** I am just looking for some figures from you for how well the car industry has done. If you do not have them, maybe Richard does.

Rachel Maclean: The car industry has done very well. I will ask Richard to comment on the stats.

Richard Bruce: We will get them for you. I suppose that the answer is not very well. It has been pretty flat.

Q24 **Karl McCartney:** I am going to ask you to compare it with the reductions in domestic heating or in shipping, whether that be cruise liners or freight ships. How well do you think the car industry has done, considering the impositions that have been put on it by this Government?

Richard Bruce: The average fleet emissions for new cars went down reasonably steadily for a period of time. They have been going up recently because of the trend to SUVs and bigger, heavier vehicles. In the last couple of years, they have been going up. Before that, they were going down. That is the lab test average, as opposed to the real world.



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People have been driving slightly further. That is why you have had an uptick in overall emissions, regrettably. They have also been gaming the test cycles, to some extent, so the real-world benefits of some of their low-carbon technology have not been felt.

Q25 Karl McCartney: The point I was trying to get to is that successive Governments have influenced—I would say picked on—the car industry and car drivers in this country, rather than going after the main polluters interfering with our air quality. That is the point I was trying to get to.

Rachel Maclean: You are quite right to make that point. You are entitled to make it. In a sense, you are challenging me on some wider areas of Government policy.

We, as DFT, are definitely not against car drivers. You will know that we have kept road tax very low for a number of years. You will know that there are a lot of very generous incentives available to people to make the switch to electric vehicles. That is backed by £1.3 billion-worth of this Government's money to help people to make the switch. That is very popular. We are now seeing that one in seven cars sold this year have a plug. There is widespread public acceptance and a desire to transition to electric vehicles. That is good for the industry because it is now making additional investments in that technology of the future. Of course, jobs are being created off the back of that in many of our constituencies.

Q26 Karl McCartney: Six out of seven vehicles have not been sold with a plug.

Rachel Maclean: That is right.

Q27 Karl McCartney: Good. I just wanted that to be clear. The Government have put moneys in place to tempt people to buy EVs. Have you done any research, or do you have any facts and figures, on the well-offness of those people who have purchased electric vehicles so far?

Rachel Maclean: We know that the price point of electric vehicles is higher, so you are right to allude to that. We as a Government want to see electric vehicles being available to everyone. We are seeing very steep reductions in the retail price of EVs, on the back of the Government policy interventions that we have made. You will know that the car grant was re-targeted at the lower end of the EV market to enable more people who probably could not afford to buy an EV out of their own pocket to buy one.

Q28 Karl McCartney: Or perhaps enabling well-off people to buy a second one.

Rachel Maclean: Possibly—absolutely.

Q29 Karl McCartney: Have you done any research in that area?

Rachel Maclean: We do not track the income level of people who buy EVs. Frankly, that would be beyond the capacity of the Department.



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Obviously, it is our duty to make sure that taxpayers' money is targeted at people who are less likely to be able to afford an EV or, as you say, a second EV.

Q30 Karl McCartney: Anecdotally, we know the type of houses people park their EVs outside.

Rachel Maclean: I would take issue with that. Anecdotally, I have also had experience of many people who are on lower incomes. Don't forget that the price of EVs is coming down now. We are seeing a number of new models come on to the market, which is a response to the policy certainty that we have provided as a Government. Because we set out the clear dates of 2030 and 2035, the industry is responding in a very good way, bringing more models that are affordable to market. Ultimately, that is how business works. It will respond to where the demand is. It knows that not everyone can afford a Tesla, so it is bringing out, and will continue to bring out, more affordable models.

Q31 Karl McCartney: To use your phrase, don't forget that when most people—certainly most of my constituents—buy a new car, it certainly will not be a new electric-powered car. In fact, for most people in my constituency, a new car is probably the equivalent of an eight-year-old Mondeo.

Rachel Maclean: Of course.

Q32 Karl McCartney: It will be a car with an internal combustion engine. It will not be electric. There is never any likelihood that it will be. If they could afford it, they would probably want to spend that money on something else.

Rachel Maclean: We are not saying to your constituents that they have to buy a new EV now, or even next year, or even the year after. What we are saying is that by 2030, if they choose to buy a new car then, they will have to buy one that is zero emission at the tailpipe. By 2030, that could be a hybrid car. We are consulting at the moment on what exactly that will mean. By 2035, which is 14 years away—really quite a long time—they will have had time to think about it and the industry will have had time to respond and bring in more cars that are affordable.

We know from our polling that when people buy an electric car, of all types and all prices, they do not want to go back to petrol or diesel. A very substantial majority—I think it is 92%—of people we have polled say that they would never go back to a petrol or diesel car. One in seven cars that are sold—

Q33 Karl McCartney: I would love to have the details of those figures, because I find that very hard to believe.

Rachel Maclean: I will provide them for you. As you rightly said, six out of seven do not have a plug, but one in seven does. That is a massive ramp-up from the last available statistic, which Richard will probably



provide. It is something like a 300% increase year on year in the number of people buying those vehicles. It speaks for itself. The public are shifting their buying patterns, and industry is responding.

Richard Bruce: All automotive technology is introduced at the top of the market and then filters its way through. That was true of ABS and automatic gearboxes. It always happens in that way. Half of all new cars are bought by fleets, not by private buyers. You need to get that supply of new cars to create a buoyant second-hand market and to create supply there. There is now an increase in demand for EVs in the second-hand market. Also, the price—

Q34 **Karl McCartney:** There may be a second-hand market in EVs, but you still will not own the batteries. You buy the body of the car—the chassis—but you do not own the battery.

Richard Bruce: Yes, you do. I speak as someone who has just sold an EV on the second-hand market.

Q35 **Karl McCartney:** What happens after eight years with the battery that is in your electric vehicle?

Richard Bruce: It is still in the electric vehicle.

Karl McCartney: Its capacity is nowhere near what it was when it was bought brand-new.

Q36 **Chair:** I am going to try to get us back to where we were, if that is all right.

Richard Bruce: We can talk about it afterwards, if you like.

Rachel Maclean: We can pick it up.

Chair: We will take that one offline.

Q37 **Karl McCartney:** I will move to a different subject. Previously, I asked you about the possibilities of alternative fuels that might replace petrol and diesel. Are you aware of what Porsche and Siemens are looking at doing in Chile and of what Rolls-Royce and BMW are doing? There was a seminar in July involving Paddy Lowe of F1 fame, along with the lead chemistry professor from Imperial. They are looking at alternatives. What does the Department think of that? In fact, I think that one of Richard's colleagues from the Department attended the same seminar.

Rachel Maclean: We see an important role for low-carbon fuels. You will find quite a lot of detail on it in the plan, so I will be very happy to get that to you as quickly as possible.

Q38 **Karl McCartney:** It looks like there is a lot in there.

Rachel Maclean: There is. We think that low-carbon fuels will play a significant role in helping us to meet our carbon reduction targets, particularly for transport modes with limited alternatives. We have a



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number of policy levers in this area. We have the RTFO, which is our overall framework. It enables greater uptake and provides policy certainty for producers. We also see it as very important in the aviation space. That is why we are consulting on a staff mandate for aviation. We see it as a vital part of our overall response.

Q39 Karl McCartney: I am pleased to hear that the Department believes that aviation is not going to be electrically powered in the future. I presume that you would readily accept that construction vehicles and, perhaps, agricultural vehicles will not be electrically powered either. You are not going to get tractors or combine harvesters that are electrically powered.

Rachel Maclean: There are already tractors that are electrically powered. I see no reason why they could not be. Currently, Leyland DAF is building a 19-tonne electrically powered truck. We expect battery electrification to take on a much greater role.

As I have said before in this Committee, we are technology neutral. We do not place bets on one technology over another. We provide certainty through our policy frameworks, including the RTFO and the E10 petrol introduction, which has taken the equivalent of 350,000 cars per year off the road in terms of emissions reductions.

Q40 Karl McCartney: Don't get me started on the damage that that has done to older cars.

Rachel Maclean: I will not get you started on that. The point is that it is very helpful for the emission reduction side of things. People who cannot use it will still be able to access the previous types of fuel. It plays a very important role. We invest our R&D budget in some of the early stages of those fuels and provide policy certainty. The industry has welcomed that. A number of plants have been able to reopen or to create jobs or investments in that particular industry. We are doing very well in the UK in that industry. The industry always wants certainty, and that is what we provide.

Richard Bruce: On e-fuels, the key issue is efficiency. The general policy perspective is that, if you have green or renewable energy, you are looking to get the most efficiency and trying to get the most bang for your buck. It would not make an awful lot of sense to use a drop-in liquid fuel that is about 10% efficient when you have an alternative that is much more efficient, because you will have finite amounts of green hydrogen and finite amounts of renewable energy.

I would be surprised to see synthetic fuels play a huge role in road transport, when there might be alternatives. They could play a role in heavy goods vehicles. They will definitely play a role in non-road mobile machinery because it is difficult to get energy to those places. It is likely that their biggest role, potentially, will be in aviation, but we need to bear in mind that you need a huge amount of energy to create the drop-in liquid substitute for hydrocarbon fuel.



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Q41 **Karl McCartney:** From where I sit, I am detecting a lack of realism. This is my final question to you. When do you think that the roughly 33 million internal combustion engines that we currently have on our roads will not be on our roads any more?

Rachel Maclean: We have projections for turnover of the fleet. I don't have that figure. I don't know whether Richard can provide it.

Richard Bruce: Between 2045 and 2050, probably. The typical fleet time is about 10 to 14 years.

Chair: Thank you. It is almost 10 o'clock now. We will take the next hour going through six of the sectors. That gives us 10 minutes each, if that is okay, Members. We are going to look at aviation; freight logistics and shipping; cars, vans, motorcycles and scooters; rail; buses and coaches; and walking and cycling. That is a lot to get through in an hour. We will start with aviation with Ruth Cadbury.

Q42 **Ruth Cadbury:** Will the vast majority of emissions from UK domestic and international aviation need to be offset by reductions in other parts of the economy?

Rachel Maclean: We have said that our primary objective is to eliminate emissions completely, across all modes. That is what we set out to do in our plan. All of our projections are based on elimination of emissions. Obviously, we may need some residual emissions in aviation, in particular, offset by 2050. Let me be clear about the steps that we are taking. At the moment, we are consulting, through the jet zero consultation, on how we measure and track the emissions reductions from aviation between 2025 and 2050, because there are some policy decisions about how those are measured.

Q43 **Ruth Cadbury:** We have had a briefing on sustainable aviation. That is all about technology. Is your carbon reduction strategy for aviation based only on technology? Is there any element that is about demand reduction? The vast majority of British people either never fly or fly only once a year. Almost 90% of passengers flying in and out of the UK are UK-based residents flying for leisure and family, not for business. Anyone who has tried to travel around 1,000 km to parts of Europe, and to Scotland, from here knows that it is almost always far cheaper to fly than to go by train. What are the Government doing on demand management around aviation growth?

Rachel Maclean: There are two key points. First, our analysis suggests, and we believe, that we can reach net zero in aviation without having a demand management policy.

