



OFFICIAL REPORT
AITHISG OIFIGEIL

Net Zero, Energy and Transport Committee

Tuesday 5 October 2021

Session 6



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NET ZERO, ENERGY AND TRANSPORT COMMITTEE
8th Meeting 2021, Session 6

CONVENER

*Dean Lockhart (Mid Scotland and Fife) (Con)

DEPUTY CONVENER

*Fiona Hyslop (Linlithgow) (SNP)

COMMITTEE MEMBERS

Natalie Don (Renfrewshire North and West) (SNP)

*Jackie Dunbar (Aberdeen Donside) (SNP)

*Liam Kerr (North East Scotland) (Con)

*Monica Lennon (Central Scotland) (Lab)

*Mark Ruskell (Mid Scotland and Fife) (Green)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Jonathan Brearley (Ofgem)

Brendan Callaghan (Environmental Standards Scotland)

Professor Iain Docherty (Infrastructure Commission for Scotland)

Harriet Harmon (Ofgem)

Steve McMahon (Ofgem)

Tony Rose (Infrastructure Commission for Scotland)

Anna Rossington (Ofgem)

Collette Stevenson (East Kilbride) (SNP) (Committee Substitute)

Professor Karen Turner (University of Strathclyde)

CLERK TO THE COMMITTEE

Peter McGrath

LOCATION

The Sir Alexander Fleming Room (CR3)

Scottish Parliament

Net Zero, Energy and Transport Committee

Tuesday 5 October 2021

[The Convener opened the meeting at 10:00]

Decision on Taking Business in Private

The Convener (Dean Lockhart): Good morning. I welcome everyone to the eighth meeting of the Net Zero, Energy and Transport Committee.

Before we begin, I remind members that social distancing measures are in place across the Holyrood campus and ask them to follow those guidelines when entering and leaving the committee room.

We have received apologies from Natalie Don. Collette Stevenson is attending as a committee substitute.

Under agenda item 1, we must decide whether to take in private item 4, which is consideration of the evidence that we will hear today, and whether to take in private two items at our next meeting after the October recess, which are consideration of the committee's work programme and the committee's draft response on the Scottish budget. Do members agree to take those items in private?

Members indicated agreement.

Committee Priorities

10:01

The Convener: Under agenda item 2, the committee will hear from two panels. First, we will hear from representatives of the Office of Gas and Electricity Markets, which is an independent national regulatory authority. I welcome Jonathan Brearley, chief executive; Harriet Harmon, head of transmission charging policy; Anna Rossington, deputy director for retail transition; and Steve McMahon, deputy director for electricity distribution networks and cross-sector policy.

Thank you very much for joining us, and thank you for your written submission to the committee ahead of today's meeting, which provided very useful background.

I understand that Mr Brearley would like to make a brief opening statement.

Jonathan Brearley (Ofgem): Thank you, convener. I will talk a little bit about Ofgem's role and some of the urgent issues that we are dealing with. I will also touch on our wider work programme.

Ofgem is here to do two things: to protect customers today and, as part of that, to support the transition to net zero. We have a strong working relationship with the Scottish Government at all levels, and we have more than 500 people working in Glasgow. That allows us to think about things not only in the United Kingdom context and to ensure that we understand the issues affecting Scotland and the concerns that come from the Scottish Parliament and the Scottish Government.

Our work programme is fully focused on those two objectives. In the very short term, the unprecedented changes in the gas price are putting strain on the wholesale market. I will highlight two points to the committee. First and foremost, we are focused on the needs of customers. As those costs feed through to bills, that will clearly be of concern to all of us. Secondly, the systems and processes that we have in place are working to reassign customers from companies that have exited the market to new companies that can take them from there.

On our wider programme, Ofgem sees getting to net zero as a full part of our objectives in Scotland and in relation to the wider UK target. I will highlight some of the things that we are doing. First of all, we have price controls that configure the network so that it is ready to receive all the new forms of technology, such as electric vehicles, and for the changes that will be needed to ensure that heating uses low-carbon energy, whether it is low-carbon gas or electricity. Equally, we are

thinking about the charging regimes that underpin that. I am happy to expand on that.

Given the scale of change that we need to meet those goals, we think that further reforms to the market might be needed. We have been thinking about that, and we will be talking about it in more detail over the coming months. We must consider not only how we get to net zero but how we do so with an efficient and secure system that is run in customers' interests and at the least cost.

The Convener: Those remarks were very helpful in setting the scene. I will follow up on the disruption in the energy supply market in recent weeks. There has been a significant increase in wholesale and consumer prices in the UK and across Europe, although I know that your remit relates to the UK. It would be useful to get your views on the main reasons for that disruption and on how long it will last in the UK.

Jonathan Brearley: A number of things are happening in the international gas market at the same time. First, there is much higher demand than expected from Asia. We can compare the International Energy Agency's projections—what it thought would be needed—with what we are seeing now. Almost two thirds of the gas that the UK uses has been added to those projections. There is therefore much higher demand than was anticipated by the market.

A series of international factors are constraining supply. For example, it looks as though there is little over and above long-term contracts coming from Russia. There are also issues with some of the liquefied natural gas terminals. That all means that supply is constrained and that demand is higher than we would expect, which is driving the price rises.

On the duration of the disruption, it is very hard to tell. Our view is that we need to be open minded about how long it might last and plan for a range of scenarios.

The Convener: A number of electricity supply companies, primarily new entrants to the market, have collapsed in recent weeks. Do you, as the primary market regulator in the area, think that tougher licensing conditions should have been imposed on new entrants to ensure that they were hedging their exposure to volatility in the wholesale market?

Jonathan Brearley: Given the scale of change that we have seen in the wholesale market, we will consider that. However, the issue is affecting not only companies that did not hedge; all companies in the market are feeling a huge amount of strain, given the scale of change and the wholesale cost rise. To give the committee an idea of that scale, we are talking about a gas price that is six times

higher than it was last year and that went up by 33 per cent last week.

At Ofgem, we are ensuring that our processes work when companies exit the market. Collectively, we need to have a wider conversation about what this means for the future. However, our focus right now is on making sure that customer interests are looked after.

The Convener: I will ask some final questions and then other members want to come in on the topic.

Does Ofgem have sufficient regulatory powers to avoid such a situation happening again? With the collapse of nine energy suppliers in recent weeks, how will you ensure that effective competition is maintained in the marketplace while maintaining stability of supply?

Jonathan Brearley: In conjunction with the Secretary of State for Business, Energy and Industrial Strategy, we laid out three principles as to how we would deal with the situation: first and foremost, focusing on customer interests; secondly, not bailing out failing companies; and, thirdly, maintaining diversity of supply.

We are keeping a firm eye on ensuring that the market has a diverse set of players as it comes through this period. In essence, our job right now is to ensure that we run the industry systems and processes, but we are, of course, talking to the Competition and Markets Authority and others to make sure that we come out of this period with a highly competitive market.

The Convener: My final question is about the expected price implication for consumer bills as a result of bailing out energy supply companies that have collapsed. I know that there are discussions about a bad bank and about how the old liabilities of the failed companies will be dealt with. Is there an overall estimate of the impact that the disruption will have on consumer bills?

Jonathan Brearley: It is too early to tell at this stage. We are still working through that, there is still change in the market and it depends on the trajectory of the gas price over time. However, the main point is that the impact of the change in the wholesale market will feed through to customer bills, so the gas price change alone is something that we all need to focus on.

Fiona Hyslop (Linlithgow) (SNP): Good morning. We know that, historically, transmission charges have disadvantaged the development of renewables in Scotland. On Friday, you issued your call for evidence on Scottish locational network charges, in which you state:

"we do not consider simply reducing TNUoS tariffs for some parties (or in some regions) to necessarily be a desirable outcome in its own right, and we expect that

changes will be assessed in accordance with our statutory duties, the CUSC Applicable Charging Objectives and the legislative framework in which we operate.”

Do you consider Scotland to be a region or a nation? We have a national Parliament.

You refer to

“the legislative framework in which we operate”.

Does the legislative framework include the Scottish Government’s net zero commitments, or are changes required? If it already does, how does it do so? Does it include the Prime Minister’s commitment to 40GW of offshore wind generation by 2030 or the impending commitment to make Great Britain’s electricity generation zero carbon by 2035? If the legislative framework is not fit for purpose, when and how should it be changed?

Jonathan Brearley: I will start with our statutory duty, which, broadly, is to protect the interests of current and future consumers. We have been clear—certainly since I started in this role—that we see getting to net zero as a fundamental part of that. We are open minded about whether those duties have changed, but we are not waiting for that. All of what Ofgem does is about protecting customers today and supporting the country to get to net zero. The Scottish net zero goal is compatible with all that. We are absolutely supportive of getting to that goal and of the commitments that the PM has made. The regulator wants to push forward to make sure that we meet all the interim goals to get ourselves to net zero. Without going back to the current situation with the gas wholesale price, our view is that one way to mitigate such risks is to diversify the supply base, which is another reason to get to net zero.

With regard to our call for evidence on transmission charging, we are opening up a question and thinking long term about the future. We welcome representations from all parties and we would love to progress that work. We are doing that work now in order to reflect on the incentives in the regime as a whole because, in order to get to net zero, we need fundamental change.

Fiona Hyslop: There is clearly a recognised tension in the regulatory framework between pursuing net zero and your historical role in relation to consumer prices. The 26th United Nations climate change conference of the parties—COP26—will provide a showcase for investment in Scotland, but the modelling for your “Access and Forward-looking Charges Significant Code Review: Consultation on Minded to Positions” states that

“we observe a shift in the location of new generation capacity in our model”

and that, under the transmission reform option,

“we observe less investment in embedded generation capacity in Scotland and a corresponding increase in distribution zones further south.”

Does that not undermine the Scottish Government’s attempts to pursue our net zero targets? How can Ofgem be sure that building wind farms in England—which, as we know, is less windy than Scotland—will not make the cost of getting to net zero higher overall?

Jonathan Brearley: We are trying to make sure that we have the right incentives in place for the system as a whole. Generation is located where it is most efficient. To come back to the bigger picture, we are pushing a route that creates huge capacity for Scottish renewable generation. We are talking to the system operator about making sure that we have a strategic offshore grid, so that offshore generation is able to connect efficiently into the UK. We want to make sure that all the renewable capacity—including, for example, in the Shetlands—is taken advantage of.

As I mentioned, we are also thinking about how the market might evolve in the future, so that we make the most of all the different options for net zero. For example, we are thinking about the benefits as well as the costs of electric vehicles. We are working with our charging regimes to make sure that the picture as a whole makes sense, and that includes making sure that we have the most efficient way to get to net zero.

Mark Ruskell (Mid Scotland and Fife) (Green): I will follow up on that point. Recently, Scotland has upped its ambition for onshore wind, with a potential target of up to 12GW of onshore wind generation by 2030. The offshore wind target is sending a very good signal to offshore wind developers, and ScotWind is coming on as well. Do you not see the transmission charging regime acting as a block to the delivery of that? How cognisant are you of those targets in your forthcoming review?

