OFFICIAL REPORT
AITHISG OIFIGEIL

DRAFT

Net Zero, Energy and Transport Committee

Tuesday 25 November 2025

Session 6

The Scottish Parliament
Pàrlamaid na h-Alba

Tuesday 25 November 2025

CONTENTS

NET ZERO, ENERGY AND TRANSPORT COMMITTEE
35th Meeting 2025, Session 6

CONVENER

*Edward Mountain (Highlands and Islands) (Con)

DEPUTY CONVENER

*Michael Matheson (Falkirk West) (SNP)

COMMITTEE MEMBERS

*Bob Doris (Glasgow Maryhill and Springburn) (SNP)
*Monica Lennon (Central Scotland) (Lab)
*Douglas Lumsden (North East Scotland) (Con)
Mark Ruskell (Mid Scotland and Fife) (Green)
*Kevin Stewart (Aberdeen Central) (SNP)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Dr Richard Dixon (Environmental Standards Scotland)
Neil Langhorn (Environmental Standards Scotland)
Professor Graeme Roy (Scottish Fiscal Commission)
Clare Wharmby (Scottish Climate Intelligence Service)

CLERK TO THE COMMITTEE

Peter McGrath

LOCATION

The Mary Fairfax Somerville Room (CR2)

Scottish Parliament

Net Zero, Energy and Transport Committee

Tuesday 25 November 2025

[The Convener opened the meeting at 09:15]

Decision on Taking Business in Private

The Convener (Edward Mountain): Good morning, and welcome to the 35th meeting in 2025 of the Net Zero, Energy and Transport Committee. Our first item of business is a decision on taking agenda items 4, 5 and 6 in private. Item 4 is consideration of evidence on the draft climate change plan; item 5 is consideration of a draft letter to the Scottish Government on pre-budget scrutiny; and item 6 is consideration of our work programme. Do we agree to take those items in private?

Members *indicated agreement.*

The Convener: I should have said right at the beginning of the meeting that we have received apologies from Mark Ruskell, who is unable to attend today.

Draft Climate Change Plan

09:15

The Convener: Agenda item 2 is an evidence session on the draft climate change plan, which was laid on 6 November. The Parliament has 120 days in which to scrutinise the draft, and the Scottish Government has indicated that it intends to lay a final plan before the dissolution of Parliament prior to the election, in March next year.

Put simply, the plan is a strategy document that sets out how the Government intends to meet carbon-reduction targets across the whole of our society and the economy. Our committee is leading the cross-committee scrutiny of the draft plan, and this is our first evidence session on it. Today, we are considering the report in the round and asking, fundamentally, what makes a good climate change plan and does the draft look like such a plan? I hope that we will find out the answers, at the end of the day.

I welcome our witnesses: Dr Richard Dixon, chair, and Neil Langhorn, head of strategy and analysis, Environmental Standards Scotland; Professor Graeme Roy, chair, Scottish Fiscal Commission; and Clare Wharmby, co-director, Scottish Climate Intelligence Service. Thank you all for attending. I will get the thanks in at the beginning in case, by the end, you are not so thankful to have attended—although I hope that you will be.

I get to ask the first question, which goes to each of you. Richard and Neil, you might have to decide between you which of you will answer on behalf of your organisation. Clare, I will come to you first. What are your overall views on the draft climate change plan, and how does it compare with earlier versions? Is it what you expected?

Clare Wharmby (Scottish Climate Intelligence Service): I presume that, when we talk about the draft plan, we mean the plan plus its various annexes.

The Convener: Yes.

Clare Wharmby: It was probably what we expected, and it was some of what we hoped for.

This is a massively complex area. The draft plan cuts across all sorts of facets of government, and you can tell that it has been really difficult to pull it together in a way that makes sense, has sufficient detail and is also communicable to people. You can see that a huge amount of work has gone into trying to make it such a document.

On what we were hoping it to be, what we really wanted was more laid-out clarity about the who,

what, where, how and when of all the policy deliveries. That cuts to the chase. We call it both a strategy and a plan—and it contains both policies and proposals. However, in reality, a plan tells you what to do, when to do it and how to sequence it, and, possibly, talks about the risks and costs of those activities. In that sense, the draft plan is possibly trying to be all things to all men. Maybe there should have been a bit more plan in there.

There are huge uncertainties. It is not a bad thing to have those uncertainties laid out, because they exist. However, we need to be honest about them.

The Convener: I am trying to decipher that answer. It seems to be a nice way of saying that the draft plan does not have half the stuff in it that you thought would be there. Is that a fair interpretation? Try to put your view in a sentence.