Q44 **Ruth Cadbury:** By when?

Rachel Maclean: By 2050. As we have made clear in this plan and in all our aviation policy statements, we do not expect to stop people doing things like flying. We believe that it is important for people to be able to



continue to fly, not just for business reasons—obviously, that is an individual choice for the businesses concerned—but for family and, of course, for leisure. We cannot underestimate the family ties that people have. They are important parts of what makes life worth living. We should not be stopping people doing these things. That is not our policy approach. We believe that we can achieve net zero without directly limiting aviation. Our scenario modelling backs that up. Of course, we are a responsible Government and will have to keep that under review.

In our jet zero consultation, we are looking at other ways people can choose, if they choose, to fly less. That involves giving them information about what is a more sustainable choice, if they choose to make it. We think that is a very important response to this issue, because at the moment I do not think that people fully understand or have the information to make informed choices. There are offsetting things on flight websites and so on, but they lack credibility. We want to look at the role that that could play. We are doing that in the consultation.

Q45 Ruth Cadbury: I hear what you say about restriction of choice. I am not saying that we should stop people flying. I am saying that the choices in price should be more equal between different forms of transport. After all, the price of not addressing our carbon emissions is massive for all of us and for the whole world. That is why we are doing this. That is why we are talking about this. Is it possible to simultaneously expand airport capacity while also meeting our climate change targets?

Rachel Maclean: Airport capacity is something that we are often questioned on. Look, we have an aviation industry in this country that has been through an absolutely awful time. Local airports play an important role in our economy. They sustain many jobs of our constituents. At the moment, I think the overarching framework—I need to get this right—is the airport national policy planning statement, which sets out the broad framework and our broad approach to airports.

Those are commercial decisions that are led by the industry. The broader point I would make is that, actually, we need the aviation sector to be successful so that it can invest in the technologies that we know will drive us towards technological solutions, whether it is SAF, electrical or hydrogen aviation and aircraft. Those are technologically feasible solutions. They exist. We have planes that fly already, supported by Government investment. Clearly, they are at very early stages, but if the sector lacks confidence in its future, backed by its shareholders, it will not place those big bets.

Q46 Ruth Cadbury: Although, to be fair, the sector is also seeking Government sticks and carrots to be confident of the large amount of investment that is going to be needed for this very ambitious target.

You mentioned Covid recovery. Could you be more specific about how you are encouraging the aviation industry to recover from Covid-19 in a low-carbon way, as the Secretary of State suggested?



Rachel Maclean: Yes. We have supported the aviation industry to the tune of something like £7 billion through the pandemic. I think we would all agree that is vital. Obviously, we have our overarching negotiations through ICAO, where we work together with other states to ensure that we are signing up to carbon reduction targets. In terms of what we are doing domestically with our own industry, we are doing that through the jet zero consultation.

Q47 **Ruth Cadbury:** Other countries have linked Covid-19 recovery in aviation to the carbon target. How is the UK doing that?

Rachel Maclean: Frankly, that particular question is not a policy area I have a lot of expertise on. My response to you is that we have not made that as a direct choice, and actually it is quite hard to compare apples and pears with some of the comments of other countries about what they are doing.

Going forward, where I want to focus, in the jet zero strategy there are five key policy measures. One is increasing efficiency, which can deliver a lot of reductions. Secondly, the SAF; we have ambitious plans for our sustainable aviation fuel industry. I was talking about that a bit earlier with Mr McCartney. There is accelerating through R&D the development of zero emission flights, and there is developing and implementing carbon markets and greenhouse gas removal methods. Finally, as I said earlier, there is influencing consumers to make sustainable choices.

Looking to the future, we clearly want to encourage and work with the aviation industry. We need to work with the aviation industry. We have to work together with them to achieve those goals.

Q48 **Ruth Cadbury:** You mentioned the work you have been doing with ICAO, and there is the 2022 assembly. What would be a realistic, long-term climate goal for international aviation? You said net zero emissions for 2050, but what are the staging points between now and 2050?

Rachel Maclean: We obviously believe that ICAO should adopt an ambitious long-term goal as soon as possible to set the sector on a pathway. That will be determined by the Paris agreement framework temperature targets. At the moment we are COP president, and we have a unique opportunity to ask states to join in with what we are doing at COP, which is our international aviation net zero coalition. We will be asking them to sign a declaration at COP 26. In the short term, we are aiming to secure a net zero goal at the next assembly, which is in September 2022. We want to push for increased ambition through ICAO.

Q49 **Ruth Cadbury:** I have just one other question, Chair. I have not yet seen a copy of the whole document, but I have one diagram from it: "UK Greenhouse Gas Emissions from Domestic Transport, Official Projections." It is a sort of ring-shaped pie chart. Domestic aviation is 1.2% of that circle. If you included the UK element of international aviation, how big would that chunk be?



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Rachel Maclean: I am not sure what you are looking at, but I recognise the figure on domestic aviation. Is that from our document?

Q50 **Ruth Cadbury:** For our contribution to international aviation, how much would that be as a percentage of UK gas emissions?

Richard Bruce: I can answer that. It is 22.7%.

Q51 **Ruth Cadbury:** So 22.7% of UK gas emissions come from aviation—

Richard Bruce: No, of transport emissions.

Ruth Cadbury: Sorry. Transport emissions.

Richard Bruce: That would come from international aviation. You add the 1% domestic to that.

Ruth Cadbury: Plus the 1.2%. So it is 23% of transport emissions. Thank you; that is helpful.

Q52 **Mr Bradshaw:** To clarify, is that now or by the end of the process?

Richard Bruce: That is now.

Q53 **Mr Bradshaw:** I have just one other thing on this issue. Minister, you will be aware that a number of other countries—France and other European countries—have decided to incentivise high-speed electric rail travel rather than plane travel for domestic journeys of a certain distance. It is easier for them because they have a well-established, high-speed electric rail system, which we still do not. Is that something you might consider as a policy, going forward?

Rachel Maclean: We are building a high-speed electric railway in this country, which is progressing very well. This is the Government that have made the commitment to it after decades of dither and delay, so I hope people will welcome that.

Q54 **Mr Bradshaw:** The point I am getting at is that they have specifically withheld support for airlines, and indeed landing rights for airlines, on certain domestic routes where there is a very good high-speed rail alternative. Is that something you might consider, looking ahead?

Rachel Maclean: As I said to Mrs Cadbury earlier, the details of those particular decisions were not for me as a Minister. I cannot really comment in detail on that. France is the country that is often spoken about. I think it is very difficult to make a direct comparison with this country. My understanding—perhaps Richard will know more—is that the number of flights that were actually included in the particular policy that the French brought in was very small compared to what the equivalent would be in this country.

As I said, I do not believe that was a policy choice that was made by the Government. I think I have been very clear on how we are going forward with putting these obligations on our aviation industry, both by including



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the emissions in our targets and working with them to agree the targets. Maybe Richard knows more about those.

Richard Bruce: I do not know a huge amount, but I think the number of passengers who are explicitly travelling between, say, London and Birmingham by plane is pretty small. Most people doing domestic flights in the UK are often going on to make international flights. It is basically just a stop-over in the hub and then moving on.

There is a question about whether a high-speed rail alternative exists for those sorts of journeys, and whether they would take it even if it was there if they are an international traveller going from Edinburgh via Heathrow, potentially, or from Leeds to London and moving on somewhere else.

Q55 **Mr Bradshaw:** If it is not your portfolio, Minister, whose portfolio is it?

Rachel Maclean: I think what you are talking about are broader questions around Treasury support for the airline industry, which would probably be for the Transport Secretary and the Chancellor, possibly.

Q56 **Robert Largan:** On that point, has any modelling been done on the expected modal shift away from domestic internal flights as a result of HS2? Are there any projections on that?

Rachel Maclean: There might be, but I do not have them.

Richard Bruce: We could write to the Committee with that. I am pretty sure that has been done.

Chair: We will move on from aviation. We are staying with Rob and going to freight logistics and shipping. Freight and shipping represent the largest shares of the total UK greenhouse gas emissions from transport, so it is apt to go there next.

Q57 **Robert Largan:** Good morning, Minister and Mr Bruce. Could you talk us through the projections on reducing emissions for freight and shipping?

Rachel Maclean: Yes. If you don't mind, I will talk about shipping first and then freight. Shipping is maritime and we look at it that way. The Department for Transport loves doing things by modes, which creates challenges for me as a Minister who has to look at freight, which of course covers all modes.

However, in terms of the maritime piece, it is a sector that is very committed to the whole decarbonisation agenda. In the TDP, we have set out a programme of work that is obviously vital to deliver decarbonisation for domestic shipping. To highlight a few of our workstreams, in March this year we launched a £20 million clean maritime demonstration competition. I believe that just yesterday we announced the results of that. For example, one of them is a green hydrogen submarine. Another is an electric charger on a wind turbine offshore. It is that sort of



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innovative type of R&D that we are looking to trial, and then the industry will be able to scale it up.

That was one workstream. The Department published a clean maritime plan back in 2019. Obviously, we have had Covid since then. We set up something called UK SHORE, which is the office for reducing emissions from shipping. What that will do is, basically, take forward all the work in the clean maritime plan and some of the competitions and R&D as well. Clearly, we work through the IMO as well to agree those targets.

COP 26 is very important for maritime. We are looking at a couple of very specific campaigns in the maritime space. One is the Clydebank declaration, which is about decarbonising the offshore wind work boats that service platforms in the North sea. The other one has slipped my mind, but I am sure that Richard Bruce can remember what it is. Oh, it's green shipping corridors.

Richard Bruce: That's it, yes.

Rachel Maclean: We really want to focus on maritime as one of the big three highlighted campaigns at COP as well, and see it play a good role there. This week is London International Shipping Week, so it is quite exciting to have that in the UK. It is a really big deal for the UK to have it here.

Q58 **Robert Largan:** Thanks. Moving now to the freight side?

Rachel Maclean: HGVs are the largest contributors after cars and vans to our emissions, at 16% in 2019. There are a few things we are doing. We are consulting on the phase-out dates of heavy petrol and diesel HGVs, and we will be publishing a response to that shortly. We anticipate a similar set of announcements to those we have had in the car and van space, but we are obviously working with the industry. We have proposed 2035 for the smaller HGVs below 26 tonnes, and 2040 for above 26 tonnes. What we have seen in the car and van market is that that drives innovation and certainty for the industry. We expect to see that as well.

The R&D piece is really important in the HGV sector because at this moment in time we do not actually know the best vector for decarbonising freight. Clearly, batteries have a role to play. Hydrogen also has a role to play, as do catenary electric and synthetic fuels. We are working through a number of zero emission road freight trials to test some of that technology in the real world. Again, we hope to accelerate it.

Q59 **Robert Largan:** Picking up on that last point, particularly moving towards low-emission trials and the clean-air zones, a number of them are going ahead, including one that is being launched just outside my constituency in Greater Manchester, which I have talked to you about before.

Rachel Maclean: You have.



Q60 **Robert Largan:** What would be a success for those zones? What would you consider a successful clean air emission zone? What kind of decarbonisation or shift would you consider successful?