10:15

Jonathan Brearley: I will pick that up, and perhaps Harriet Harmon will want to come in, as our charging expert. This is a chance for us to have a substantial conversation about how the charging regime plays out—we issued the call for evidence to open that conversation. All that I will say at this stage is that we are open minded about where that conversation goes, and that we will be mindful of all targets and aspirations when we design the regime. However, we must ensure that we stick to our goal of getting to net zero at least cost to consumers.

Harriet Harmon might want to provide more detail about the scope of the review and how we are approaching it.

Harriet Harmon (Ofgem): Good morning. I agree with the points that Jonathan Brearley has outlined. We have put out a broad call for evidence, and we are keen to hear from consumer groups and a variety of stakeholders from within and outwith the renewables community. We want to reach as many different forms of stakeholders as we can, and we want a variety of information to come back, to inform what we do next.

On the current charging arrangement, we have issued in the call for evidence an outline of some of the areas about which we think that there are questions. That is not to say that we have a concluded view. It is not about setting out a list of things that do not work; it is more about setting out those areas that have a material effect on the absolute value of charges. There are questions about whether those are still the right assumptions, whether that is the right treatment and whether that is the right degree of cost reflectivity in the broader context of a very different energy system than we had when the charging regime first came in, 20 years ago, and in the context of the sweeping reforms that we might see over the next 10 to 15 years to get us all to our net zero targets, whether that is the UK target or the Scottish target. We are cognisant of the variety of targets, and we are absolutely committed to delivering net zero.

The call for evidence will support us in our thinking around how we can utilise the charging regime not to preclude net zero. There are many potential ways to get to a net zero system. We want a charging regime that is open to and would support all those different ways. Through the call for evidence, we want people to tell us what stops them from investing and what makes it hard for them to compete, or whatever their perception is, such that we can assess whether, to answer the original question, there is a block to the net zero targets or to renewables deployment.

As Jonathan said, we are open minded and encourage a variety of responses.

Jonathan Brearley: I will just jump in with a final point. For a while, many members of this committee, Scottish stakeholders and the Scottish Government have been asking us to open up the question and that is what we are doing. I am looking forward to having comprehensive engagement. As Harriet Harmon said, we are being as open minded as possible in our approach.

Mark Ruskell: Okay. I am sure that you will get a lot of responses.

Is the fundamental problem that we have inherited a grid largely from the 1950s, and that all the locational signals are based around that old-fashioned grid, which is based on coal-fired

generation? We do not have any coal-fired generation left in Scotland. How do you see your decisions, as well as the charging and investment, fitting in with a grid that is fit for the 2030s and beyond, when we will have a completely decarbonised electricity system?

Jonathan Brearley: I will point you towards some of the work that we have done and that we are currently working through to explain how we see that. You are right—the grid was designed for the 1950s and it worked really well for about 50 years. When I started working in the energy sector, we still had big fat power stations and people at the end of a line who flicked a switch on and off.

If you look forwards to 2030—this is the case under almost any scenario—you will end up with a very different configuration on the grid. There will be much more local generation, and there will be new renewable generation; there will also be resources such as batteries and storage, which will form part of the electric vehicles that will be joining that grid.

The country is facing a choice: either we try to manage the situation by building a lot of copper in the ground and running a fairly inefficient system or we have a much more flexible system in which we can move demand by, for example, changing the times at night when people can charge their cars to manage the costs of generation and investment in the network. We believe that, by doing that, you would have a much lower-cost system.

The question of transmission charging, therefore, is nested in the wider question of how we make a reality of this smarter and more flexible system that will bring down costs for customers. Ofgem is increasingly of that view and is pursuing that flexible future as one of the key drivers of a successful transition to net zero to meet not just climate goals but security and cost goals.

Liam Kerr (North East Scotland) (Con): Good morning. I have three quick questions. First, do you expect the costs of renewable electricity to fall as more infrastructure is built? If so, could renewable electricity ultimately become an alternative to gas for heating?

Jonathan Brearley: One of the massive pleasures in my career was starting out with the teams that initiated the policy for the offshore wind sector. Given that the price of that energy was six times the retail price when it started, offshore wind can be seen as a case study in how technological innovation can reduce costs. Like onshore wind, it now competes with conventional forms of generation such as gas and coal, and we absolutely see it playing a big part in the future of the electricity system. However, what we need to

think through is how we get a system that is firm and resilient enough to manage intermittency, and that is why pursuing options such as battery storage and the kind of flexible grid that I described earlier is key.

As for heating, we have, as I have mentioned, looked at different scenarios for the future, and one of the key dimensions is how the electric heating versus low-carbon gas heating issue will play out. We are open minded on the option, but electric heating is a serious option that we should be considering.

Liam Kerr: Have you done any modelling—or are you aware of any—on the financial implications for households of decarbonising transport, buildings, power and so on?

Jonathan Brearley: The Committee on Climate Change has come out with its own assessment, which I think is roughly 1 per cent of gross domestic product. However, once you start to unpick it, the picture becomes quite complex, and what you will see, in my view, is an increasingly optimistic picture of the costs of transition for the power sector. As I have said, and as very strong evidence that we have shows, there are a number of technologies that are genuinely continuing down the cost curve. However, the picture is more complex with regard to transition for heating, and we need new technology and more innovation in that area. Those are the two biggest dimensions from a household's perspective.

Going back to electricity, I think that one of the fascinating things about electric vehicles is that the running costs are already very low, and the job of manufacturers now is to bring down manufacturing costs to ensure that we do not have such a price differential between cars. We are optimistic that that will happen.

Liam Kerr: Given all that you have said, does Ofgem have a view on how the capital costs of decarbonisation can be paid for? Are there other ways of doing that other than through consumers' personal bills? Could public funds be generated and used, or does responsibility for paying for this devolve ultimately on the individual consumer?

Jonathan Brearley: We think hard about the distribution implications of what we do, and we have made very granular assessments of Ofgem's own decisions, but ultimately the question whether this falls within the electricity system and therefore on bills or whether it is something that can be dealt with through taxation is a matter for the Treasury and the Government. It is up to them to make that trade-off.

Liam Kerr: I am very grateful. I have no further questions, convener.

Collette Stevenson (East Kilbride) (SNP): I want to focus on your action plan and future work programme. How is Ofgem engaging with consumers to ensure widespread understanding of and buy-in to net zero transition?

Jonathan Brearley: We do a great deal of work in three areas. First, we have direct contact with different consumer panels and groups. We work hard as an organisation to create links between the non-governmental organisations that support consumers and the people who work in the organisation. I talk regularly to customers. Recently, I was in the north of England talking about a trial involving low-carbon gas and how people felt about that. That is a fundamental part of my job, because we realise that things that might be imagined to be part of the plumbing create a deal of concern for the people who are involved. We need to be very mindful of how people feel about some of the technological changes that we might make.

Secondly, although we talk publicly about all those issues and are engaged in a wider public debate, we have a very close relationship with those NGOs that work with consumer groups—particularly with those who are most vulnerable. What we have found during the Covid crisis, for example, is that that relationship is key for us in understanding all the different sorts of issues that customers have faced over the past year and a half, during which they have been put under strain in all sorts of different ways.

Collette Stevenson: You have mentioned new technologies, better use of data and artificial intelligence. Is there a role in that for you when it comes to the zero carbon energy system? What work is Ofgem doing to maximise those opportunities?

Jonathan Brearley: The flexible world that I was describing, in which we will need to become more granular with regard to decisions about turning things on and switching things off—for example, moving the times at which people might charge batteries—absolutely needs a different kind of platform to support it, and that means that the public will have to be much more data enabled than in the current system. The role of data is fundamental to getting to that more efficient and more flexible system.

We have built up quite a large data team in Ofgem. We have a chief data officer and we are beginning to think through, almost from first principles, what that new world needs to look like and what data requirements and standards are behind it, and, therefore, how Ofgem should intervene to support some of those things to happen.

I will give an example. One area in which we see a big role for data is in local networks. We are currently in the process of re-agreeing those local network settlements. Data is certainly a part of that. I ask Steve McMahon to come in and talk a little about that.

Steve, are you online? Whoever is compère needs to unmute Steve.

Steve McMahon (Ofgem): I think that I have been unmuted now.

As Jonathan Brearley said, we will get huge changes over the next 10 years or so, certainly when it comes to electric vehicles and to the way in which we heat our homes and businesses. In that transition, consumers will engage very differently with regard to how they get their energy. Data is a big part of that.

As you have heard, over the next 12 months, we will be settling the next set of RIIO—revenue=incentives+innovation+outputs—price controls for the electricity distribution networks. At the moment, we are at the business planning stage with the network companies, including the two Scottish distribution network operators that operate the local grids in Scotland. A key part of our requirements for those networks concerns how we transition to a smart, flexible and data-enabled system that can give us real-time information on how people are using their energy and how the system can then manage that to optimise the costs, so that we can use more technology in order, for example, to charge electric vehicles when demand is not as high—that is, not at the peak evening periods. When it comes to the operational aspects of the distribution system, that enabling technology and that investment in data capability for network monitoring are fundamental parts of our price controls, and they will be fundamental parts of the decisions that we will take next year.

The Convener: Mark Ruskell has a supplementary question and will be followed by Monica Lennon.

Mark Ruskell: How is the smart meter roll-out progressing across the UK? A lot of constituents have been in touch with me and said, “Oh, I’ve got one; it was installed but it doesn’t work now.” It is really patchy. Some people are able to get them and some are not. Is it best that the smart meter roll-out is being done through energy companies—some of which are going bust at the moment—or would it be better that it is rolled out consistently through DNOs, which have more of an overview of distribution and the grid in a particular region? What I am seeing is just a bit of a mess at the moment.

Jonathan Brearley: Anna Rossington can come in on the status of the smart meter

programme. I will then pick up the wider point about who is best placed to make that change.

10:30

Anna Rossington (Ofgem): The smart meter roll-out programme is progressing and is successfully rolling out a large number of smart meters. Last year, Covid caused quite significant problems with regard to suppliers rolling out the meters, which led to the Government’s delaying the new framework for the roll-out by six months. At the end of this year, a new framework will come into place, which will place tight roll-out targets for the companies to achieve. The programme is at quite an advanced stage and the Government is still confident that the targets will be achieved.

Jonathan Brearley: To pick up the wider point about who is best placed to roll out the meters, we are quite far down the programme now, so we feel that the model that is being used will work. The rationale behind our model is that one of the issues with local network companies is that they do not have the same direct relationship with the customer as the retailers have. Given that what we are trying to build out of smart meters are different products and services that will make a huge difference to the way that customers can use their energy, particularly when we get to the more flexible world that we are talking about, we feel that it is right that the retailers should lead that movement, because they are the ones who need to adapt their packages behind it.

Monica Lennon (Central Scotland) (Lab): I would like to bring us back to the UK energy crisis. A report that Citizens Advice published last week found that consumers who are moved to a new supplier typically pay £30 a month more than before.