Clare Wharmby: Yes. We wanted more detail about the delivery.

The Convener: Okay. Thank you. I am sorry to have put words in your mouth, but your reply helped me to understand your point.

I will bring in Professor Roy.

Professor Graeme Roy (Scottish Fiscal Commission): Our particular interest is in the fiscal sustainability implications. Prior to the plan being produced, we set out in our most recent fiscal sustainability report what we needed to see in the plan. That concerned points about the detail, which Clare Wharmby has picked up on, and the methods for calculating the numbers. Crucial for us, from a fiscal perspective, is the issue of the uncertainties and potential variabilities in relation to the Government's ability to plan over the medium to long term. From our point of view, there is some really useful material in there, but it lacks the detail that would let us come up with a detailed plan around long-term fiscal sustainability. That is not a criticism, per se; I am just saying that, from a fiscal sustainability perspective, the information that we would need in order to make that judgment call is not in the document.

The Convener: Richard and Neil, I do not know which of you is going to throw the other one under the bus.

Dr Richard Dixon (Environmental Standards Scotland): I will start off. Neil Langhorn can talk you through the detail of the extent to which the draft plan matches up with what we said in our letter about what a good plan would look like, but I will start by giving you an overview.

The first thing to say is that, like Clare Wharmby, we believe that there are some good things about the draft plan. There are strong statements about the urgency of the need to tackle climate change, the economic benefits that flow from that, the need for an organised just transition and our international obligations on climate change. It is also good that the draft plan follows the recommended budgets that were set out by the Climate Change Committee, and it mostly follows its recommendations about pathways. In its 320 or so pages, there has clearly been a lot of effort to try to do better than what was done in the climate change plan update, in terms of the level of detail. However, as Clare Wharmby says, it is still missing the who, what and when, so we cannot quite disentangle that detail.

The frustration is that there are overall numbers for packages, which would suggest that, for individual policies, figures have been developed and have been added up to give the total that we are presented with for each package of six policies, but we are not being shown the individual numbers, timescales or costs. The information must be there, but we are not being given that level of data.

Another good thing about the draft plan is that it contains some high-level cost and benefit estimates that are really helpful. It clearly shows us that investment today will save us money in the future, because climate change is coming and we need to both adapt and change our economy. According to the study that is quoted in the plan, that investment will head off a £17 billion loss of gross domestic product in 2040. Of course, there is less cost information for individual policies, though. Overall, those figures suggest that climate change is the ultimate case for the use of preventative spend. We must spend today to get ourselves in shape for what is to come, otherwise we will face a very large bill in the future.

In the letter that we sent to you in March, one of the things we said right up front was:

> "It is imperative that there is sufficient time for scrutiny of the next draft CCP and incorporation of feedback before its finalisation."

I know that your committee was also concerned about the issue of how much time will be available. We do not seem to have learned the lesson from last time. In 2021, when the CCPU came before the Parliament, four committees worked hard on it, making 166 recommendations. I thought that that was a great example of the Parliament doing proper scrutiny on a piece of strategy. However, because there were only about 20 days between the end of the scrutiny period and the election, the final version that the Government published was the same as the draft—it basically ignored all 166 recommendations. It wrote a letter saying, essentially, "Well, we have thought about them, and they will be taken into account in the next CCP." However, there is no mention of that in the draft plan. Perhaps lots of them have been taken into account, but, if so, that is not highlighted.

We are in the same situation now, in that we have about 20 days between the end of parliamentary scrutiny and the Parliament going into recess and then being dissolved for the election. The Government has said that it will produce the final version by the end of those 20 days, so there is very little time for it to read what you have said and actually do something meaningful about it. That is frustrating.

What can the Scottish Government do about that? We are in a difficult situation, which we cannot entirely fix, but I hope that the Government is reading all the submissions as they come in, watching sessions such as this one and revising as it goes, rather than waiting for you to produce the ultimate answer to what should happen. I hope that it is pre-empting some of what you will say and is producing another draft, so that, when it produces the final version before the election, it will have incorporated a lot of what people have been saying. However, even if that happens, that will still mean that there is a need for this committee, like your predecessor committee, to write a stiff letter to your successor committee saying that you have undertaken an important piece of work and that, because your recommendations might not have been fully dealt with, it is important that the successor committee and the whole Parliament consider scrutiny of the implementation of the climate change plan to be a key issue for the next session.

The Convener: I would like to clarify something, as the issues that you have raised are pretty fundamental to the situation that we find ourselves in. Three other committees have agreed to undertake specific bits of work to support the work that we are doing. However, as you said, we have limited time, as the Parliament has to have finished its consultation by 5 March, which means that it is likely that we will be considering our report before we have seen the summary of responses to the Government's consultation, given that that is likely to be released in early February. On behalf of the committee, I have made our concerns clear in that regard.