Rachel Maclean: It is important to draw a distinction at this point, if I may, in what you are talking about, which is the clean air zone that is introduced for public health reasons to tackle the damage to people's lungs from dirty air. That is not just about emissions, although it obviously has that benefit as well, as you know. That is a specific policy intervention based on a particular area. What we need to do is tackle the greenhouse gas emissions reduction from the whole of the freight sector. It is not just HGVs. It is also maritime, aviation and rail. Shifting more of our freight on to rail is a very important part of our policy response. It is something that we have supported with a number of grants over the years. That particular grant funding pot is something that we have certainty on, which is very helpful for driving more of our freight off our roads and on to rail.

Richard Bruce: On the ozone point, the success criterion is quite simple: zero revenue. That means zero non-compliant vehicles entering those zones, which means that all the vehicles there are compliant. That is quite a simple binary thing. It has to happen really fast because the legal imperative is to deliver that compliance as fast as possible. Some of the cities doing those sorts of things are looking to leapfrog interim slightly cleaner technologies and move straight to the cleanest cars and vans, and trying to support local companies to do that.

Q61 **Robert Largan:** To pick up on the point, which I think is a very good one, about shifting towards rail, obviously that is moving away from HGVs, a very high emission form of freight, towards rail, which is a much lower one. How vital is High Speed 2 as part of achieving that and getting freight off the roads and on to rail? How important is it in that strategy?

Rachel Maclean: It is vitally important, actually. I am sure that if the HS2 Minister was here, he would give you chapter and verse on that. As you know, HS2 is a fully electric railway from day one. It is committed to biodiversity net gain. More broadly, we have said as a Government that we will introduce a rail freight growth target through the Williams-Shapps plan. We already have that target, but we are going to commit to introducing further certainty around it.

We provide revenue funding for that. I do not actually have the figure, but I know that the grant has helped to remove about 900,000 HGV journeys off the roads every year. That is really a lot when you think about the amount of congestion. In an area like yours, I know it is something that affects your constituents.

Q62 **Robert Largan:** Absolutely. One of the other things the Government have done is to announce the upgrade of the Hope Valley line, which will allow more freight to come out of the many quarries in my constituency, which can then go all over the country to help build HS2 as well.



Rachel Maclean: Yes, absolutely.

Robert Largan: Even more good reasons why we need to keep on with HS2.

Rachel Maclean: Yes. Good.

Robert Largan: Thank you, Minister.

Q63 **Chair:** Excellent. Thank you very much indeed. I think Karl wants to come back in. Before he does, and mindful of the time, I want to look at the list of commitments for transport decarbonisation as it relates to HGVs and the like. There is a theme running through the plan.

There are 14. We can talk about consulting, demonstrating, stimulating, supporting, assessing, accelerating and pressing. There are only three where I can see that you are ensuring, taking forward and extending, so actually doing something right now. Isn't a lot of this quite motherhood and apple pie in terms of what you want to see happen, but perhaps a bit short on real stringent measures that will happen? Is that harsh, Mr Bruce?

Rachel Maclean: I can see him chomping at the bit, but I will have a go and then he can come in.

Q64 **Chair:** I am sorry to be a doubting Thomas.

Rachel Maclean: I liked your thesaurus there, Chair. I fully accept that we have to work with industry, but honestly if we had the industry in front of us, they would tell us that these are incredibly challenging. The phase-out date will be a massively significant moment. They welcome it, but they are already telling us how difficult it is, especially given what we all know about the situation with HGVs, drivers and the general industry at the moment. We have to be mindful of that, but I think those are very clear dates as well. Richard?

Richard Bruce: I think it needs to reflect the relative level of technological maturity for heavy goods vehicles. The Prime Minister announced the phase-out date for all petrol and diesel cars and vans last November; those vehicles will be commercially available for 10 years. The number of HGVs with zero emissions on the market now is virtually zero. It is tiny. This is really pushing the accelerator—no pun intended—to drive that change in heavy goods vehicles. We need to force the market to move faster than it otherwise would.

The EU only started thinking about regulating CO₂ from trucks about two years ago, in terms of actually doing it, so this is moving incredibly fast. Since the 10-point plan announcement in November, we have announced the phase-out date for cars and vans, and a consultation on phase-out dates for smaller trucks, bigger trucks and the mechanism by which we would phase out CO₂ emissions entirely from cars and vans in eight months. It might sound like motherhood and apple pie, but I am not sure that the automotive sector would agree with you.



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Rachel Maclean: No, they definitely do not.

Q65 **Chair:** To be fair, given our target on 2030 for the combustion engine, there isn't anything like that from Germany, India, China or the States. Given that this is the first plan, and it therefore makes sense that you are kickstarting it, do you think that in five years' time there will be less of the fluffier words and more commitment?

Rachel Maclean: There will be—100% there will be. We have already seen it. Even in eight months, as Richard has said, we have seen a massive uptake in electric vehicles. We have seen gigafactory investment coming to this country that we did not know about. We will have an awful lot more concrete stuff to talk about in five years' time.

Chair: Okay. We will see if you are both here, and we are in fact. Karl, do you want to come in briefly on this as well?

Q66 **Karl McCartney:** I certainly do, Chair. Minister, do you not think that you are missing the bigger picture?

Rachel Maclean: In what way?

Q67 **Karl McCartney:** You cannot see the wood for the trees. How much pollution is caused by shipping, by maritime, whether that is freight or cruise ships, compared to vehicles on the road in this country?

Rachel Maclean: It is quite small. I am sure I have—

Q68 **Karl McCartney:** Conservative estimates—with a small c—are that seven times more pollutants are caused by maritime than those vehicles—

Rachel Maclean: You see, we are talking—

Q69 **Karl McCartney:** Let me finish my question. If you are hammering, as you have done with regulation in Government, those vehicles on the road in this country and reducing pollutants, which is great, what have you done to the maritime industry to make them become cleaner and greener in the equivalent time? I don't think you have done anything.

Rachel Maclean: I accept that there has been a lot more focus on road transport emissions because it is a domestic sector, and it is the dirtiest sector. We have policy solutions, as Mr Bruce has just—

Q70 **Karl McCartney:** No. It is not the dirtiest sector. The maritime industry is the dirtiest sector, followed by the aviation industry.

Rachel Maclean: Forgive me, I did not mean to say dirty. We are confusing our terms. I am talking about greenhouse gas reductions. When you talk about pollution, there is a vast number of other variables in those measurements, which I accept that maritime has. We are talking about greenhouse gas reductions here.

Q71 **Karl McCartney:** Do you accept that a ship bringing a whole load of new cars from China that comes over to this country produces as much pollutant as all of those cars running for seven days a week, 365 days a



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year, for 40 years?

Rachel Maclean: I don't recognise that figure. I would have to have it verified. The other point about maritime—

Q72 **Karl McCartney:** It's been used since 2012. I am sure your colleagues will do their research.

Rachel Maclean: I am sure they will. The other point about maritime is that it is an international sector, as you have just highlighted. There is no point us having our measures in this country and pushing emissions, and seeing them leaking to other states. We need to work internationally. All of our policy approach is very much focused on an international approach. That is why we have committed to including international emissions from shipping and maritime in our plans and projections just recently. It is very challenging, but it is a very clear and ambitious statement of our trajectory.

Q73 **Karl McCartney:** Domestically, you are loading costs on business in this country while letting those who are creating more pollutants carry on creating those pollutants.

Richard Bruce: On the share point, if you are talking purely about greenhouse gas emissions, and if you include international shipping in the UK's overall transport emissions, it is about 4.5%, which is an awful lot less than cars, vans and trucks.

If you are talking about the other pollutants, in terms of nitrous oxides and sulphur dioxides and that sort of stuff, some of the fuel-burning ships—

Q74 **Karl McCartney:** Ships run on oil that has to be heated to flow to their engines. Every two weeks, they have to chip the carbon off the inside of the funnels. Tell me why you are hammering people who drive their cars, whether it is to school, shopping or work.

Richard Bruce: If you are talking about greenhouse gas emissions, it is 4.5%. If you are talking about other pollutants, it is different. Those things are regulated internationally—

Q75 **Karl McCartney:** It is not just one pollutant.

Richard Bruce: The context for all of this, including cars, vans and trucks, is international regulation. The reason there are now far more EVs on the roads in the UK is that regulations in the US, Japan, China and the EU have all come down and obliged manufacturers to make that technology. When that happens globally in aviation and in maritime, you will see these technologies deployed in the UK as well. The UK cannot react alone on container ships and cruise ships that go from A to B. We cannot define that you have to use one sort of technology, especially when it is not clear what the technology would be.

Chair: I probably have to intervene as we are moving into the car space.



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Again, that is quite apt because this is a section with cars, vans, motorcycles and scooters, which Simon Jupp is going to take us through.

Q76 Simon Jupp: Good morning, Minister, and good morning, Mr Bruce. I have a simple question to start with, hopefully at least. How can you encourage people to use their cars less without introducing policies that make driving less convenient and more expensive?

Rachel Maclean: It is a very fair question. We have talked about that quite a bit in the plan. We have been very clear that we want to tackle congestion in urban areas because it is bad for communities, businesses and people. It has a whole host of other disbenefits such as air quality and so on that we have talked about.

I've forgotten the second part of your question, Mr Jupp. Please would you repeat the second bit?

Q77 Simon Jupp: Clearly, you have an ambitious agenda.

Rachel Maclean: Yes.

Q78 Simon Jupp: I understand the need to look at the amount people use their cars on a daily basis, especially in urban areas. How can you make sure that you do not penalise people who have to use their car, and make it less convenient to them and more expensive to run a car?

Rachel Maclean: Absolutely right. The main mechanism you are probably referring to is motoring taxes: road tax and fuel tax. Those are the things that "penalise"—your word not mine—and that is the main way that we drive behaviour shifts, buying patterns and consumer shifts. That is always a matter for the Treasury, as you know. They are doing a lot of work around their net zero strategy, and so on. I don't have any more information about that.

However, we have been clear, and I think it is right to say this, that we have kept fuel duty low as a Government, and for successive Governments, for quite a long time. We have always been clear that motoring taxes in the round need to keep pace with our climate ambitions. We will need to course-correct as we go forward.

I said earlier, and it is important to state this again, that we recognise that transport and travelling using cars is a big part of people's budget. It is a big part of their daily life. Lots of people need cars to get around, especially in areas where there isn't public transport. We cannot simply have a 350-degree shift overnight for something as significant as that.

Q79 Simon Jupp: I am really glad to hear you say that. That is my concern. My constituency is fairly rural. I come from Devon, and the south-west region itself is sparsely populated across most of it. People rely on cars because there is no public transport in vast swathes of the south-west and in many other regions.

At the moment, the whole decarbonisation agenda can seem really



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daunting and uncertain to those communities, who may feel that they do not know where to turn. They hear and read articles in the press about petrol cars being phased out by 2030 and this, that and the other tax coming. How is the Treasury going to make up for the fact that we are not paying for petrol in the future? How much will it cost to run an electric car, which currently they cannot afford? Can you see at the moment why car drivers, particularly in rural areas, will feel very nervous about this agenda?