Jonathan Brearley said that all of Ofgem’s work is about supporting the consumer. How can Ofgem ensure that effective competition is promoted in the wholesale and retail markets while ensuring that energy is affordable to all consumers?

Jonathan Brearley: The price cap, which provides a fair reflection of the costs that are in the market, protects all consumers in that market. Indeed, when we consider current wholesaler costs, the price cap provides good value for customers. We feel that, in these extraordinary times, our measures protect customers’ interests and ensure that the passing through of those wholesale costs is managed in a way that best protects those interests. Some customers on lower tariffs were with companies that were unable to fulfil those lower tariffs, and we try to manage the transition as best we can.

Anna Rossington can say more about the specific numbers that you mention. We are working with Citizens Advice to understand what is behind them.

Anna Rossington: As Jonathan Brearley said, customers were on cheaper deals previously and many of those have now been withdrawn with the rapidly increasing wholesale prices. The price cap means that the capped tariffs now tend to be the cheapest tariffs available. When a supplier exits the market, Ofgem's safety net means that those customers are transferred on to the capped tariff, so they are protected and we ensure that they pay a fair price for their energy.

Monica Lennon: The issue is important. Citizens Advice goes on to say that many more people will face fuel poverty this winter and could face

"turning off their fridges and freezers, relying on hot water bottles for warmth and requesting support to buy extra duvets and blankets."

None of us wants to live in such a society.

Energy companies and charities have called for the introduction of a social tariff—that is different from what Anna Rossington has talked about—for those who are already in fuel poverty, which would offer a tariff below the price cap. How could that be implemented to ensure that the most vulnerable households are protected from the recent price increases? More generally, given our interest in net zero, how can we be sure that the journey to net zero will not push households further into fuel poverty?

Jonathan Brearley: We need to be clear that changes in the wholesale price will be extremely difficult for customers to manage, not just through this winter but as the prices feed through to bills later. We have something called the warm home discount, which is a discount for vulnerable groups on the tariff that is in place. I encourage all customers to apply for that. We always encourage customers who are facing financial difficulties to contact their supplier to get access to the range of support and help that is available. For example, if someone is on a prepayment meter, they will have access to emergency credit. We have rules in place that mean that companies have to put people on an affordable repayment plan if they are falling behind in their bills.

My view is that we all need to work together—the Scottish Government, the UK Government, Ofgem and the industry—to support customers as best we can through what is undoubtedly a big change in the cost of energy. It has already been faced, but cost pressures will undoubtedly feed through to bills later as well.

Liam Kerr: I have a question off the back of Monica Lennon's questions. The Scottish

Government was planning to start an energy company. Did Ofgem see those plans? Does Ofgem take a view on whether the Scottish Government's energy company would have achieved on its duty of reducing prices to consumers?

Jonathan Brearley: We do not take a view on whether different forms of ownership make a difference to a company's capacity to deliver for customers. Our experience shows that the most important thing is the way in which a company is set up and, ultimately, how it manages the transition between the risks that are in the market and the prices that are paid by customers. Even in today's market, with the current changes, we see that a variety of ownership models can achieve that. We do not take a particular view on the success or otherwise of the proposal, and we accept that different models can be successful in the market.

Liam Kerr: The Scottish Government is now proposing an energy agency. What impact do you foresee that agency having? Will it achieve all that an energy company could achieve in both prices and decarbonising the energy system?

Jonathan Brearley: We would have to look at the details of that proposal and see how it might work with some of the schemes that we run. *[Inaudible.]*—right now is that there are lots of things that we need to do, including working on energy efficiency and other interventions to ensure that we manage bills for customers. We would be happy to work with the Scottish Government on its energy agency proposal. I do not have a view right now as to whether that will—*[Inaudible.]*

Liam Kerr: Thank you.

Jackie Dunbar (Aberdeen Donside) (SNP): My first question goes back to the issue of supporting consumers, which Monica Lennon raised. It made me think about prepaid meters and the fact that customers who use them tend to get quite a raw deal. What is being done to protect folk who have prepaid meters? Is there anything that Ofgem can do about the cost of getting them removed? If someone moves into a property and a prepaid meter is already there, it is expensive to get it changed. I would welcome your comments on that.

Jonathan Brearley: We have strict licence conditions on how suppliers should behave to all customers and, in particular, the most vulnerable. There are really clear requirements around access to emergency credit, for example, which might tide a customer over if they are facing financial difficulties. For all customers, there is a requirement that companies put them on an affordable repayment plan. Anna Rossington

might want to come in on the specifics of removing meters.

An aspect of the smart meter programme that we talked about earlier has been the really big change in the prepayment market, because such meters allow people to top up in a variety of ways.

The last thing that I would say about how we and the industry have been working over the past year and a half relates to the fact that prepayment customers faced some of the biggest issues in the Covid crisis. If someone is self-isolating and they have a meter that they need to top up physically, they will have to find help to do that. One thing that the industry, Ofgem and the Government, working together, did really well was identify such issues early on and find solutions where we could. That meant working with community groups and, in some cases, companies sending someone out to support people to top up their meters.

Anna, do you want to address the specific issue of removing PPMs?

Anna Rossington: As you have said, we have strict licence rules for all aspects of this. The roll-out of smart meters is really key in reducing the cost and hassle that are involved with PPMs, because they enable people to switch easily between suppliers and to pay their bills. It will also make the whole process more cost effective, which will reduce the bills for PPM customers.

There are two other things that I should flag up. First, the cap also applies to PPM customers, which means that they, too, are protected. Secondly, if a supplier goes out of business, PPM customers are the first on our list of people we have to look after and who we must ensure are transferred seamlessly.

Jonathan Brearley: We will get back to the committee on that issue.

Jackie Dunbar: I want to change the subject again and ask about the issue of hydrogen, which we have not really touched on. What role does Ofgem have in the hydrogen market and the hydrogen economy? What work is it doing to prepare for and regulate that market?

Jonathan Brearley: That is a huge area for us, and we are highly enthusiastic about it. When I was talking to the group of customers that I mentioned earlier, we discussed hydrogen blending and how they felt about hydrogen being used in part for heating and cooking. I have visited a fully hydrogen-powered home and have seen how the whole thing can work in practice. It just shows that these technologies are possible.

Clearly, the UK Government will lead in the design of the regulatory regime and the wider economic incentives that will be available for generating hydrogen, but Ofgem is likely to have a

large role in ensuring that the network evolves. As for what we would do if hydrogen turned out to be the most cost-effective option, the fact is that changing and innovating within the gas networks is already a really important part of our work. I know that Steve McMahon is very passionate about it. We have built a huge amount of innovation funding into the network settlements and, as a result, I expect to see a lot of proposals for taking this to the next stage of development, understanding the implications of hydrogen on a commercial scale and ensuring that, if it is the right option, we have a network that is ready.

Steve McMahon will say something general about the innovation fund, which is a big part of our thinking on the matter.

Steve McMahon: Absolutely. It is all about preparing the gas networks for the transition to a low-carbon future, understanding the feasibility and the costs of hydrogen in the gas grid and getting to a position where we can clearly demonstrate that the hydrogen network is technically and economically feasible, safe and acceptable to customers.

As Jonathan Brearley has just said, a huge amount of network innovation funding has gone into that. Last year, for example, we had Scottish Gas Network's H100 project in Fife, and there is a lot more like that. At the back end of August, we announced the arrangements for the new strategic innovation fund that will apply through the RIIO-2 price controls, and a heavy focus of that is on hydrogen and the heat challenge more generally. We can flex the available funding to explore such innovation schemes, depending on need and the value-for-money case.

Jackie Dunbar: Finally, what are your expectations of COP26, which is just around the corner? What would you like to see come out of it to achieve the net zero targets?

Jonathan Brearley: Perhaps I should talk about the role that we are playing in COP26 and some of the things that we are doing. Early in the process, we started to talk to other regulators and market operators in a wide range of countries in order to share experience on how we are approaching net zero and in order to learn from them.

10:45

One thing we are hopeful about—*[Inaudible.]*—on a very micro scale is to build that network for—*[Inaudible.]*—that we would like to see an international network of regulators created whose sole role would be to share the challenges that we are all facing. I have spoken to regulators in fully publicly owned systems and I have spoken to regulators in completely different regulatory systems, and it is remarkable how similar the

challenges that we face are. I would like to make sure that, as an organisation, Ofgem works with its international partners not only to spread our good practice but to learn from them and to understand other people's approaches, which will undoubtedly sometimes be more successful than what we do.

With regard to COP26, I am hopeful that we will continue the level of ambition not just in the UK but globally. I have worked in climate and energy policy for 15 or 20 years, and the paradox, for me, is how far we have come but how far we still have to go. The risk is that, if we do not get sufficient international ambition, it will become harder to continue domestically and, more important, we will not ameliorate some of the big effects of climate change that we know are there. I think that we all should use two voices: one that says that we have to push further and faster and another that recognises that there has been a huge change just to get to here.

Jackie Dunbar: Thank you. That was my final question.

Mark Ruskell: Going back to hydrogen, are you not concerned that, if the gas grid was up to 20 per cent hydrogen, we would, in effect, be building our dependency on natural gas, with all the price volatilities that we have seen in recent weeks—and, of course, all the carbon as well? Would we not be locking in that infrastructure of high-carbon assets into the 2030s and beyond?

Jonathan Brearley: What we are doing with that project, in particular, is testing and trying out a whole set of different approaches. There are going to be some big trade-offs between low-carbon gas and electric heating. In a sense, what we have to understand better in both dimensions is the cost disruption and the infrastructure change that are involved in each.

There are different ways of producing hydrogen, and green hydrogen will come from renewable sources, potentially. I will give you a pen portrait of our thinking and how the acceptance of that thinking is evolving. It seems that hydrogen is getting a lot of attention from some heavy industry, but there is an open question about heat and how heating will work. It is really important that, over the next few years, we push the innovation programme so that we get a much fuller understanding of the potential and the costs of different fuels.

Going back to the point about the current situation and our reliance on gas, however we do it, we need diversification, and I think that we are going to get that in the electricity sector. Remember, too, that that sector is going to power a lot of our transport in the future.

Fiona Hyslop: Jonathan, I would like you to think about the strategic space and about the

timescale. You said that the world has to move further and faster, but that is not always going to be driven by the market—clearly, legislation and regulation can drive it. If we are going to make that shift, what do you see as a reasonable timeframe within which to meet the UK targets on climate change and to make the shift from carbon to renewables? What is your strategic thinking on that?

Jonathan Brearley: We would look to a number of different areas to answer that question.

My internet has gone slightly shaky, so I am just checking it. It might seem a silly request, but, if you cannot hear me, let me know. If you can, that is great.

If we look to the Committee on Climate Change on the trajectories that we think we will need, it is clear not only that we need to continue the big shift in the power sector but that we need to accelerate our transition to renewable and other low-carbon technologies such as carbon capture and storage and nuclear. We also need to see an equivalent shift in transport, and the Government's goals for 2030 accept that we are going to need millions of electric vehicles on the system to support that. However, to me, the biggest question that we face collectively is about how we are going to heat our homes and businesses. We need to work hard on unlocking the potential of the possible solutions that are already out there. That is where we need to put continued effort.