Rachel Maclean: Of course, I have sympathy for that. It is like my constituents as well. I have a rural area, as well as a town area. It is completely natural that people will feel anxiety or uncertainty over something as important as this.

What we know from public polling across the board is that people broadly welcome the Government's ambitions. They broadly welcome the fact—

Q80 **Simon Jupp:** Until they realise what it means and the impact it could have on their daily lives. That is the challenge, isn't it?

Rachel Maclean: Of course, and I agree with that. As a Government it is our job to reassure people, to take a very iterative approach and not to penalise people, such as your constituents and others, who live in more remote areas. There is a whole host of measures. I appreciate that and, when you start from where we are now in 2021, some of these things are very far in the future.

We are not saying that you cannot drive your car tomorrow or next Tuesday. We are not saying that and we will not say it, because we have to do this and we have to take the public with us. We have to have sensible and practical plans to help people transition. There has to be appropriate Government support, as there is at the moment for the grants for EV drivers, and support through the tax system and benefit in kind and so on. There are a number of incentives.

The other key bit—you touched on it, and if I may, I will do so briefly—is the public transport side. You are right to say that in your area, and others, public transport is not what people expect. It is not good enough. That is why there is a lot of investment going into buses and trains. We need to get that right as well, because otherwise we will lack credibility.

Q81 **Simon Jupp:** I get that, but equally there is no point in putting on buses that only a couple of people use at certain times of the day. That is a separate point from the one that I am making. I will move on because of time.

The Transport for Quality of Life report in 2018 estimated that car use would have to be reduced by up to 60% to achieve net zero. Going back to my previous point, that is really worrying for many people who rely on the car and do not have an alternative. They may want an alternative, but an alternative will never come because we cannot afford to subsidise buses when only two or three people use them from tiny villages like



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mine in East Devon, and other places. We cannot put train lines everywhere. How are we going to achieve that 60% drop, if that is the target or the overall aim, within the timeframe that Whitehall has set without penalising car drivers? It just does not add up.

Rachel Maclean: I do not recognise that statistic, but I am very happy to look at that. We have not set targets ourselves for the reduction of car use. What we have done is set out very clearly where we want to incentivise the alternative. We have talked about the reduction of journeys only in urban areas. We have been very clear on that. We have not said that has to happen across the board. What we have done is make it very clear that this has to be locally led. There has to be very significant support for local areas to come up with credible alternatives.

There are a number of ways that that can happen. It can happen through active travel and through cycling and walking. It is already happening through employers doing smart things around car sharing and car clubs. There are lots and lots of different alternatives. Obviously, they are not all available across the country. Something might be available in London but not in East Devon. In East Devon it might be much more suitable to have a demand-responsive minibus service. That is also available through our policy and grant support.

It is vital that your area and your local leaders engage with the Department on the funding and support that is on offer and the solutions that are right for your area. We talk a lot about place-based decarbonisation in the plan. It has always been clear that what is right for London is not right for East Devon, Redditch or Bexhill and Battle. I think that is a very important point, and I hope that your constituents can feel some reassurance from that.

Q82 **Simon Jupp:** Thank you, Minister. Looking at the figures for a second, what scale of reduction in UK greenhouse gas emissions are you hoping to achieve from encouraging people to use their car less and through the uptake of zero emission vehicles? We have discussed several times this morning the cost of buying a zero emission vehicle. At the moment, it is way away even from the exalted wage of a Member of Parliament.

Rachel Maclean: I am not going to talk about the cost because we have covered that exhaustively. What we know is that the total cost of ownership is significantly lower. It is worth saying that we expect price parity to be reached in the mid-2020s for electric vehicles. That is actually not very far away.

However, on your question about the amount, if I look at my projections—I stress that they are projections and not targets—by 2030 we expect to remove between 20% and 57% of our domestic emissions by 100% of the Government car and van fleet being zero emission; from the phase-out of sales of all new petrol and diesel cars and vans; by increasing road vehicle occupancy; and by shifting half of all short journeys in urban areas to cycling and walking. There is a lot more detail.



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In terms of the actual numbers, they are projections and there is a lot of uncertainty.

Q83 Simon Jupp: There is a lot of uncertainty not least, as I mentioned, among car drivers. Regardless of your Government figures, your plan, the ideas you have and the targets you have set, people have spoken by putting their foot back on the pedal rather than getting back on the bus or using public transport. Public transport has not recovered to the extent that car journeys have as a result of Covid; 90% of journeys in cars are not back as they were before the pandemic. The tube is still quiet. Buses in my constituency and in London are not as widely used as they were before the pandemic because the Government scared people to death about using public transport, so how are we not now experiencing a car-led recovery from Covid-19?

Rachel Maclean: I think it is a fair challenge. We have been clear that we want to use all the levers at our disposal to avoid a car-led recovery, particularly, as I said, in urban areas where alternatives exist. There is a wider conversation about Covid and whether people are going back to the office and commuting patterns. There is still a significant amount of uncertainty about how that will play out in the future.

The statistics on recovery of tube, train and bus are not as pessimistic as you might have suggested. Perhaps Mr Bruce might have the actual figures. I do not have them right here. They were a bit better than I thought, certainly, when I was reviewing them. Put it this way, people are getting back on public transport. It is not where it was, and that is why we have had to support it.

Q84 Simon Jupp: Does that mean that behaviours will not change overnight like they did with the shock of last March?

Rachel Maclean: Almost certainly correct.

Q85 Simon Jupp: Could you see, for example, that the lovely targets you have set to reduce the use of cars and everything else like that could be affected by the Government narrative and rhetoric over the last 18 months, which has scared people to death from using public transport? It has put them off using the tube, getting on the bus and doing all those things.

Rachel Maclean: First of all, we modelled the uncertainty in all of our planning. You are absolutely right to say it is uncertain. The wider public health narrative is clearly unfortunate but has to be done to protect public health. Throughout that, we have supported the public transport sector to an unprecedented degree. The amount of taxpayers' money that has gone in, not only to support Transport for London and keeping the tubes going, but the trains up and down the country—

Q86 Simon Jupp: And that's very nice. That is all taxpayers' cash and everyone in this room pays that tax to bail out the services that people are not using because you have scared them into not using them. The



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point is that the recovery, the getting people out of their car and on to public transport, will have been set back because of the communications in the last months. Do you accept that?

Rachel Maclean: I accept it up to a point, but we are taking action on that. We are making a series of interventions, led by the DfT. My colleague, the Rail Minister, has a number of very exciting announcements that he is working on with the rail industry to encourage people back on trains. I know that the bus sector is doing the same thing. There are safety measures that have been put in across the board on all modes of transport. All the operators are trying to get people back on trains. I think we will see recovery on public transport. It just may take some time.

Richard Bruce: In the last two weeks, public transport has definitely ticked up from where it was. I think I saw that it was about 75% on some of services. People are travelling less overall. I think what has happened is that people who are travelling at the margin, if they have a choice, are opting for cars versus public transport. That has been felt keenly by the bus services and rail companies. It is far too early to say what the total net impact of this might be. It could be that the propensity to travel less and work from home more, once we get back to higher levels of public transport, is a net benefit. It has not settled down yet. Location decisions by businesses and individuals, how much they commute and their commuting patterns have not washed through and may take a number of years. There is an upside risk and a downside risk.

Simon Jupp: Thank you, Mr Bruce. Thank you, Minister.

Q87 **Chair:** Gavin wants to come in briefly, and so does Ben. We will not be too dominated by the car, but I want to reference our zero emission vehicle inquiry and recommendations. We made a recommendation as to the ZEV mandate, where those who do not produce enough electric cars that are sold in this country would have to buy credits from those who do. That is also contained and embraced in the plan.

Rachel Maclean: Yes.

Q88 **Chair:** Is there a timescale for when that might be rolled out, and detail as to how much the price of the credit might be?

Rachel Maclean: Thank you very much for your leadership on that issue. It is clearly something that we think is important. All the major players agree. We are talking to the industry at the moment. I met them earlier this week. The consultation is open at the moment. I believe it closes on—

Richard Bruce: Next week.

Rachel Maclean: Thank you. Then we need to work through the responses. There is a mixture of views in the industry, as you would



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expect, so that has to be considered quite carefully. Clearly, the industry wants detail, and we will provide that as soon as we possibly can.

Richard Bruce: It is a two-stage process. The conversation at the moment is around what the mechanism should be for regulating CO₂ from cars and vans. The next choice is the detail of the mechanism, once you have said, "Should we do a fleet average or should we do a ZEV mandate?" If it is a ZEV mandate, what will the numbers be and what could the uptake be, what will the trading be and what will be the price? That is all to be decided. The first thing is to settle on the mechanism.

Q89 **Chair:** I personally really welcome that. I can only imagine the amount of lobbying from industry against it, so good call. The other thing I want to ask about—I think we touched on it with you, Minister—is interoperability in the ability to use the various electric charging points. I think in the autumn it is likely that you will bring forward legislation or regulation to bring in interoperability. Is there a timescale for that?

Rachel Maclean: Yes. We intend to lay legislation later this year. I do not think we have the slot yet, do we?

Richard Bruce: No. It will be before Christmas or just after Christmas, potentially.

Chair: Good. Excellent. I am happy. Let's see if the happiness extends to Gavin and Ben.

Q90 **Gavin Newlands:** I agree with the Chair. I am going to come back to the cost for a second, if I can. You mentioned earlier the Government incentives with regard to EVs. You also mentioned that you expect price parity around the mid-2020s on ICE vehicles and zero emissions.

The truth is that the price point at the moment, as Simon highlighted, still puts a lot of people off. In fact, the SMMT has figures that show that, essentially, six months prior to the Treasury cutting the plug-in grant, which happened without warning, the growth in sales of full battery electric vehicles outstripped hybrids by 73%, but in the six months since, the growth in hybrids has outstripped full electric by 800%. They are pretty stark figures. Surely, you have to accept that the incentives from Government at this point in time and at this stage of maturity in the market are still massively important. Would you accept that?

Rachel Maclean: They are, and that is why we spent £1.3 billion of the Government's money to subsidise people with that up-front cost, recognising that it is more expensive, including, obviously, people in Scotland.

Q91 **Gavin Newlands:** I accept that. We add more incentives in Scotland, which is why we have a better take-up rate. Surely, you recognise that change in behaviour and what people are buying since it was cut again. Would you go back and change that decision if you could? I know it is a Treasury decision and not a DFT decision.



Rachel Maclean: It is important to say that, when we are using taxpayers' money to support the purchase of something like a car, we have to consider it very carefully because these are demand-led pots. It is actually a sign of success; the reason that the incentive scheme had to be paused at that time, or re-targeted, was that take-up had been so great. Despite concerns that have been expressed by Members in this Committee about electric motoring, it is incredibly popular. As I said, one in seven cars sold has a plug. Whether they are hybrid or full battery electric vehicles, they are contributing. I think I am right in saying that it is only the full electric battery vehicles that are eligible for the grant. That is massively driving uptake and contributing to our zero emissions targets.

By definition, there is not an endless supply in a grant pot. It has to be targeted where it will make the most impact. When we see consumers wanting to make that choice themselves, and we have very significant challenges in the van and the truck sector—expensive vehicles—it is right to make those hard decisions. Obviously, we would all like to subsidise the purchase costs.

Richard Bruce: I can add to the SMMT stats. This is quite a strange time in the UK car market because there is a massive shortage of semiconductors. There are waiting lists for almost all cars. There is a very long waiting list for EVs. Despite that, battery vehicles are still outselling plug-in hybrids in the UK for the last month I saw, and I think the month before that. There is constrained supply, so now is not the time to be drawing conclusions about the impact of the grant. We saw a number of manufacturers cut their prices to get their vehicles under the new threshold, showing their willingness to sell those vehicles. There is a lot of demand.

Q92 **Gavin Newlands:** I am a politician. That is what I do. I have a quick question on chargers. You were asked about this last week at Transport questions by my colleague. The SMMT has suggested that we need about 700 charge points installed per day to reach demand by 2030, but in your answer you said that you were installing 500 per month at the moment.

Rachel Maclean: Yes.

Gavin Newlands: First, how do you intend to bridge that gap, and do it quickly? Secondly, the figures I have from a report on pay points for the last full year suggest that per head local authorities in Scotland were spending £1.91 on charging infrastructure, while English local authorities were spending 45p. That is about 420%. There is obviously a large disparity. Do you have any up-to-date figures? I think those are a year old. If you have any up-to-date figures you could furnish us with, I would appreciate it.

Rachel Maclean: The first thing is that, obviously, the SMMT is a valued interlocutor. We work very closely with them. There are a number of different projections based on different assumptions about charge points.



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We will be producing an infrastructure strategy shortly, where we will set out our assumptions for the base level of charging infrastructure that is needed. You are aware that one charge point is not the same as another. You have home; on-street; destination such as the supermarket; and on the strategic road network.

Obviously, you can interpret those figures and present them in different ways. By any measure, we have one of the best charging networks in Europe. People are never more than 25 miles away from a rapid charger. We know that the use case of most people is to charge at home. The majority of people have their own drive. Clearly, there is a whole piece around on-street charging that we need to tackle, and we will set out a lot more detail about how we are going to do that in the infrastructure strategy.

On your figures about local authority spending, again we will have to look into that.

Q93 **Gavin Newlands:** If you could update that, it would be good.

Rachel Maclean: Absolutely, but we have a Government incentive scheme of £20 million that we make available to local authorities. That will be augmented by a number of different funding pots, providing local authorities with different ways they can access that and install the right kind of infrastructure for their area. What is right for London might not be right for Paisley and Renfrewshire.

Richard Bruce: On charge point numbers, it is worth contextualising that. There are about 8,000 petrol stations in the UK servicing around 30 million vehicles. There are around 3,000 rapid charge points servicing half a million plug-in cars. Obviously, it is different in terms of dwell time and the number of points, but you cannot fill up a petrol car at home, although you can an EV. All the targets in this area are quite difficult and quite nuanced. It depends on what you assume about charging behaviour and that sort of stuff.

Gavin Newlands: I am sure we will return to it with infrastructure. Thank you.

Rachel Maclean: I am sure we will.

Q94 **Mr Bradshaw:** Minister, one of your challenges in achieving modal shift from cars to public transport is, of course, that if you own a car—perhaps with the exception of London—it is almost invariably cheaper to use it than to use public transport. I did not see anything in the strategy that will change that equation and make it cheaper for people to use public transport than it is to drive a car if they already own one.

Rachel Maclean: I am very happy to send you a personalised copy, Mr Bradshaw, and highlight those sections, because we have made it very clear that we recognise what you say. The cost of driving is actually cheaper than public transport. We want to change that.



Mr Bradshaw: Excellent.

Rachel Maclean: We do not want to change it by, in the words of one of the questioners, hammering drivers. It is not about hammering drivers. It is about bringing down the price of public transport. We have a number of policy documents that we are working through. There is the Bus Back Better plan, plus the Williams-Shapps Great British Railways announcements. All of those have front and centre reducing the cost of public transport and making the services better as well as, of course, cleaning them up. We know that we cannot achieve what we need to do without shifting people off the roads and on to public transport. We need to make the alternatives better, cheaper, cleaner and more pleasant for people.

Mr Bradshaw: Excellent. You can expect good support from this side of the Committee room on that—

Rachel Maclean: That's a relief. Very good.

Mr Bradshaw: If not from your own side.

Chair: We are launching a road pricing inquiry in the autumn, so we will be feeding into the mix as well.

Rachel Maclean: I will be very interested to see that.

Chair: Let us move off the road and on to rail. We have just touched on it. Back to you, Gavin Newlands.

Q95 **Gavin Newlands:** How are you supporting significant modal shift from road and air to rail, Minister?

Rachel Maclean: We have made that clear as an objective, especially for freight. The modal shift revenue support grants are part of that picture. We talk about it a fair bit in the plan overall, and also in the Williams-Shapps rail plan.

Q96 **Gavin Newlands:** In a bit more detail, how do you plan to do that?

Rachel Maclean: Do what, exactly?

Q97 **Gavin Newlands:** How are you planning to incentivise people to get out of their car and to change to the train rather than flying?

Rachel Maclean: I think it builds on what I said to Mr Bradshaw earlier. The main driver of people's behaviour is choice and convenience. There has to be a valid and realistic choice for people to make short journeys, especially in urban areas, by active travel or by an alternative public transport method. It has to be cheaper and more convenient. It has to meet their needs, and the price has to be right. It is a combination of all of those—all of our policies and everything in the plan. There is a number of different interventions, and we will achieve that. There is the bus plan, the rail plan and, of course, active travel as well. We have not touched on that yet, but that is part of it.



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Q98 **Gavin Newlands:** We are going to come to it. Do you have a target for the reduction of emissions that you are seeking through that modal shift from car and plane to rail?

Rachel Maclean: Yes. Are you specifically asking from car to rail?

Q99 **Gavin Newlands:** Car and air to rail.

Rachel Maclean: I don't think we have done it quite that way, have we?

Richard Bruce: No.

Q100 **Gavin Newlands:** Moving on to the effects of the pandemic, do you have an estimate of the number of rail passengers who switched to their car during the pandemic, and may continue to use the car in the future? Is that part of what you have done?

Rachel Maclean: We touched on that a little bit earlier. We do polling, obviously, on travel patterns and who is using cars, who is using rail and the reasons why. I think Mr Bruce has given quite a good explanation about how it is a bit early to make long-term projections based on that. As I am sure we all know, there is still so much uncertainty. Yes, we have data on that and what people are choosing to do.

Q101 **Gavin Newlands:** We touched on freight, but what would be a realistic target for the growth of rail freight?

Rachel Maclean: We are going to set that out. I believe it will be set out through the Williams-Shapps rail plan. Do we have a specific target?

Richard Bruce: I am looking, Minister.

Rachel Maclean: Thank you. Clearly, as I alluded to earlier, we have already removed a large number of HGVs—I think it is 900,000—off our roads through incentivising the modal shift rail grant specifically. That is for the freight and the HGV side.

Richard Bruce: There is a commitment to introduce a rail/freight growth target, yes.

Q102 **Gavin Newlands:** When?

Richard Bruce: We can find out. We will write to the Committee with that.

Rachel Maclean: Yes, we will.

Q103 **Gavin Newlands:** That would be great. Going on to electrification, just under 40% of the rail network at the moment is electrified. In the Williams-Shapps plan, there was a commitment to a rolling programme of electrification. Correct me if I am wrong, but we have still not heard any announcements on any electrification schemes. What is the plan for moving forward with that? Are any schemes to be announced very shortly?



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Rachel Maclean: The actual specifics of the schemes themselves are very much a matter for the Rail Minister as an individual modal Minister. Clearly, we have set out that we want to get to net zero on the railway. We know that electrification is a way to deliver that. Network Rail have set it out in their own traction decarbonisation network strategy. That is Network Rail's own strategy, and clearly we work very closely with them on the right solution for the right stretch of rail. I think it is fair to say that we have delivered 700 miles of electrification in England and Wales in the last three years, and we are committed to electrifying more of the network.

Q104 **Gavin Newlands:** As I think I have said to you before, the electrification pace in England and Wales has been half the pace in Scotland over the last 20 years or so, give or take. Scotland has a target of decarbonising rail by 2035. It has a plan and the whole rail industry has bought into that plan. Is 2040 good enough, or do you think you could perhaps bring it forward?

Rachel Maclean: We have committed to net zero by 2050 with the railway. Obviously I congratulate Scotland on what they have done, but clearly they have been supported by the UK Government in many of those endeavours. We work together, I hope you would agree. I certainly agree that as the United Kingdom we have to have that ambition for the whole of our country.

We need to work across the railway to make sure that it contributes to our environmental objectives. It is a very important part of the clean transport mix. There is a lot more detail in the Williams-Shapps rail plan about how we are going to achieve some of those targets.

Q105 **Gavin Newlands:** Moving on to Greg's favourite subject, could I bring in HS2 for a second?

Chair: Not too much HS2. I can see what is going on.

Gavin Newlands: There has been lots of rumour and what-have-you about phase 2b being mothballed. If that were to be the case, would you commit to using some of that money to electrify the rest of the rail network a lot quicker?

Rachel Maclean: I am not going to answer that. With respect, I am not the HS2 Minister, and it is not for me to speculate on future plans for HS2. Please ask him to come and speak to the Committee on that.

Gavin Newlands: I didn't think you would, Minister, to be fair, but it was worth a shot. I am finished on rail.

Q106 **Chair:** We look at HS2 every six months, and sometimes in between as well. I want to touch on rail and decarbonisation, which is slated to be by 2040. Is that realistic? Something like 15,000 miles-worth of track will need to be turned from diesel to either electrification or battery hydrogen, depending on what is there. That is a heck of an ambition. If we do not get rolling electrification soon, which was one of our



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recommendations from the inquiry we did, I just do not see how that target can be met.

Rachel Maclean: Look, we have been clear that we are committed to that target. It is important that rail plays its part. It is already a very green form of transport. I have set out a number of measures that we have already committed to, backed by funding, to shift more people on to our railways.

We are doing a lot of work around the R&D side as well. We have something called First of a Kind, where we are looking at new traction technologies. Obviously, not only the rail but the locomotives need to be zero emission. I draw your attention to the UK's first hydrogen-powered train—the HydroFLEX—backed by Government funding. All of these technologies have a role to play. Obviously, we need to accelerate the R&D; we need to work with Network Rail; and we need to make sure that the solution is right for the particular use case of the particular railway. Yes, I believe it is realistic. The rail industry is a very innovative industry, and we have worked with them and supported them with a significant amount of R&D. Do you have anything to add, Richard?