Given the scale of the change—there is the potential to have more than 10 to 12 million electric vehicles on the roads by 2030—we need a flexible, smart system. If we have that system in place, the cost of adding all those vehicles will be a lot lower and those batteries will provide huge benefits of stability, security and the ability to manage other costs on the system.

Fiona Hyslop: Looking at the scale of the change—whether it is in transport, heating or other big areas—the more infrastructure that we have, the more the costs can come down. It goes back to where the generation potential is. In the Scottish context, the Beatrice wind farm is being charged an average of £4.50 per unit of energy, whereas the similar Greater Gabbard wind farm off the south-east coast of England is being charged £1.50 per unit. The tension that we mentioned is clearly there, and regulation has a part to play. How do we get the infrastructure shift in order to get that generation? Scotland has 25 per cent of Europe's offshore potential. How do we translate that, on a cost basis, into mass infrastructure for more renewable distribution if generation is being severely handicapped by the current regime?

Once you have answered that question, I want to get on to what steps we need to take in relation

to energy legislation and when we need to take them. We do not want to miss the boat by missing legislation that is required in order to make those changes. If you could address that issue, that would be helpful.

Jonathan Brearley: Can you hear me? I apologise for the fact that my internet is shaky. Are you asking about the scale and pace at which we need to reform the system and the charging system around it?

Fiona Hyslop: Yes, including the point about transmission. If we miss the boat on changes, how will we get the pace and scale that we need within the timeframe for the “further and faster” drive that you were talking about?

Jonathan Brearley: My view is that some very big changes are needed in order for us to make that strategic step. For example, with regard to the transmission system as a whole and the build that will be needed to support offshore wind, we are strong supporters, as people know, of having an independent system operator to guide that investment and ensure that we can make that strategic change. That system operator needs to make sure that we have an integrated offshore regime that allows the huge step change that we need to make in offshore wind generation as well as allowing us to begin to plan and run the system at a more local level.

That will take time, so, alongside that, through our network regulation, we need to make sure that we have capacity to get the necessary investment in place. Steve McMahon is leading the current set of price controls. When we designed the first three of those, we said that there was an initial allocation of roughly £30 billion and that we had designed a process to allow companies to come to us and build more network if that was what they needed to do. In essence, we have a system that makes sure that we can run the system that we think we need today but that can also adapt very quickly if we need to build out more tomorrow. You will find that that is played through in our local network settlements as well as our national network settlements. In that way, we will make sure that networks can invest—in some cases, ahead of need—to make sure that we meet our net zero target.

Steve McMahon: I agree with that. Significant investment is already happening across electricity networks in Scotland, whether that be at the transmission or the distribution level. A lot of grid reinforcement projects are coming through so that network constraints do not obstruct the export of power across the country.

To pick up on the last point that Jonathan Brearley made, we are scaling up the investment ahead of need, through our approach to strategic

planning, particularly on the transmission network. That is essential because, in the past, emissions have been created when generators were connected to the grid without the associated network capacity being in place, but with a commitment to sort it out later. Now the investment is catching up and, in the future, we will anticipate in advance so that network constraints are not an obstacle. That is a big feature of the transmission planning. We also have the distribution networks and local grids. We are going through the process of settling those price controls, and we will take the decision on those next year. The same driving principles apply in terms of making sure that the networks are not a constraint on achieving net zero and that we do so in a way that is fair to consumers.

Fiona Hyslop: Diversification of energy needs to be “both/and” to get to where we need to be, as opposed to “either/or” green hydrogen and others. With regard to the timescale again, how do we know that the necessary legislation will be in place in advance of that transition? When do regulations have to happen to unlock that potential?

Jonathan Brearley: I will explain how we think about our regulations. We use those scenarios to 2030 to ensure that we build a system that is fit to allow all the millions of electric vehicles, for example—[Inaudible.]—which really fills a fundamental part for the business planning—[Inaudible.]—going through.

Equally, the planned energy bill is vital to ensuring a system of governance changes—[Inaudible.]—underneath to have a sustainable system for the future. In a sense, we look to people such as the CCC to give us a stake in the ground to ensure that we understand how much a system needs to change, which is what drives our thinking around how to shape our regulatory design. We apply the regulations—[Inaudible.]

The Convener: I would like to come back to something that Steve McMahon mentioned in relation to consumer behaviour and the concept of behavioural change. One of the issues that other panels have raised is the extent of the required behavioural change on the part of consumers. What is your perspective on the main elements of behavioural change that will need to happen in the years ahead, and what role will Ofgem play in them?

Jonathan Brearley: The way in which we all use energy will need to change, and, as a result, we will need to adapt how and when we use it. That process has a number of different elements to it, one of which is taking advantage of the potential of the new technologies that are available.

I will give a simple example to explain Ofgem's role in that process. We know that, if we charge our electric vehicles in a smart and flexible way, the consequent costs for the system are much lower than if we charge our vehicles at the same time as we use the grid for many other things. Equally, we know that we can manage that process in a way that allows consumers to meet all their needs and allow the system to optimise around them through smart chargers. Governments are considering how to ensure that product standards in BEIS are applied so that a customer not only gets the smart charger but also a default set of tariffs.

We see our role as working with the Government to shape those processes and, equally, ensuring that, when we do that, the charging regime and all the costs underneath it really support consumers to get the right cost. We need to get the economics right, but the economics will not be enough and we will probably need a wider set of behavioural interventions to support customers on that journey.

I have highlighted smart charging, but one nut that we still need to crack is energy efficiency. We all need to do what we can to prevent our homes from using more energy than they need to, in order both to support us in our journey to low carbon and to reduce bills.

The Convener: That brings us to the end of our allocated time. I thank the panel once again for joining us today. We appreciated hearing from you. Given the range of issues that you have raised this morning, we would like to have another meeting in the near future to consider some of them as they progress.

10:58

Meeting suspended.

11:07

On resuming—

The Convener: Welcome back everyone. I am pleased to welcome our second panel of witnesses: Brendan Callaghan is the interim chief executive officer of Environmental Standards Scotland; Tony Rose is a former director of the Infrastructure Commission for Scotland; Professor Iain Docherty is a former commissioner of the Infrastructure Commission for Scotland; and Professor Karen Turner is the director of the centre for energy policy at the University of Strathclyde. Thank you for joining the committee meeting today. We appreciate your input. We also thank you for the submissions that you made to the committee in advance.

We have roughly one hour and 15 minutes for this part of the meeting, and we have a number of topics to cover. Please bear with us while we ask our questions of you.

My first question is about scrutiny of Scottish Government policy in the transition to net zero, which is one of the committee's main responsibilities. Your submissions to the committee make it clear that we are looking at a vast number of overlapping policy initiatives and a wide range of targets and metrics that will need to be monitored. With the best will in the world, the committee will not be able to keep track of every single one of those targets. What key policy initiatives and key targets and metrics should we be monitoring? What policies and targets will have the most impact on shifting the dial towards the climate change target?

Perhaps you could start, Professor Turner, because measurement of policy impact is covered in the net zero principles framework that is described in your submission to the committee.

Professor Karen Turner (University of Strathclyde): Thank you for inviting me along this morning. The essence of what we submitted in advance is that, when we are thinking about net zero, it will be a huge transition in the economy, in how people live, in how they earn and spend their income, and in what things cost. As you have said, convener, this is a huge public policy challenge. It is not just a climate policy challenge; it will cut across economic policy, social policy and industry policy, and it is very challenging to bring all those parts together.

That is probably particularly true in the Scottish context because we are operating with a devolved Government that does not necessarily have all the levers and powers in place. A lot of co-ordination will be required between the devolved nations and the national Government. We have identified issues around how we really need to understand who ultimately pays for things, how they pay for them and when.

If we adopt an approach in which industry has to pay for things, industry will try to pass that on through its prices. As we start to incorporate the price of carbon into how we pay for things and the price of our consumption, that will impact on the cost of living. Where it is difficult to pass on costs—such as in the complex international supply chains in which many companies, including those at Grangemouth, for example, operate—companies lose competitiveness and the costs are transmitted to households through workers losing their jobs and reducing their spending. The picture is very complex.

I am an economist, not a technologist, so I am not going to pick out the best technological

pathways. I am concerned about how we do things in a way that impacts on the continued prosperity of the Scottish economy. I was one of Scotland's just transition commissioners. Ideally, we should not be looking just to sustain what we have now, because there are a lot of inequalities in our economy and our society. Rather, we need to consider how we can work in ways that start to improve on those inequalities.

The metrics that we need to be looking at are the ones that concern people's lives, such as the number and quality of jobs and how easy it is for people who work in carbon-intensive sectors and who are often—as Office for National Statistics data shows—people from low-income households, which accentuates the challenge of ensuring a just transition for workers.

We are looking at the level of wages, the quality of jobs, training opportunities that allow people to be more mobile, and earnings. We really need to keep an eye on what is happening to levels of income from different sources—not just employment—in different households. We also need to look at what is happening to the cost of living and consumer prices—although those are UK metrics—and at where costs are being passed on as a result of the green economy expanding.

The challenge is complex. For example, if we ask the petrochemical industry to pay more, even in a global sense, that will feed back to us. People consume so many things from that industry—from toiletries to the way their food is produced and packaged, to the furniture in their houses. If those costs start to go up, that introduces a wider concern. We have been vexed by energy poverty, but that is to do with energy bills. When we start to move into a space in which prices will inevitably rise, carbon poverty would cover a wide range of goods and services.

We should always have our primary focus on metrics that concern people's ability to earn a living and what it costs them to live.

The Convener: Before I bring in other witnesses, I want to ask you about the key metrics that you just covered. Is there consensus among policy makers in Scotland about what the key metrics should be and about what should be focused on, or is that debate still being had? I get the sense that the answer is probably the latter and that there are not yet five or 10 settled key metrics that are central and are agreed by most policy makers.

11:15

Professor Turner: Yes—there is probably broad consensus on higher-level things that need to be monitored, but you are right that discussion and debate are needed to tie down what

specifically we need to monitor and how we will monitor. Crucially, as we are operating in the devolved context, we need to decide how we identify what causes what and what is under the control of decision makers in Scotland. We need to track how things are changing and to understand why they are changing. Therefore, it is not just a question of identifying metrics; we need to identify metrics that things can be tracked and effected.

The Convener: Thank you for that. I ask the same question of Tony Rose or Professor Iain Docherty from the Infrastructure Commission.

Professor Iain Docherty (Infrastructure Commission for Scotland): Thank you very much for the invitation to speak with you this morning. I will make some remarks about the transport sector, which is the area in which I am most heavily involved. It is somewhat different because we know what problem we have to solve: we need to reduce the level of car traffic in the economy.