Richard Bruce: I am not sure that the number of non-electrified miles is the right measure there. If you are using technologies like batteries or hydrogen, the track is irrelevant. It is more about the locomotive and the power, and having the infrastructure to re-energise the train. The fact that—

Q107 **Chair:** I accept that, Mr Bruce. The issue with hydrogen at the moment is that it cannot take the speeds and the weight currently in use, certainly for freight. The technology for hydrogen is just not there at the moment, albeit I take into account the retrofitting from Porterbrook of the HydroFLEX.

The other issue is that rolling stock has a long life period. If it is being commissioned right now on a diesel model, how on earth do you get to the end point by 2040? It is not like cars, where the lifespan is much shorter.

Richard Bruce: It is challenging, but I guess the point is that rail is only 1% of emissions. It is already very clean. The technology for the bulk of decarbonisation is clear. With something like freight, there are pinch points where you have non-electrification, but if you just tackled certain points on the network you could basically run electric trains on the whole route, and electric freight trains as well. I do not think it is easy, and we would not want to underestimate it, but there is lots of opportunity.

Q108 **Greg Smith:** When you talk about 1% of emissions coming from rail, does that include the emissions from the generation of the electricity to go into the rail, or is it just what is coming out of the back of rail? That 1% is going to become very much bigger.



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Richard Bruce: As energy generation decarbonises, it is the same for car. We calculate car emissions on the basis of the tailpipe, but we are confident that, if you look at the lifecycle emissions, as you decarbonise the generation, it will also be decarbonised in the same timeframe. If you like, the long-term projection is not really a problem because we will have a decarbonised energy system.

Q109 **Chair:** Is it the point that rail currently takes about 1% from the national grid? I think that is where the 1% comes from.

Richard Bruce: It might be. That sounds quite likely, yes.

Q110 **Karl McCartney:** Chair, some of the statistics that you have both used this morning really are not believable. You are telling us that 1% of the pollution in this country is produced by rail. There are still diesel engines on the railway system in this country, and there are still electric trains that have to be powered. That electricity has to be produced. It is not wind or whatever else you might like to think. Solar panels are not going to produce all that electricity for all the railway trains in this country.

Richard Bruce: One per cent. of the greenhouse gas emissions from the transport sector come from rail.

Karl McCartney: Ah, so you quantify it as a greenhouse gas again.

Chair: My point is that 1% of the national grid goes towards rail, but of course only about 40% of that energy production is from renewables. It is still dirty in that sense. Anyway, there we are. It is interesting with rail.

Gavin, back to you with buses and coaches.

Q111 **Gavin Newlands:** Can we go back to projected reductions in emissions, if you have those figures? What percentage of that reduction would come from modal shift, from cars to buses and coaches, and from the contribution of zero-emission bus and coach fleets?

Rachel Maclean: I am just wondering if I have the statistic that you are asking for. I will probably need to write to you because I have a number of different data sources that it does not make sense for me to read out right now.

Richard Bruce: We do not identify a specific shift from mode A to mode B. The inputs to the modelling are vehicle miles travelled and the mix of pollutants coming from the fleet of vehicles.

Q112 **Gavin Newlands:** How will you track how well you are doing if you do not have targets in any of these areas?

Rachel Maclean: We have statistics, as Mr Bruce outlined earlier, that are published. The numbers are published every single year about emissions from each of the modes. Those are looked at by a number of people, including the CCC and the National Audit Office. Of course, we will track it. We will do very rigorous tracking of all the emissions reductions across the whole piece of the plan.



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Q113 **Gavin Newlands:** Your national bus strategy stated that the Government aim to “return patronage to pre-Covid levels and then to exceed it,” which obviously we will all have to do across the UK if we want to meet our targets. Will you set a more specific modal shift target from cars to buses once you know the likely long-term impact of Covid, as we move forward?

Rachel Maclean: I think my answer would probably be the same. Our plan is about reducing emissions from the whole transport sector. We have not taken the approach of having specific targets for a shift from mode A to mode B because all of them can play their part. Obviously, cars can be zero emission and can contribute to emissions reductions, but a lot will depend on behaviour change and technology. It is not just about cars as a mode into buses. It is about all of the modes playing their part.

Q114 **Gavin Newlands:** That is an entirely fair point, but in terms of behaviour change and encouraging use, you have heard me before bring up the fact that in Scotland at the start of next year we are about to bring in free bus travel for those aged 21 and under. That could perhaps have implications for the rest of their lives—that is, using public transport as routine. Is that something that might be considered to try to drive increased use of public transport, in particular buses?

Rachel Maclean: A number of local areas are already doing that. I think Andy Street, the Mayor of the West Midlands, already has a plan. I will have to check, but I think he already has free bus travel for young people. Subsidised bus travel is available to various sectors of society. Overall, in our Bus Back Better plan, which is £3 billion-worth of funding, we have said very clearly that we want bus travel to be cheaper. We want more flexible fares. We want more transparency about fares. We want more of the city hopper-type fares to be introduced across the whole network. To support that, we will be working with operators to increase the bus service operators grant incentive that they can claim, which will definitely help those local areas and those operators to come up with better services and cheaper fares.

Q115 **Gavin Newlands:** If there is excellent evidence that comes out of Scotland and, indeed, the West Midlands, is it something that you would look back on at some point for free bus travel for youngsters?

Rachel Maclean: Of course. We look at all evidence from all across our country, and other countries as well. Then we have to make the decision about what is right for our country and the use of taxpayers’ money.

Q116 **Gavin Newlands:** Moving on to the bus and coach fleet itself, how are you going to achieve a fully zero-emission bus and coach fleet? I should say at this point that we spend a lot of time talking about buses but not so much talking about coaches. The coaching sector has spent a lot of money on new vehicles to meet Euro targets, and so on, which they will now have to try to replace at some point. What help is going to be provided to the coaching sector?



Rachel Maclean: The coach sector plays a part. We work with them, and that is led by my colleague Baroness Vere, as you know. She has worked closely with them throughout the pandemic. We work very closely with the trade bodies, particularly the CPT, on their plans.

In the bus sector, we have already held a consultation on the phase-out date for petrol and diesel buses. That was an initial consultation, but we will be holding a full public consultation later this year and setting out more detail. Of course, we will be working with the industry because they have a huge role to play in this.

Q117 **Gavin Newlands:** There was a promise made by the Prime Minister of 4,000 buses. What progress has been made on the delivery of 4,000 buses?

Rachel Maclean: We have funding available for 900 zero-emission buses; 50 of them are already on the road. The funding will help us to introduce, as you say, 4,000. We have already awarded funding to Coventry to become the first all-electric bus town or city. That will support 300 zero-emission buses.

Q118 **Gavin Newlands:** The Secretary of State was questioned last week about buses. He said, as you have said yourself, that there were 50 on the road. He said that there were some in production and some were already on the road. From my understanding from the sector, no buses have been ordered, are in production or are on the road in England at all from the ZEBRA scheme. Is that incorrect? Where are the 50 buses being driven?

Rachel Maclean: We are happy to write to you with the detail on that.

Karl McCartney: [*Inaudible.*].

Gavin Newlands: I can't compete with that.

Rachel Maclean: I think it is worth—

Chair: Let me bring us back to order, if I may.

Q119 **Ruth Cadbury:** We have just seen a letter that people from across the bus industry, from the manufacturers to the bus companies to the unions, wrote to the Secretary of State two days ago, saying, "What is the Government doing to deliver on the promise of the 4,000 zero-emission buses?" Given that that was received two days ago, I wonder if the Minister is able to give us a response to that letter.

Rachel Maclean: Forgive me, I have not seen that letter. If it was sent to the Secretary of State, I have not seen it. I am sure that a response will be issued in due course. I think I have already said that we have made funding available for 4,000 zero-emission buses. That is backed by £3 billion-worth of funding, which is a very significant amount of funding to the bus industry, as I am sure everyone will agree. In fact, it is more than has been put into the bus industry by any Government, including previous Governments in this country.



What you see as down-payment on that is the zero emissions ZEBRA scheme, which was announced in 2021 with £120 million-worth of funding. Local authorities are already going through the application process in the first tranche of areas. There will be additional rounds of funding for that. I am absolutely sure that they will receive a reply, and I am very happy to follow up.

Q120 Ruth Cadbury: What they are actually seeking is a road map. They have heard about the 4,000 but they are seeking a road map to that end. I have to say, Chair—this is a comment rather than a question—this is a repeat message we are getting from across the different sectors. We have ambition in the plan, but no targets and no road maps. How are we to achieve zero emissions in transport without the Government being much more active in supporting the sectors, most of which want to make the transition?

Rachel Maclean: I completely agree with you that the sectors want to make the transition. I, as well as the Buses Minister, meet regularly with all the operators and we have those conversations. They tell me directly that they want to see a road map. That is very fair, and here I have a road map with a huge amount of detail. I am sure that the people who wrote the letter will be very interested to read that and to see the road map that we have already set out.

As I alluded to in my previous comments, we have already done one consultation with the industry. We will be doing another, and obviously when we respond to it, that will be the time when we set out a lot more detail about how we will reach those phase-out dates. It is very similar to what we did with the car process. We held the consultation. We asked industry for their views. We then set out, on the back of that, a number of other policy commitments, some of which we have talked about, including the infrastructure strategy, the ZEV mandate and a number of other policy levers that are required. These are big changes. We have to work with the industry.

Q121 Chair: The issue we keep touching on is that if there is a pledge from the Prime Minister to deliver 4,000 of these zero-emission buses by the end of this Parliament, and we have only done 50 out of 4,000, it comes back to my straight line bit. That line will have to go up massively at some point. We also know that the industry needs that boost right now.

Rachel Maclean: It does.

Chair: That is why we keep coming back to it.

Rachel Maclean: Fair enough. On the industry, Chair, it is very important to say that Wrightbus in Northern Ireland has created 300 jobs on the back of the Prime Minister's announcement. There is a lot to welcome in it. It gives certainty and policy clarity.

Q122 Chair: We have the Secretary of State coming before us next Wednesday, so we can ask him about the letter. As you say, it was sent



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to him rather than to you. That is a very fair point.

Talking about other targets, on walking and cycling the Prime Minister has a bold vision for half of all journeys in towns and cities to be cycled or walked by 2030. We all have some work to do on that front. Over to Ben Bradshaw.

Mr Bradshaw: Some of us have.

Rachel Maclean: Mr Bradshaw is already doing 90%, I am sure.

Q123 **Mr Bradshaw:** How is it going, Minister?

Rachel Maclean: Let's take you as an example. I am sure that you are at 100% already.

Chair: He is a paragon of virtue.

Rachel Maclean: Exactly. Again, this is a big investment: £2 billion over five years. Clearly, we have had a pandemic in the middle, but that has not stopped a lot of the progress. Let me highlight some of the top lines and the top priorities.

First of all, there is the emergency active travel fund, which enabled a number of schemes to be rolled out in local authorities. We have helped people to repair their bikes. We have made funding available for electric bikes. The other key point is the Prime Minister's cycling and walking plan, which has 33 commitments to increase cycling and walking across the country. There is a lot to welcome.

What we saw in the initial stages of the pandemic was cycling and walking increasing massively. We really want to build on that. People got their bikes out. We helped them repair those bikes. We provided extra training for people to be confident on their bikes. It is important that we keep rolling out those measures.

Q124 **Mr Bradshaw:** There is £2 billion over five years. Do you know what that is, off the top of your head, as an overall percentage of transport spend, or can your official help you?

Richard Bruce: We can get that figure for you, I am sure.

Q125 **Mr Bradshaw:** I make it about one point something per cent. Scotland is spending 10% of its total transport budget on active travel. It sounds like a big, round figure but actually, in the scheme of things, it is pretty small beer, isn't it?

Rachel Maclean: I think that is a bit unfair. It is always very difficult when you compare other countries. They have very different economies and different societies. Obviously, Scotland benefits from the Barnett consequential of being part of the United Kingdom in terms of the funding that they provide to their citizens. I do not think it is directly comparable.

Q126 **Mr Bradshaw:** The point I am getting at, Minister, is that there are other



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countries that are ahead of us on this—the Netherlands, Germany, Denmark and even northern Italy—where cycling is the norm in towns and cities. Everyone does it—old people, young people and even disabled people. They spend a considerably higher proportion of their overall transport spend than you are proposing to spend.

Rachel Maclean: All I would say is that you have picked on Germany, for example, and they do not have an ambitious phase-out date for removing petrol and diesel cars off their roads.

Q127 **Mr Bradshaw:** This is about active travel.

Rachel Maclean: I know, but I am just pushing back in terms of direct comparison with a different country. You are not comparing apples and apples. Obviously, we would all like to spend more on everything, but we have to spend taxpayers' money sensibly. I think £2 billion is a very significant amount. It is actually the biggest single announcement of spending on this particular priority that any Government have made. I think I am right in saying that it is certainly larger and more significant than the last Labour Government, although I would have to check that.

In terms of what we have done, the real policy changes on the ground, which I think are important, embedding the behaviour change that we have seen and enabling local authorities to roll out low-traffic neighbourhoods are how we are going to get change. It is about habit and behaviour change. Your point is right in one way. When people see everybody else doing something, they will start to shift their behaviour. We are a social species. If we see other people cycling, it will become the norm and we will start to do it. It will feel safer for people.

Q128 **Mr Bradshaw:** You are right about the very welcome increase in cycling at the beginning of the pandemic, but do you share my concern that more recently it feels as if things have gone back to the way they were before the pandemic, and in some cases are even worse in terms of private car use and congestion, and that we are no further forward than we were?

Rachel Maclean: You highlight the use of cars and congestion, and I would refer the Committee back to what I said earlier. We have said in the plan that we are still committed to reduction of urban congestion. That is something we need to tackle, but it is not straightforward or easy for the reasons that we have all discussed around Covid and the pandemic. There is a psychological safety side of it.

We have seen cycling use and walking stages increase. My understanding is that they are still somewhat above where they were pre-pandemic, but we need to continue to put investment and other policy levers in place to enable people to take up cycling on a greater scale. That does not just come from the DFT. It comes from planning, and how cities, towns and new builds are planned. We have talked a little bit about that as well in the plan; urban planning is a very important part of the whole picture.



Q129 Mr Bradshaw: Given that, in spite of the small increase post Covid, most journeys in urban areas are still under two miles and are eminently doable by anybody able-bodied, and indeed disabled with modern cycling technology, by bike or by foot, do you accept that you have to come up with much more radical policies to deter unnecessary car journeys in urban areas and make cycling safer and more attractive to a wider range of the population than fit, able-bodied young people like me and my colleague next to me?

Rachel Maclean: Absolutely. There are two things. The first thing is something I referenced earlier, which is very much about the place-based approach. What is right in Exeter, London or Germany is probably not right for East Devon, Redditch or Scotland. It is very much down to local authorities to lead on this, with Government support and policy frameworks. What is not talked about very often, and should be talked about more, is the support and funding that we are giving local authorities around the capability to enable them to do that. We all know that some local authorities are very forward leaning on this and take it up. They are ready to implement new schemes and change the way they plan their streets and their transport systems. We cannot sit here in Whitehall and say, "This street should be closed on this day for cycles." It is impossible. It has to be led by the local authorities. That is the system we have in this country.

We need to continue that. It is something we are very active in. That piece of work is led by Minister Heaton-Harris for the cycling side of things. In my world, I lead very strongly on making sure that they have enough electric vehicle charging infrastructure, for example. That partnership working is absolutely vital. It is something we have prioritised, and we continue to prioritise it in all the funding that we have put into this particular policy.

Q130 Mr Bradshaw: What are you going to do about those recalcitrant local authorities that have taken your money, like Kensington and Chelsea or West Sussex, spent it on delivering cycle routes that have been hugely popular and have been used by families to take their children to school, and then several months later have ripped them out because a minority of very vociferous protestors have wasted public money and forced families with young children back out on to very busy and dangerous roads?

Ruth Cadbury: Or into their cars again.

Rachel Maclean: The first thing to say is that we recognise, obviously, that local authorities are democratically elected to represent their constituents. That is the system we have. However, we have made it very clear that, with the active travel fund, the way that the funding is allocated has an evaluation process attached. The Walking and Cycling Minister, Chris Heaton-Harris, has recently set out more detail about the trigger points for removing or reversing an active travel scheme. I do not



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have access to that letter right now, but we are very happy to provide it. Do you have any more details, Richard?

Basically, there has to be an independent evaluation of the effectiveness of these schemes. We all hear the anecdotal evidence, but there has to be an independent process for evaluating how much modal shift they generate, whether they were successful and whether they had any negative impacts. It is right, when we are awarding Government money to local authorities, that that process takes place.

Richard Bruce: I think we should write about the process. We need to distinguish a long-term culture change piece, which is the £2 billion funding, from the emergency funding last summer, where some local authorities put stuff in very quickly to try to make the most of the opportunity, and then there was some push-back on how that was done.

Q131 **Mr Bradshaw:** Why don't you just stop giving money to local authorities that are sabotaging your policy?

Rachel Maclean: In local authorities where it has not worked well, my understanding is that there is some conditionality around awarding further funding. Forgive me, it is not my portfolio so I would have to provide further detail. There clearly is a process by which we want local authorities to take up the money and use it in the right way.

It is only one intervention. We also have a number of other initiatives such as the School Streets scheme, where we are seeing roads closed around schools and making it much safer. As part of the plan, we want a lot more children walking or cycling to school. Of course, there are concerns about safety; people need to feel safe when they are taking their children to school on a bike or asking their children to cycle. That is another policy intervention where it is very important for local authorities to build confidence for their vulnerable road users.

Q132 **Mr Bradshaw:** What about you taking over responsibility for certain roads in areas where local authorities are either refusing to do anything or actually making things worse; or in London's case giving the responsibility for those roads to the Mayor, who would like to see more cycling in those boroughs.

Rachel Maclean: I think the Mayor has a role to play. I cannot comment on the intricacies of who is responsible for road in London. It is beyond my remit, with respect. We have a devolution settlement in this country. Local areas run the roads. I think that is the right way. Locally elected councillors of whatever political persuasion are accountable to their residents. They receive correspondence and input from their residents. We provide very clear funding guidelines. There is conditionality. We can provide more detail about that.

Q133 **Mr Bradshaw:** Are you satisfied that the levers you have are actually strong and powerful enough to overcome some of the opposition driven by small minorities of unrepresentative local residents and businesses?



Rachel Maclean: I remember talking to the Prime Minister about this. Obviously, he was Mayor previously in London, and he was a big supporter and promoter of cycling. A number of the initiatives that he introduced received opposition when they were first introduced. He was very clear at the time that you are always going to get vocal opposition to any change, especially on something like road use. Everybody uses a road every day and they have an opinion on it.

He has always been very clear, with the Transport Secretary and all of us Ministers, that this is the right thing to do. That is why we are making money available. I accept that there are some high profile things that we hear about in the media, but outside that there are many other schemes that are working really well around the country in all sorts of different areas, where they are making a massive difference to people's lives, and they actually can cycle. They have seen other people doing it. That is the thing that makes the really big difference for culture change over the longer term.

Mr Bradshaw: Lovely. Thank you.

Rachel Maclean: It's a pleasure.

Chair: I think the Mayor of London has more to do when it comes to reducing his own carbon footprint as well, but I am sure we all have more to do on that front. Simon wants to come in on this, and then Ruth.

Q134 **Simon Jupp:** Minister, you have just touched on a really good point about encouraging people and not putting them off using active travel lanes and things like that. I want to ask a bit of a curve ball, really.

I see e-scooters on active travel lanes. Obviously, e-scooters are not active travel. You are not doing anything; you are just standing on something that moves. Do you think that e-scooters will put people off taking up walking and cycling because they clutter up and add danger to active travel routes up and down the country?

Rachel Maclean: Your Committee has done a brilliant piece of work on e-scooters. I appeared before you and gave quite extensive evidence. It is fair to say that we are still in the trial stage with e-scooters, so we need to evaluate the evidence

Our initial view is that anything that increases people getting out of cars is a good thing, but of course it has to be done safely. There are concerns around illegal riding. There are concerns around safety. I think you have recommended them yourselves as a Committee and said that you broadly welcome e-scooters as part of the mix. They are only part of the mix; they are not the only solution for car-free travel. They are one option for people to choose, but there has to be a proper regulatory and legislative regime. That is what we intend to do.

Q135 **Simon Jupp:** We have covered a lot in this Committee this morning about the need and the want to encourage people to get out of their cars



and, for example, get on a bike. That requires confidence on the part of that person. That confidence is surely hurt if they are scared off by e-scooters that get in the way, clutter up active travel lanes and are, frankly, inappropriate for that level of road usage.

Rachel Maclean: First of all, let's remember that the e-scooters that are ridden legally—I am not talking about the illegal ones, which are a whole separate issue—are restricted to how fast they can go. They will not go much faster than an average cycle, and probably slower in many cases. They have to abide by the rules of the road. If they do not, there are penalties that can be enforced.

Obviously, you are going to get road users in any road situation who behave in an irresponsible fashion. When we come to evaluate the success or otherwise of the trials, we will look at the impact on all road users, including pedestrians and vulnerable road users or people with disabilities, of e-scooters because they are a new mode of transport. We all have our opinions, but we need to look at the data.

Q136 **Simon Jupp:** I appreciate that at the moment there is something of a trial focus, but you can go into certain shops anywhere in the country and buy an e-scooter off the shelf, which is a problem because not everywhere are they appropriate or legal to ride. I hope you take my point on board. Specifically in my area, where people might want to walk and cycle or use active travel lanes, e-scooters are causing a menace to an awful lot of people and may actually harm your agenda to try to get more people to use active travel. Equally, they are self-defeating because they are not active travel. You are just standing up on something very much smaller that will propel you in a certain direction, but you are not actually losing any weight or becoming any healthier.

Rachel Maclean: But you are not burning any fossil fuels. Look, I have a trial in Redditch and that is not what I am hearing. I hear a lot of people who are very supportive of e-scooters. They welcome them because they are incredibly convenient to get around.

Mr Bradshaw: Hear, hear.