At the moment, transport emissions are about 40 per cent of the overall inventory. About 40 per cent of that 40 per cent is allocated to traffic. That number has been pretty stubborn and has not reduced much, if at all. An impact of the pandemic is that car traffic is higher than it was before Covid; there has been an explosion in use of light vans, in particular, as the economy has moved even further towards online retailing and home delivery. Lots of trends are going in the opposite direction to the one that we want them to go in.

To answer directly your question about the metrics that are crucial to holding the Government to account for the targets that it has set, I point you towards the 20 per cent car-kilometres reduction target. We absolutely have to achieve that. It is important to recognise that that target is derived from academic research that shows that, even if we are able to decarbonise the road vehicle fleet completely, we will have to do with a smaller fleet in the future because of the embodied carbon in the vehicles themselves. Therefore, that 20 per cent car-kilometres reduction over the next decade or so is crucial.

It is also important that we focus on the interim milestone targets for 2030. Our trajectory towards the 2045 targets will be well set by then, but there is always the danger of loading in the assumption that in the next five or 10 years technological solutions to problems will come along, rather than our having to make the more politically and behaviourally difficult changes that our carbon targets will require of all of us.

I echo a point that Professor Turner made about the key issue of who pays for the process of decarbonisation. At the moment, we have a

transport system that embeds inequality and, arguably, a lack of productivity in the economy because of the domination of road traffic in particular places, which is created by particular sets of people doing particular sets of things. We will not get anywhere towards our transport decarbonisation targets unless we have a proper and agreed system of road pricing. That is, in any case, inevitable because of the shift away from fossil-fuelled vehicles; from the Treasury's perspective, the revenue stream from fuel will have to be replaced by something else.

The question of how that happens is deeply challenging, but it is also an opportunity to change how we organise the transport system and who pays for different aspects of it so that that more clearly relates to who benefits most from it. I do not underestimate for one moment the difficulty of doing that, particularly because pricing remains, by and large, a reserved matter. There are ongoing but stuttering conversations between the Administrations—the UK Government and the devolved nations—on those issues. In a sense, it is a classic multilevel governance problem, in which the incentives for agreement are not always as clear as we might wish them to be.

The Convener: I will ask the same question about key metrics and key policy initiatives of Brendan Callaghan. I appreciate that it is early days in terms of the establishment of Environmental Standards Scotland, but do you have anything to add to the discussion at this stage?

Brendan Callaghan (Environmental Standards Scotland): It is very early days. We are a brand new body that was set up by Parliament earlier this year to help with scrutiny of, and to ensure compliance with and effectiveness of, environmental regulations and laws.

This is an area in which ESS can have a role and to which we can start to contribute. We have not identified an immediate list of priorities, because we want to respond to the representations that people come to us with and to the work of our own analytical function.

I have some quick thoughts on what are, perhaps, obvious priorities. The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 clearly identifies the main sectors. Transport has already been mentioned. Land use and industrial emissions are two other areas in which it will be very tricky to reduce emissions in line with the Government's targets. They will be obvious areas to watch annually to see whether their progress keeps up at the pace that is needed to get to the interim measures and the final 2045 net zero target.

The Convener: Thank you.

I come back to a matter that Professor Docherty highlighted: the target to reduce the distance that is travelled by car by 20 per cent by 2030. That will require a reversal after a very long period of increasing car use. I would like to hear your thoughts on the behavioural change that will be required to achieve that target. Are Governments doing enough to set the scene? Are they doing enough to help the public to understand why those significant changes in behaviour will be required?

Professor Docherty: That issue is at the front of everybody's minds because of the scale and immediacy of the challenge of our decarbonisation targets, but it has been explored and researched in literature for several decades now. It is the classic question about the balance between what are termed the carrots, which are the improved alternatives to the car, and the sticks, which are making it harder to use cars for some trips, whether through parking policy or other modes of pricing.

Politicians of all stripes are, for obvious reasons, much more comfortable speaking about the carrots than about the sticks, but if we look at the history of our attempts to shift travel away from cars to other transport modes, the carrots have relatively little impact. Growth in car traffic has proved to be pretty resilient over the years—albeit that there was moderation in the rate of growth in the 2000s and 2010s.

However, as I have said, I am very worried about the potential of the pandemic to set us back from some of that progress. Public transport passenger numbers are still heavily depressed from where they were before the pandemic. Car traffic is back to the same overall level as before the pandemic, and the level of some traffic, such as commercial traffic, is higher. The baseline is very difficult.

The direct answer to your question is no. No Government anywhere is doing enough to prepare people for the level of change in how we travel that our carbon targets mean must occur. We know what that means, though. We know about the transport hierarchy, which starts with reducing the need to travel in the first place. A lot of very important research is being done to understand the long-term impacts of the shift to online working and on the potential to embed that shift and reduce business travel and other trips, which can be substituted with virtual meetings such as we are having right now.

We also need to make sure that the number of optional trips that are made by other modes are maximised. That is where we need policy interventions such as the now-famous 15-minute or 20-minute neighbourhoods, through which we must very quickly address the inheritance of our planning policies over the past few decades, which

have made it difficult for people to fulfil their everyday travel needs by walking and cycling. That needs to be a very important immediate focus of Government policy.

The Convener: I have a brief follow-up question on the relevance of annual targets on the way to meeting the 2030 and 2045 targets, which are some way off. You mentioned that progress against those targets might not be linear, in the sense that difficult decisions might be put off in the hope that improvements in technology bring some of the solutions. Can you elaborate on the implications of that for public policy? What difficult decisions will have to be taken in the next one or two years?

Professor Docherty: If you were to ask most members of the public about their understanding of the debate so far, they would understand the challenge of decarbonising the transport system as moving to electric vehicles or vehicles that are powered by alternative fuels such as hydrogen. As I have set out, the point of the traffic reduction target is that we cannot achieve our decarbonisation targets for the transport sector as a whole solely by changing the vehicle fleet. We have to reduce the overall level of travel and make radical changes to the modal split of how we travel around, which means rebalancing the number of trips between private car and van traffic, public transport and the active modes of walking and cycling. I fear that there is a crowding-out process, because a lot of Government communication is about the provision of electric charging points and the strategy for electrification of the vehicle fleet, and a lot less of it is preparing people for having to change their personal behaviour and adjust how they make some of the trips in their everyday life. It means that all of us who have cars available to us will have to use them a bit less in future and we will have to do more of the other things. To answer the convener's question directly, no, despite the best of intentions, I do not think that the scale of that challenge and what it means for each of us as individuals is anything like adequately communicated to the public as yet.

The Convener: Thank you.

Fiona Hyslop: Good morning. I will focus my questioning on infrastructure, so I will come to Mr Rose first, and Professor Docherty might want to come in on that as well. The Infrastructure Commission for Scotland's view on existing infrastructure and a presumption against new infrastructure was quite a powerful statement. So much focus has been on new building standards or things that are new, so what needs to happen to ensure that that recommendation is delivered? In your view, is the Scottish Government implementing the recommendations on presumption against new infrastructure?

Tony Rose (Infrastructure Commission for Scotland): Thank you for the question and for the invitation to the meeting today. In terms of—*[Inaudible.]*—existing assets, it was a key part of what the commission recommended, with regard to achieving both net zero and an inclusive economy. When the infrastructure investment plan was published, in February, one of its key tenets was the investment hierarchy, which goes from, at the top, looking at existing assets and what we need from them, down to investing in new infrastructure at the bottom—*[Inaudible.]* Therefore, it was encouraging to see that that approach was being taken at a level of principle.

The working practice that we need in order to get there is turning a lot of policy thinking on its head and will take time to roll through, but in terms of promoting that recommendation from the commission, the articulation of that hierarchy, which starts with looking at what we already have, was a good start to the infrastructure investment plan. Although there is no need not to build new things, looking at what we already have was part of that hierarchy that the Government put forward in the infrastructure investment plan.

11:30

Professor Docherty: On transport, we considered whether we should recommend a complete moratorium on new road building. There are one or two road building schemes in Scotland that you could probably still argue would be effective if they do not add any more capacity to the network overall. The scheme that most obviously comes to mind is some form of bypass for Dundee, given that there are lots of opportunities to reallocate road space along the Kingsway and to do a lot of urban repair and regeneration using better public transport along that corridor.

Therefore, unlike what happened in Wales, we did not recommend a complete moratorium on road building, because we thought that that was inappropriate. However, we said strongly that we should not promote the idea of continuing to expand the overall capacity of the road network. I was therefore pleased that the Government has adopted that in recent policy statements, which have said that the focus will be on the resilience and performance of the existing network rather than its expansion.

Scotland has gone through a welcome period of expansion of the railway over the past couple of decades, with noticeable reopenings of routes and stations. However, that will be much harder to continue, given the scale of the decarbonisation challenge that the rail sector faces and the scale of electrification and rolling stock renewal that will be required. Many people assume that new

railway lines and stations will come along over the next 15 to 20 years at the same pace as we have been able to deliver them over the previous equivalent period, but I fear that that will not be the case, because of the scale and size of the decarbonisation task that is ahead of us on rail.

Fiona Hyslop: My next question is mostly about the incentives for building reuse. What investment or incentive mechanisms are needed to maximise the economic and resource opportunities of transition to the circular economy for materials and in relation to building use? Particularly in city centres, can better or different use of existing buildings be part of the green recovery from Covid? What can the Scottish Government do to incentivise the reuse of existing buildings? I think that there is a consensus in Scotland that a zero VAT rating for retrofitting existing buildings would be an economic incentive for recovery as well as for the reuse of existing buildings.

Tony Rose: This is a bit bland, but there are already initiatives out there on the reuse of buildings. A net zero buildings standard is being promoted, which is very important for public buildings, in particular, but also for other buildings. The standard sets out what can be done to design buildings and requirements to get to net zero. A lot of that is new to building owners and others. It is important to have a standard and guidance that allow owners to understand what they can do to get their buildings to net zero.

Earlier, the committee heard from Ofgem about the choices around fuel and energy. The hydrogen element of that is about reusing gas networks, which is a complicated process. We need to build in the whole-life asset value of these things and allow owners of assets to see why investing now in repurposing and reusing can be an important part of their approach. It is important that owners think about the whole-life asset value and build that in. We need to provide guidance that allows them to see how getting to net zero is financially positive for them as well as providing the positives of net zero. Moves are already in place to do that but, clearly, more needs to be done on that front.

Fiona Hyslop: Does Tony Rose or Iain Docherty want to say anything about the use of existing buildings in cities? Is that helpful in reaching net zero, or is it just a necessity of life post-Covid?

Tony Rose: I will kick off, and I am sure that Iain Docherty will come in, too. The repurposing and reuse of buildings in city centres is a vital component of what the commission was seeking to achieve. Covid has accentuated the requirement to do that, because people are not working in cities so much. It is vital that we repurpose assets and make them places to live and that we make the city centre environment

more viable for a combination of living and working. There are already trends of offices that are not being used as much being repurposed into residential dwellings. That does two things: it enhances the city centre as a living place, and it means that assets are not being knocked down and rebuilt. There are good examples of that happening already around the country. That is an important part of what the commission was saying, and Covid has almost accelerated the implementation of that.

Fiona Hyslop: Professor Docherty, I am conscious that people are not biting on the issue that I raised to do with VAT, but there you go.

Professor Docherty: I was not aware that there was a consensus on the VAT issue—

Fiona Hyslop: There is not.

Professor Docherty: It is by no means my area of expertise, but the gradient between the lack of VAT on new build and the application of VAT to materials that are used to refurbish existing buildings is a long-running issue, and I would certainly be in favour of doing something about that.

I will say a couple of things on transport and cities. It is a truism that, for probably as long as we have measured these things—for a century or more—we have travelled around for more or less the same time and to do the same things. However, as transport technology has improved, we have travelled further to do the same things. That is what we have seen over decades and decades of net decentralisation from cities, as the car has become an ever more dominant part of the overall mobility mix. Therefore, it is obvious that, if we want to reduce the overall level of car traffic and therefore emissions from transport, we should reverse that trend and ensure that, if we are to continue to spend the same time travelling to do the same things, we travel shorter distances. Reusing buildings in city or town centres where the majority of services that people depend on are easily available to them by walking, cycling and public transport is pretty much as close to a no-brainer in a policy sense as you can find.

That takes me back to the point about pricing that I made earlier. I am concerned about the potential for a renewed gradient between how we price and how easy it is to travel around and access city centres versus the ease of access to urban and out-of-town service areas. We know that city centre footfall has collapsed and that that is driven by a lack of public transport commuting. That is because the people who are most likely to have used the rail network to access city centre jobs are those who can do them from home. The research base on that is now quite well

established—of course, we will have to wait to see how the rebound on that unwinds over time.

As long as we continue to fail to price properly trips such as taking a 4x4 from a suburban location to an out-of-town shopping centre, we will create that kind of traffic and there will be that double whammy for town and city centres. We have been concerned about that in academic research and the professions for decades. The risk now is that, while we are desperately trying to reinvigorate our town and city centres, even more activity will graduate to out-of-town retail and service centres, with all the implications that that has for equality of access for people who do not have a car. That is a difficult short-term problem that will have to be addressed by bold policy interventions, including on pricing.

Mark Ruskell: I want to ask Professor Docherty about his report on the future of rail post-pandemic. That remains controversial, because one of the recommendations was that there should be a reduction in revenue requirement. Clearly, that has raised alarm bells with staff unions and those who are concerned about cuts to services that might come on the back of that. Do you see a reduction in revenue requirement as compatible with designing a rail service that is competitive with private car usage?

I will give a quick example of that. Last week, I held a public meeting at which ScotRail told the public about the proposed changes that it wants to make to the rail timetable. Arguably, that has come on the back of your recommendations to the Government. ScotRail described the Perth to Edinburgh rail service as, in effect, not competitive with the private car, because people can use the M90 and the Queensferry crossing cheaply. ScotRail's response to that is, in effect, that it does not really matter if journey times are increased, because very few people use the rail service anyway.

What are your thoughts on the compatibility of reducing that revenue cost with maintaining competitive services? Is there a danger that, if we cut too fast too hard, we will end up with a service that people will not use any more because there is nothing left to use?

Professor Docherty: Thank you for the question and the opportunity to discuss the report. I am flattered by the attention that it has generated—if only I had that level of direct influence over ScotRail's decisions.

I point you to two things about the report. First, it is based on the evidence that colleagues and I have been collecting as part of a wide, cross-Great Britain research project on the impacts of Covid on travel behaviour. That study will continue for another couple of years as we seek to

understand better many of the longer-term trends, particularly the impact on public transport.

One of the key recommendations that I made, which does not seem to be picked up in the dash for a headline, is that there is no credible decarbonisation pathway for transport that does not involve a very much greater level of use of the railway in Scotland than there was before the pandemic. In the report, I made some guesstimates about the scale of that increase based on what might be considered achievable shifts from the car to other modes and from physical transport to online meetings or home working. The headline is that it is reasonable to assume that we should plan for a doubling of the number of passengers on the railway compared to pre-pandemic levels. If we plan for that, we can get towards net zero and the decarbonisation of the transport system.

As you rightly point out, the question then becomes how we get from the crisis situation that we have now, in which railway patronage and revenue are still only about half what they were before the pandemic, to a situation in which patronage—perhaps not revenue for reasons that I will come on to—is double what it was before that. It is, in effect, a bridging challenge.

There are some difficult issues that the railway industry and, by extension, ministers who fund it have been grappling with that have not had the airtime that they deserve. First, the rail network is not used much, particularly where we have a lot of expensive rail network. Pre-pandemic, even in the greater Glasgow suburban network, which is often lauded as being the best in the UK outside London, fewer than half of all adults used the train once a month. We have an asset that is grossly underused and the main reason that it is grossly underused is the different level of pricing. I point to that in the report.

That brings us back to the question that Professor Turner raised about who pays for the transport network. To be frank, driving is too cheap and public transport tickets are too expensive and too complex. That is the reason why more people do not use the railway. That is the root cause and, if we really want to address patronage recovery on the railway, given everything that we have said about the decreased activity in city centres, we will not do that to the extent that we require to do it if we do not get a grip of the pricing structure across all modes of transport. That means getting a grip of who pays, which brings us back to the core issue about how we price car travel, because just about everything depends on that.

I do not envy people in ScotRail or ministers. Part of the problem of service reductions that the operators are grappling with is the direct

operational impacts of the pandemic: what it has meant for the availability of staff—in particular, drivers and the expense of driver training—and a set of difficult operational issues that, again, do not tend to make it into the media.

The rail network as it stands has had so many services, seats and people employed in it only for a relatively short period. I have looked up some of the statistics from the start of the current franchise period to ensure that I get it right. Since 2015, we have had a 4 per cent increase in passengers, about—[*Inaudible.*—]seats, an 8 per cent increase in the services that are run on the network, and a 22 increase in Government support for ScotRail. We have been spending a lot more money for not very much more in terms of service output, so I do not think that a recalibration of the ScotRail timetable is necessarily as much of a difficulty across the network as a whole as is being made out. I understand that there are differences between routes and particular users whose services are affected—of course that is true.

11:45

My final point before any follow-up questions is that we have a devolved financial settlement and, unless somebody has changed the legal basis of Scottish parliamentary spending and we have all become modern monetary theorists overnight, the budget still has to be balanced. Ministers have a revenue budget to spend across all public services—of which rail is effectively one, even in advance of the nationalisation of the operating company. Looking at how much the railway costs now for the relatively small number of trips that it provides, and then looking at the pressures that particularly the health system is under, I think that it is entirely justifiable—and, indeed, I would expect ministers—to open up the question about where value for money across those public services is best found.

That is a difficult set of questions, and they shine a light on the very large revenue support that the rail industry has enjoyed, which has been increasingly large over recent years. Those are difficult political questions that we see played out in the media every day, but I think that it is very healthy that, at long last, we are having that conversation.

Mark Ruskell: With regard to revenue income, your research points out that we might not know what rail patronage is going to look like for another 12 to 24 months. I am wondering whether now is the right time for ScotRail to do a timetable review, when we do not know what the long-term trend is going to be. I am on the train every week, and I see marginally more people coming on each week, but it is not clear whether levels of patronage are going to go back to what we saw

pre-Covid, when the trains were completely packed.

Professor Docherty: Again, I have no responsibility for setting the timetable. I am lucky enough to be able to write a report and give some advice in this committee meeting, which I hope that colleagues in ScotRail will listen to. I think that ScotRail has said publicly that the timetable recalibration that is under way is to set a new baseline and that services will be added to it as patronage recovers. I think that we would all welcome that.

However, I would not underestimate the operational difficulties, particularly of ensuring the availability of drivers, given the hiatus in driver training over the course of the pandemic. Engineering and ops colleagues in the railway industry have had to deal with some pretty difficult operational decisions over that period. The timetable recalibration is a crucial, difficult and controversial process, and it is driven by a whole set of complex variables. One which we have not yet mentioned is reliability. We know that, for many people, the reliability of railway services is as important as frequency. Pre-pandemic, the predecessor to this committee spent a lot of time looking at the reasons why punctuality on the ScotRail network had fallen, as had happened for many operators across the GB network. The main reason was that they were trying to shoehorn more and more services on to an infrastructure that could not cope with it.

In many respects, I think that this is the ideal time to be doing this. Again, I agree that it opens up some very difficult questions about the impact on individual routes and value for money. I would say that bringing the operating company into the public sector is going to shine an even stronger light on the issue of the value for money that we get from the railway network as it is currently constituted and on the question of what the opportunity costs are of not spending that money on other public services. As committee members know, the way that the annual Scottish budget is formulated is that, when you propose changes to the budget, you have to think about the impact on other spending lines across the responsibilities of the Scottish Government. That is a really healthy debate for us to be having.

I would say that the most important discussion that we have to have as a result of that is about how overall transport is funded, who pays for it and what that tells us about how well it serves our communities.

Mark Ruskell: Thank you. We are certainly debasing it intensely at the moment.

I have a question for Brendan Callaghan, on something completely different. ESS now has an

interim strategic plan. Are there key areas that you will focus on in the next year? I am aware that there are particular concerns around the marine environment and compliance with existing laws and regulations, as well as the adequacy of some of our laws, particularly in relation to salmon farming and fisheries licensing. I am also aware that complaints were with the European Commission ahead of Brexit in relation to acoustic deterrent devices, for example, in the marine environment, which I presume will now go nowhere. Are you already focusing on the marine environment area? Or are there other areas that are problematic in terms of compliance and the adequacy of our existing laws and regulations?

Brendan Callaghan: I stress that it is early days for us. ESS was established on 1 October 2020 and we have not taken any formal decisions about the topics that we will investigate at this point. However, the marine environment and the wider concerns about its regulation have been brought to our attention in the informal discussions that we have had with a range of bodies so far. We are at the pre-investigation stage of looking at the wider circumstances around that and understanding whether we could look at it further.

In the development of ESS over the past six to nine months, we have made our presence known and have started to establish early relationships. A lot of bodies have concerns about a range of matters but are probably keeping their powder dry until we have our powers and are formally established. However, we are starting to get a stream of inquiries and issues coming to us. As I said in my introduction, we made a conscious decision not to start by saying what we would do for the first six months. We are still putting in place our capacity and we want our early focus to be informed by those discussions with expert bodies and the issues that people come to us with, so we have been talking to bodies such as Scottish Environment LINK, RSPB Scotland and Coastal Communities Network Scotland, which have flagged up a variety of issues that we will start to sift through in considering where we put our resources.

Mark Ruskell: Okay. In terms of your relationship with the UK Climate Change Committee, we discussed during the passage of the UK Withdrawal from the European Union (Continuity) (Scotland) Bill how that was going to work. How does that look now? Do you have a memorandum of understanding? Are you clear about where you can work together and where you have discrete responsibilities?