Rachel Maclean: There are nurses at the hospital who are able to get to work without having to battle with parking and all of those other problems. I accept that there are a lot of views on e-scooters, but that is why we are doing the trials.

If anyone watching this Committee hearing is selling an e-scooter without giving a warning that it is illegal to ride e-scooters outside private land, they are breaking the law. Can I be very clear on that? They are breaking the law. That is a matter for the enforcement authorities in this country. It is also a matter for trading standards. It is very clear that they are breaking the law and misinforming consumers if they are not making it clear, at the point of sale, that if they are riding those on a public road they are breaking the law.



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Simon Jupp: Your point of clarity is very welcome. Thank you, Minister.

Chair: You are right, Minister. I think the first time you came before us was when we covered it in our inquiry on e-scooters. Once the consultation or trial period ends, we will no doubt look at this again. We broadly welcome the development.

Ruth and Karl want to come in. Can I ask you to be very brief because time is rolling on, and we still have to close off the brief?

Q137 **Ruth Cadbury:** Minister, you cover net zero targets but not active travel, yet the two go hand in hand.

Rachel Maclean: Indeed.

Ruth Cadbury: Certainly in Hounslow we are rolling out school streets, segregated cycle paths and LTNs, thanks to the Government strategy and funding and also Transport for London. We see significant behaviour change around the school run and areas where it is safe to cycle and to walk. It only goes so far because a lot of people are reverting to their cars as they do not feel safe on roads where they are competing with traffic.

I assume, Minister, that you are working with your colleagues, because the Department is soon to release the cycling and walking investment strategy 2. I hope you will be influencing that. A particular opportunity would be to enable the grants that are given for EVs and for cargo bikes to be available to purchasers of normal e-bikes, as has happened in France and Germany and has massively increased the fast roll-out of the sale of e-bikes. You could also ensure that the Motability scheme is available not just to vehicles but to bikes and adapted wheelchairs and so on. Will you consider that and specific zero-emission targets in CWIS2? I am sorry it is a multi-question.

Rachel Maclean: That is quite a question, Mrs Cadbury. We published the Gear Change strategy one year on. What we have seen there is an increased amount of funding for cycling and walking, to £338 million for this financial year, which builds on some of the work that you have highlighted. I am very glad to hear how well it is going in Hounslow.

We have also announced some changes to the highway code to enable safer cycling across the whole country. In terms of the specifics, I have not had sight of the early working. We have supported e-bike grants in the past. I am sure that part of the consideration will be about how we continue to do that.

Chair: Thank you, Ruth. Please be careful of your microphones. I think they are all on at the moment, so everything is getting picked up.

We move on to Greg to discuss decarbonising transport and how it will affect the public.

Q138 **Greg Smith:** This is very much a section that will bring together a lot of the individual themes that we have been talking about through the



hearing. Earlier, Mr Jupp was talking about the cost to the general public of the ask of switching to a different private vehicle such as an EV or whatever it might be. We have been talking about the cost of train tickets and the cost of bus tickets. To round all of that into one, how would you summarise it?

What is the ask of the public, particularly from a cost perspective? What analysis has been done as to what it will cost someone on an average income, for example, to do all the things that the plan aspires to do and that clearly you have argued in favour of at the meeting this morning? Maybe we could give the example of a family with two kids that cannot get 12 bags from Tesco's home by any other means than putting them in the boot of their car; or someone in retirement who simply does not have the means to buy a bike or a different car. What is the cost to the public of this plan?

Rachel Maclean: It is a very fair question. It is always the first consideration that I, as a Minister, have. Obviously, I am a Conservative. I do not want to burden people with additional costs. I said earlier, and I will say again, that we recognise that transport is a vital part of people's everyday lives, not just for leisure but for work, business, mental health reasons and seeing family. The list goes on. It is vital for business. We need connectivity in this country to have a strong economy, and we have never seen that more so than in Covid.

My other principle, again as a Conservative, is about individual choice. It is not for us, as a Government, to say to the pensioner in your example, "You should do this or that." What we hope to do is have a range of choices for people that actually make transport and travelling better, cheaper, easier and, by the way, cleaner. The way we are stimulating that is through investing in those supply side reforms, obviously using taxpayers' money to invest in R&D.

We can already start to see that from some of the examples I talked about earlier—for example, in the way the automotive industry has responded to our policy certainty. It has responded by innovating, as it always does, and by investing in this country, which, by the way, has the most ambitious phase-out date that has driven some of those investments. That is the way we will get better models of cars on the market that will reach price parity with petrol and diesel cars, to take one example, by the mid-2020s.

Q139 **Greg Smith:** That is very reassuring. What about trying to move away from private vehicles? How can we ensure that the transition is smooth for people taking different choices in their day-to-day lives to support the Government in the decarbonisation plan? You have given a clear answer on electric vehicles or zero-emission vehicles. What about the railways? Everyone knows what I think about HS2, but no one can pin down how much a ticket is going to cost on this thing. Given that it is now something like 10 times more than the original cost estimate to build it, that is going to lead in one direction for tickets. How do we ensure that



as people are asked to change the way they travel in some respects, they can afford it in other sectors outside private vehicles?

Rachel Maclean: I think I would turn the question around slightly. I do not think it is necessarily the Government asking people to do it. I think people want to do it. All of the polling bears that out. We need to take the public with us. If we are just sitting here telling the public, "You must do this," it will not work. Of course, it will not work. The evidence from the polling is that people's opinions, attitudes and, more importantly, behaviours are shifting. It will be driven by individual choice.

To talk about the railways specifically, the ambition for the railways is that we make that public transport much more affordable. The whole ethos of the Williams-Shapps plan is about providing more transparency, more certainty and more flexibility over tickets. We all recognise the cost of commuting and travelling by rail. You are right to say that we are not going to incentivise that behaviour shift unless it is a viable, cheap and convenient option.

Q140 **Greg Smith:** That is helpful. I am aware of time, so this is my last question. It is incredibly heartening to hear you talk about individual choice and leaving it up to people to decide for themselves. Can you give us an assurance, or even better a guarantee, that the Government will never turn the taps off on certain modes of transport? I am not saying petrol, diesel or things like that, but the car, whether it be a zero-emission one or whatever. There will never be a move to just curb a certain form of transport at any point and say, "This city is too congested so no more cars in this city."

Rachel Maclean: Obviously, I am not going to give a guarantee about anything because that would be definitely—

Greg Smith: It was a cheeky ask.

Rachel Maclean: —a rash thing to do. I think there is a slightly nuanced answer to your question, which I am going to give. I have said in many answers that congestion is not a good thing for anybody in a city or in a congested area. That is why we have so many policy levers and Government funding to make it better for people not to use their car in certain situations.

We know that that is already happening. We can build on the ways that that is happening and benefiting businesses, commuters and so on. Of course, if you have fewer cars on the road, less freight and fewer heavy lorries, you get better air. It is better for people to cycle and walk. It is faster for the people who need to make journeys. There are many positive ways that we can intervene and provide helpful incentives for people to do the things that benefit the environment.

Q141 **Greg Smith:** That is fine. Having said it was my last question, I have a very brief come-back on that. Once this plan works, there won't be any pollution coming out of any vehicles. It will be annoying that there is a bit



of a wait to get through a city or a town in congestion, but by the time we are at the end of this plan there won't be any pollutants coming out of the back. It will either be hydrogen vehicles, where the only product is water, or EVs where there is nothing coming out the back. Therefore, that argument falls over once the plan is delivered, doesn't it?

Rachel Maclean: You are right. I have talked about congestion, which is of course separate from emissions reduction. You could, in theory, have a very congested city full of electric vehicles. The point I want to make to people listening to this is that that is obviously not a good thing either. In the same way, air quality is another consideration because not all electric vehicles are completely free of all pollutants.

There are a number of policy objectives in there, but going back to your original question, we already have some incentives to change behaviour around driving in cities, such as what we see in London and what we will see in Birmingham and Bath. There are other reasons why, for a specific period of time, we may have to disincentivise driving in polluting vehicles for health benefits.

Richard Bruce: On the original point around costs, there are two issues to bring out. First, it is hard to separate the cost to an individual from the wider cost to society. One of the themes running through the plan is that a lot of the stuff you would do to decarbonise transport would make sense even without the need to decarbonise because of the costs you are mitigating. Congestion is billions of pounds a year. Poor air quality is billions of pounds a year. Obesity is billions of pounds a year. You can tackle all three of those things with measures that also happen to address decarbonisation. We estimated that £50 billion a year were associated costs, which you can mitigate through some of the things you do to decarbonise.

The other point around private cost is that, unlike some other sectors of the economy, some of the stuff you do to decarbonise transport will be lower cost ultimately. Electric vehicles have far lower maintenance costs, far lower running costs and could be a penny a mile. That is why, for freight and for vans, industry is attracted to those low running costs. It might drive the transformation far faster. That will filter through to lower cost delivery and all that sort of stuff for the economy as a whole. It may not be true for other sectors like heat and agriculture, but for transport a decarbonised sector is almost certainly possibly a lower cost one as well, ultimately.

Q142 **Chair:** Finally, the Climate Change Committee has estimated that the cumulative investment cost of the delivery of net zero, using 2019 prices, would be £1.4 trillion. Do you know how much of that cost will be related to the transport sector?

Rachel Maclean: We don't, because those are their figures. There is a huge amount of uncertainty. The point on this—building on what Mr



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Bruce has just said—is that that cost is also borne by industry. It is not all borne by Government or individuals.

Q143 **Chair:** That was my question. What proportion should be borne by industry, and what proportion should be borne by the taxpayer/consumer?

Rachel Maclean: When the Prime Minister set out his 10-point plan, he talked about those 10 points, and one of the key parts was crowding in private sector investment. We are already seeing that happening in a number of the measures. For example, the Chancellor has introduced green finance products such as bonds, I think, and the infrastructure bank and so on. That is all part of the overall Government response, to encourage and build a green finance industry to actually back some of these things.

This is how markets, commerce and industry work. It is where they are going to make the profits. That is why we are going to see investment going into these new technologies in the future. They are going to make money out of it, and they already are. That is going to drive increased investment.

Q144 **Chair:** The public, and indeed all political parties, have signed up to deliver net zero. The public seem very enthusiastic about it. Call me cynical, but as soon as the public start to see the pricing and how it will impact their wallet, I suspect they will be less enthusiastic. You will see some newspapers running campaigns against this, as has happened before. Are you concerned that as the public start to see how much it costs support for it may ebb away?

Rachel Maclean: I have been quite clear all the way through, Chair, and I want to repeat it for the benefit of doubt, that we understand that we need to take the public with us and to take an iterative approach. As a Government we will not be introducing significant changes in any sense. We know the impact that has on people's daily lives. This will not be successful unless we do it in a way that enables a fair transition for everybody, people on all income levels and with all abilities. That is at the centre of everything we have set out in our plan.

Chair: Excellent. That is a good way to end. Minister Maclean and Mr Bruce, thank you very much indeed. It is a vast area and a big plan. We look forward to continuing to monitor it. Thank you for its delivery.

Rachel Maclean: Thank you.

Chair: Thank you both.