Brendan Callaghan: We are heading towards a memorandum of understanding. We have had a formal meeting with the CCC to discuss how that might work. We know that the CCC inputted to the

consultation on the draft legislation. It is looking like being a productive relationship. The CCC has a role as an adviser and it is an expert committee that does research into and analysis of the role of climate change policy. We have a role to play in that regard, but we also have the powers of compliance and enforcement. We will capture that in a memorandum of understanding over the next couple of months, which will be on our website so that people can have a look.

However, in essence, we want to avoid duplication, so we will not do research and analysis in areas that the CCC is working on, although we want to be able to feed off its work and the issues that it identifies. The CCC might advise the Government of problematic areas or areas where progress has not been made, but that might be useful for us in identifying areas where there is lack of compliance or ineffective law so that we could investigate that and take action with the authorities concerned.

The Convener: Liam Kerr wants to ask a brief supplementary in this area.

Liam Kerr: Mr Callaghan, with regard to the powers of enforcement that you mentioned, am I right in saying that the ESS cannot impose fines for breaches? If that is the case, does it actually have sharp enough teeth?

Brendan Callaghan: We cannot impose fines directly. If it is a straightforward matter that requires us to issue a compliance notice, we would hope to resolve that through dialogue and agreement with the public authorities concerned. However, if we issued a compliance notice that required an authority to change its procedures or adopt a different approach and it did not comply, we have the ability under the legislation to take the matter to the Court of Session, which can require the actions to be implemented or can treat it as contempt of court. In that situation, fines or other court action could ensue. I think that we have teeth and adequate powers, but time will tell and members will be able to see for themselves how that goes.

Liam Kerr: That is very interesting.

Collette Stevenson: I have some questions about adaptation. Obviously, no matter how swiftly we might hope to cut our emissions as we move forward, we will still have to adapt to climate change. My question, which is for Karen Turner, is this: how should the costs of adaptation and becoming more resilient to climate change be borne?

Professor Turner: Thanks for the question, but I should say up front that most of our work so far has looked at the costs of mitigation rather than adaptation.

However, on the general question of how the costs should be borne, the challenge is that, as I mentioned earlier, there is a kind of polluter-pays model, which is often thought of as the moral or appropriate way of paying for something. However, where they can do so, people or bodies will pass on any costs that they have to bear. If you charge a polluter, its prices go up in turn.

I love watching people on television talking about certain issues, and a couple of weeks ago I saw this guy at the petrol pumps saying, "Well, we end up paying for it whatever happens." There is a heavy dose of truth in that. You have to be careful, because this is all about distribution, and you have less control when costs are passed on indirectly through consumer prices. That brings the argument back to the question of whether you need to look at taxpayer burdens, because there is more control over who ultimately pays for things.

We need to be concerned about making those who are least able to pay for things carry too much of the burden. With regard to taxpayer burdens, as we have seen in the Covid crisis, whenever better-off people spend less money, it is the jobs of those on lower incomes that get put at risk. We always need to caution about that.

Before you get on to the question of how the burden should be distributed, you have to think about the outcomes that you are concerned about. For example, with regard to just transition, where do you want the different groups in society to be at the end of all of this? There should be particular concern about those who are less able to pay, but we need to start from the position of ensuring that citizens—who, I should point out, are also the electorate—are content with whatever happens, and therefore the question that we need to ask is what we want our net zero society to look like. Yes, we are going to have to pay more and we will need to think about how that burden will be distributed, but then we will have to backtrack to look at the stuff that we will have to pay for and find out how we ensure that it is paid for so that we can get to the outcomes that we want.

I am hearing a lot about this theory of change, and we really need to start to applying it by looking at the outcomes. Scotland's electorate and society are different to those in other parts of the UK; we need to find out what the Scottish people want the Scottish economy and society to look like when we reach net zero, and based on those outcomes, we then need to figure out how we pay for everything. If we do not do so, the law of unanticipated consequences might mean that, although we have the best intentions about how we set things out, how the costs are passed on through various mechanisms in the economy could give us outcomes that are not desirable and will ultimately equate to a transition that is not regarded as just.

That is the key point. Academics such as me can define a just transition, but the transition will only be just if people view it as such.

12:00

We need to start with where we want to be. That is a bigger, wider debate; however, COP26 is coming to Glasgow. Rather than have a public debate about cars, emissions and how we heat our homes—although those are all important issues—why do we not have a discussion about what we want this country to look like when it is net zero?

Collette Stevenson: Thank you;. That is an interesting response. I ask Brendan Callaghan the same question.

Brendan Callaghan: Potentially, we have a role with regard to adaptation. Environmental Standards Scotland has to have an eye on the requirements of the legislation and the role of public authorities in delivering them. I do not have an awful lot to say on the issue at this stage. We would have to look in quite a lot of detail at where we could use our powers and role to influence matters.

If a matter relating to unfairness or the lack of a just transition was drawn to our attention, and we identified that the law was broadly environmental and was ineffective and having an unintended consequence, we could draw it to the attention of the public authority or the Government, and shine a light on the issue in a formal way. That is probably all that I need to say on the matter at this time.

Collette Stevenson: With regard to the publication of Scotland's adaptation programme in 2019, where has the most notable progress been made so far, and what are the areas of greatest concern?

Professor Docherty: I point to something that I said earlier, which is the built-in expectation that we will continue to build as much new transport infrastructure as we have been able to build over the past 15 to 20 years. We have already seen the impacts of climate change on the transport network. The Rest and Be Thankful is an obvious example, and it remains to be seen what the final outcome of the inquiry about the derailment at Stonehaven will be. Those are examples of the effect of extreme weather events, which we expect to become ever more commonplace as climate change unfolds. They can have a catastrophic impact on infrastructure and infrastructure failure.

I am taken by what Professor Turner said about the transition being just only if it is seen to be just in the court of public opinion. I am not sure that we are all ready for a period of redirecting resources

much more towards increasing the resilience of our existing networks, rather than building new ones. Such a shift has been long talked about in the analysis and academic research on likely futures, but I do not think that that has percolated through to the public debate yet.

A lot of our infrastructure remains aged and is up for major renewal. There is a debate about the long-term future of the structures on the M8 through the centre of Glasgow that are 60 years old. We have the existing fragility of the infrastructure and the need to make it more resilient for increasing extreme weather events and other implications of climate change. On top of that, there is the requirement for decarbonisation through electrification of either vehicles or the fixed network.

When you set out the sequential set of requirements, it is not hard to see that we will not be building as much new kit as we have done in recent years. Again, I am not quite sure of the extent to which that consideration has made it into the public understanding of how our public expenditure choices will, by necessity, have to change over the next 15 to 20 years.

Monica Lennon: Good morning to the panel and to Professor Turner's cat, who made a nice appearance a moment ago.

I return to your report, Professor Docherty, about which Mark Ruskell has asked questions already. You were modest about the attention that the report has received and some of the headlines that it prompted, but you are a former non-executive director of ScotRail and Transport Scotland, so you are a person of influence.

Your report is correct in saying that Scotland's rail network has a central role to play in our meeting Scotland's climate change targets, and you made an important point about making the shift from car to train. I am not sure, and the public is confused, about how the proposed service cuts, closures of ticket offices and job losses will help us to meet those climate change targets. Surely, those measures will make that objective more difficult—making people feel less safe and secure, and making train travel less accessible to them—and run counter to the race to net zero.

There are also concerns about the equality impact of some of those proposals. We are hearing a lot in the media now about women's safety and about the rise in hate crime against disabled people and people of colour on our railways. If we want to change behaviours and give people the confidence to get on the trains, how will all those cuts help?

Professor Docherty: Those issues are complex, so I will try to piece my way through them.

It is obvious that any reduction in service quantity or quality in isolation is likely to have an adverse impact on people who depend on the service. No one is arguing that that is not the case. However, there is some crucial context to the issue. In recent years, we have had a massive growth in the proportion of public expenditure that is allocated to the railways and, indeed, in the number of trains that we have. Therefore, if there is a modest retrenchment in the overall number of services, it is not as though we are going back to the 1960s or 1970s in relation to the overall level of service provision. We are going back to where we were probably in 2015 and 2016, with about half the number of passengers that the network would have expected to have. Those are the facts. You are correct in saying that they present really hard choices, which, to me, is always about opportunity costs.

What would we expect our ministers to do with the public expenditure that they have available to them? What are the best outcomes that the public should expect from those decisions? For many years, I quietly warned—in public events and in the roles that, as you identified, I have held in the rail industry—that, at some point, the relentless growth and the amount of public expenditure that is allocated to the railways would come to an end, because nothing is forever. I did not expect the cause to be Covid—nobody expected the pandemic to be the exogenous shock that delivered that end—but it was a fair assumption that, at some point, that continuous growth and the resources that were available to the network would slow, stop or reverse. In many respects, we are dealing with the consequences of that process now.

I understand your point about the equalities aspect of the issue, as well as the points about personal safety and the general quality of the experience of being a traveller on the network. Those issues are common to every equivalent railway network across Europe and the world, and a set of choices exists about how resources are deployed to address them.

Our network has not changed much in comparison to many equivalents across Europe. It is still a traditional heavy rail network—crude in a way, because it looks the same as it has looked for a long time, with stations and ticket retailing options that look mostly the same as they have looked for a long time. Many equivalent railway networks in Europe have made different choices in modernising those aspects, and they have had better outcomes. By far the best way to improve safety for people who use the network is to have more people travelling on it. We then come back to the root cause of the issue and the question of how to get more people travelling on the network.

Of course, I understand all the concerns that have been raised in response to the questions, and they need to be highlighted and discussed. Even if ScotRail's proposals are enacted and their impacts on the attractiveness of travelling by train are as negative as Monica Lennon suggests, they are absolutely dwarfed by our inability to get grips with the low overall use of the railway. That goes back to the question about who pays and the fact that we have set up the fiscal structure of the network to encourage behaviour—even more so now, post-pandemic—that means that far too many people use cars when they could be on a bus or in a train. A statistic that shocked me when I heard it the other week was about the number of adults in the part of the country that is covered by our best railway system who, pre-pandemic, had used it only once in the previous month.

If we are going to fix the service quality issues, which everybody is concerned about, we need a step change in the use of the network, and that requires far-reaching questions about whether it is fit for the travel patterns of the future rather than the travel patterns of the past.

Monica Lennon: Thank you, Professor Docherty. I have found my notes from earlier, when I was scribbling down what you were saying in response to Mark Ruskell. You talked about having a plan for doubling the number of rail passengers. I am not sure whether that plan exists yet, but I am interested in what you think it should include.

Going back to public confidence and mood, during the pandemic, people were advised not to use public transport and, if they were travelling by car, not to car share. How do we use public messaging to shift that advice? I have not heard a lot of new advice telling people to get back on the bus and train. Morale is very low among key transport workers including rail workers, there is an industrial dispute and the number of strikes might increase during COP26. How do the Government, Transport Scotland, ScotRail and the trade unions cut through all that and find some agreement, so that we can get the travelling public back on to public transport and out of private cars?

Professor Docherty: Thank you for those questions. I have scribbled some of them down and will go through them. Forgive me if I miss any.

I and colleagues who were involved in the transport and Covid research project have already published some of our conclusions. The findings came from our household survey work, which was undertaken in 10 areas across Great Britain, some of our focus group work and our interviews with key decision makers across the transport sector as a whole. One of our academic papers contains a quote from a senior representative of one of the key organisations in the transport sector south of

the border, in which he expresses his bewilderment when he heard the Prime Minister, in one of the early Covid briefings from Downing Street, articulate the message that people should avoid public transport. That person's entire working career had been based on trying to achieve the modal shift between the car and public transport that we talked about at the beginning of the session and on making the public transport service better. He argued that it felt as though decades of that work was being undermined in an instant. I do not underestimate the impact that that message has had, and, in our forthcoming survey waves, we will do some work to understand that better.

In passing, it is worth saying that Transport Scotland tried to put out a slightly different message about keeping the public transport network open for essential users. We could probably discuss all day the extent to which that was successful. Again, my academic colleagues elsewhere are doing work on messaging across Covid and its impact on behaviour.

On the upside, in our work thus far, we have not found much evidence of people switching away from public transport to more car use because they are uncomfortable due to either the direct impacts of the virus or the safety issues that you mentioned. The people who were most likely to commute by train are most likely to have jobs in city centres that are best served by rail, and they are most likely to be in the kind of jobs that, traditionally, rail commuting has served well. The same is true of cycling, interestingly. According to our survey, the number of people who commute by cycling—in proportionate terms—has fallen again precisely because those people tend to be in jobs in which it is easy to work at home or with a laptop in a cafe, for example. A kind of self-selection process is going on.

12:15

On the downside, people have more flexibility in terms of time when they work at home. For example, if I am sitting at home rather than in an office somewhere and it rains at 3 o'clock and I decide that I want to pick the kids up from school rather than get them to walk home, I am free to do that, because the car is in the driveway.

Looking at the traffic use statistics, we see that there has been a reprofiling of the trips that are happening. Again, that is why I said that I worry that those behaviours are being embedded and that we have created—almost by accident or default—a more North American view of daytime car trips: more school runs, more driving to the shops instead of walking to the local corner shop, and so on. Those things are now more possible for more people because we are not sat in offices

somewhere else, away from the home. There is a whole set of really complex behavioural changes that we have to understand better and try to unwind, because they are contrary to what we are trying to achieve.

On messaging and how we move forward—*[Inaudible.]*

The Convener: It looks as though we have a brief technical issue.

Professor Docherty: —to do that.

The Convener: Okay, we are back. Professor Docherty, you cut out slightly there. If you could repeat your last couple of sentences, that would be great.

Professor Docherty: I had just moved on to messaging as we move forward and how we recover patronage. That is difficult, because the lack of use of public transport is driven by economic imperatives for people who would otherwise have used it. The issue is about whether their job is still being done from home.

I think that it will be challenging for the public transport sector to recover patronage, particularly given the fact that the rail network is set up to depend on a significant number of city centre commuters paying premium fares. That will be really tough to recover—indeed, I do not expect the level of city centre radial commuting to recover in the foreseeable future. There will be on-going questions about that.

I do not want to get into the issue of industrial action, because that is not my area of expertise. However, I am, as much as anybody else, an observer of the relationships between the rail industry employers and their employees. As a member of a trade union in a profession that has its own issues with its employers at the moment, I understand that context very well.

The one comment that I would make is that it is very instructive to look at the difference in conditions and in the way that the sectors have been treated during Covid—between the rail and bus sectors, in particular, and between the rail sector and other public services. For example, in the bus sector, many members of staff were furloughed, wages tend to be lower and employment tends to be more precarious. There has been a long-standing debate, in which I have participated in parliamentary committees and elsewhere, about whether the relative split in public support for bus and rail is appropriate, given the vastly greater expenditure on the rail network for a much smaller relative contribution to meeting overall transport needs. There has been no furlough in the rail industry as there has been in the bus industry, and salaries tend to be much

higher. That is one of the issues that has been exposed by the experience.

I would say that in the context of comparing different public servants, too. For example, a ScotRail ticket examiner with eight weeks' training will earn the same salary as somebody who enters the national health service in a professional nursing, midwifery or scientific job and is expected to have a degree. There are lots of ways in which people can look at that comparison. One view that I would be entirely sympathetic to is that colleagues in our health service, who have borne the brunt of what has been a terrible experience, are underpaid. However, I wonder about the unintended consequences of bringing the rail sector into the wider public expenditure conversation more explicitly than has been done in the past.

That is my semi-informed observer's opinion. I really hope that the management and the unions can sit down and find a way through the situation, because there is a wider issue about how we ensure that the financing of our key public services and the people who work in them is adequately and fairly agreed upon.

The Convener: Because we are up against the clock, I ask the witnesses to keep their answers fairly brief. The topic is fascinating, but we are slightly running against time.

Jackie Dunbar: My question is for any member of the panel who would like to answer it. What are the key opportunities not only to increase the natural infrastructure but to integrate better planning of, investment in and delivery of such infrastructure into the other forms of infrastructure planning?

Would anybody like to answer that question?

Tony Rose: I will give a quick take on that in the absence of anyone else looking as though they are going to.

One of the key opportunities is in the new national planning framework 4. On the back of the Infrastructure Commission's work, natural infrastructure was included in the Scottish Government's definition of infrastructure, which is pretty monumental compared to lots of other countries' definitions. The Government is taking a good step in taking that on board.

For the first time, NPF4 provides the opportunity for natural infrastructure to be considered in the context of everything else that is being looked at in the built environment. That offers a really good opportunity for natural infrastructure to have a level playing field and take its place in the way that Scotland plans its infrastructure and fits it into wider policy making.

Jackie Dunbar: You mentioned NPF4. Will you dig down a bit deeper into what the key opportunity would be for green and blue natural infrastructure in the framework?

Tony Rose: On one level, having natural infrastructure on a level playing field with everything else in that context is an opportunity in itself, because it will be considered in the same way, whereas it was outside that system before. Having natural infrastructure as part of the infrastructure definition and having it considered at the same level of importance as transport, energy and other infrastructure is an opportunity in itself. It will be interesting to see where NPF4 gets to in terms of bringing it into that fold.

The Convener: The final question is from Liam Kerr.

Liam Kerr: Professor Turner, I have two questions for you. The Scottish Government signalled its intention to create a national public energy agency that will have as its remit a focus on heat, energy efficiency and the delivery of investment. Is it right to focus on those things rather than on the traditional energy markets?

Professor Turner: Yes, because there needs to be a focus on the service and how we use the energy, which determines the demand—what people need and when they need it.

There is a lot of debate about what is essential for different groups and what is a luxury. Heat is the big challenge that we have yet to make much ground on. There has been important progress in energy efficiency and retrofitting goals, perhaps with action to catch up. The focus on services is good. The public sector role needs to be in delivering the outcomes that are important for people and ensuring that essential needs continue to be met for different groups in society, particularly those who are less able to pay.

The focus is right. There is already policy attention on markets through the regulator. The interventions now need to be extremely well targeted, given the scale of the challenge and the limited time. The focus on service is important.

Liam Kerr: In the paper that you supplied, Professor Turner, you tell us about your net zero principles framework for public policy making. One of those principles is that

“‘Off-shoring’ is not the answer in regional/national or global contexts if it only shifts emissions, jobs and GDP overseas.”

That seems to me to be a very important point. Indeed, the principles are very important. How much regard does the Scottish Government have to such principles and, indeed, that framework?

Professor Turner: I think that the problem—this is a big challenge—is that the targets that we are set under the international climate agreements and what has had to come through the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, for example, relate to our territorial emissions, which are emissions that are generated within Scotland and the UK. If we take it to the extreme, the simplest way to reduce our emissions would simply be to have all the dirty stuff not take place in Scotland. That issue certainly came up in the just transition commission’s work. There was a big drop in Scotland’s emissions when the steel industry went, but we are still using steel every day to meet our consumption needs, and it is very important. Even things such as our wind farms have a steel requirement, as do our cars.

There is a high-level issue. More than 10 years ago, I and other researchers raised through Organisation for Economic Co-operation and Development negotiators, for example, the question of whether the targets that we have are the right ones, because they relate to territorial emissions. I think that the answer is that they are the best that we can get, because it has taken so long to get everybody to agree them. If we went to a carbon footprint measure, it would be very difficult to measure things properly and consistently, although that does not mean that we do not need to have an eye to the implications of our decisions.

Offshoring is probably the biggest risk. There is a lot of debate about new coal mines and whether we should be extracting oil and gas from the North Sea. For me, the question is whether we are still using those things. If we are still using coal, oil and gas but they are being extracted in other countries, that is not delivering climate justice, even though we might be meeting our targets.

The big offshoring concern for society is that, when we lose jobs here in order to meet Scotland’s domestic territorial climate emissions, we are not only offshoring emissions—the jobs and the gross domestic product that is generated are going somewhere else. That issue needs to be central because, even though, strictly speaking, we will do well if net zero is reached on account of our territorial targets, we need always to bear in mind the wider question of the global climate, even if we are not legally bound in relation to that.

There are implications for the wellbeing of the Scottish people and the Scottish economy. We do not want to be protectionist, but activity should take place at the most carbon-efficient location. People’s earnings and jobs are important, and not just in a social sense. If people lose their jobs and earnings, our tax base will be reduced, which will mean that we will not have as much money to spend on achieving net zero and other things. It is

really important that we build a strong economy that serves the people and that delivers in spirit, as well as in legal terms, on addressing the climate change problem.

Offshoring and onshoring need to be at the front and centre. If we can become a carbon-efficient location with some of the first-mover things that we are doing with the carbon capture and storage programmes, maybe we can pull more production to us. That will become somebody else's offshoring problem, but that shows the complexity of the problem.

Liam Kerr: I am very grateful for that explanation. Thank you.

The Convener: That brings us to the end of our allocated time. I once again thank our panellists, who have given us a fascinating range of discussion points to take forward in our work programme. I wish that we had longer. Enjoy the rest of your day.

Subordinate Legislation

Carbon Accounting Scheme (Scotland) Amendment Regulations 2021 (SSI 2021/318)

12:29

The Convener: Agenda item 3, which is our final item in public, is consideration of the Carbon Accounting Scheme (Scotland) Amendment Regulations 2021. I refer members to paper 3.

The instrument is laid under the negative procedure, which means that its provisions will come into force unless the Parliament agrees to a motion to annul it. No motion to annul it has been laid.

The Delegated Powers and Law Reform Committee considered the instrument on 21 September and determined that it did not need to draw the attention of the Parliament to it on any grounds within its remit.

Do members have any comments on the instrument?

As there are no comments, I invite the committee to agree that it does not wish to make any further recommendations in relation to the instrument.

Members indicated agreement.

The Convener: The committee will now move into private session.

12:30

Meeting continued in private until 13:01.

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