Unless I have got my maths entirely wrong—which is quite likely considering my inability to do maths properly, as my mother would say—we will have about nine sitting days after we submit our response in which we can consider the draft plan, which will have been amended to become the final plan. We are exactly where you said we were going to be. To me, that is of huge concern. I am sure that scrutiny will suffer because of the tight timescale.

I just wanted to clarify that work is being done by other committees, and that we remain concerned about the situation.

Sorry for interrupting you—or had you come to a logical end?

Dr Dixon: That was the logical end of that section. If you will indulge us, Neil Langhorn can talk about what our letter said good looks like and how the current plan matches up with that.

Neil Langhorn (Environmental Standards Scotland): As Richard Dixon said, we looked at the previous climate change plan and had a representation on that. We published a report on that representation, setting out what we thought needed to be addressed in the next plan. That very much informed our letter to the committee in March about what would make a good climate change plan.

In that letter, we set out that we wanted to see individual proposals and policies relating to quantified emissions reductions. That has been partly met, in that some policies have that level of detail, but, for the most part, the approach is at a package-of-policies level. That is actually what the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 requires, but it would have been good to have seen that greater level of detail.

We wanted to see clear timelines for all the proposals and policies, and I do not think that we have those. They are there for some of them, but certainly not for all of them.

Richard Dixon has already made the point about the time available to consider the draft.

We wanted to see clarity around effective monitoring and delivery of the plan. I think that that has been partly met, in that the annex on monitoring and evaluation contains quite a lot of detail. One idea is to have early warning indicators. That is a good idea in principle, but I am not sure that the detail is there.

We also wanted to see clear ownership and responsibility for individual proposals and policies, and I think that some of that is lacking as well. That builds on Clare Wharmby's point about knowing the who, how and when of the delivery of the policies.

The requirements of the 2019 act have been met in part. The just transition principles are embedded and the monitoring framework includes just transition indicators as well as emissions, but adaptation monitoring remains separate and has not yet been integrated.

The final point that we made was about addressing the unresolved recommendations from previous parliamentary committees, which Richard Dixon has already mentioned.

09:30

The Convener: I thought that I might need to drill down into what requirements had and had not been met, but you have all been pretty clear on that point. That means that we can go straight to the next set of questions. It is over to you, Douglas.

Douglas Lumsden (North East Scotland) (Con): I am sticking with the topic of the costs and benefits. As was mentioned, the costs and benefits at a sectoral level are set out in the draft plan. What are your views on how those have been quantified and presented? Is there enough detail in the plan to enable us to analyse what the costs are?

I put that question to Clare Wharmby first.

Clare Wharmby: I have not found an easy-read guide that explains which assumptions are included for the costs and the benefits. My feeling is that different benefits, some of which are financial and some of which are non-financial, are being included at different times. We need clarity on the details of that.

Having said that, I do not think that it is possible to break down to a granular level all costs and benefits for every policy. Our experience, from working with local authorities, is that, when we are talking about a package of measures that are seeking to achieve an overall aim, in complex systems, it is sometimes quite difficult to disentangle that information. Having an overall approach to a package of policies is fine, but what we really need to know is what elements make up the numbers, what assumptions are being made and what the risks are of those assumptions. It is also important to know who gets the benefits. In some cases, those might be experienced by only a sliver of society—that goes back to the just transition point.

I do not need the costs and benefits to be broken down in detail, but I would like a bit more detail about how those numbers arise.

Douglas Lumsden: Thank you.

Graeme Roy, was the Scottish Fiscal Commission involved in putting figures into the plan?

Professor Roy: No. That is outside our remit. The Government would pull together those numbers.

From a fiscal perspective, detail is needed of what the investment is and what will be expended on the elements in the plan throughout its life cycle. For example, we have a budget spending review coming up in the new year. How do the specific scenarios, costs, benefits and assumptions that are put into the plan relate to what the Government will do in its budget and its spending plans for the next five years? It is on those aspects that detail is needed.

A key point that we make about the draft plan, from a fiscal and a budget point of view, is about how the numbers and the analysis that underpin the plan reflect what we will see in budget documents with regard to where action will take place—and vice versa. In other words, when we see the budget document, can we say that the money is being spent in exactly the places that will deliver the aims of the plan? We do not have that level of detail yet.

Douglas Lumsden: Do you think that there will be a link between the budget that we will see in the next couple of months and this document? Perhaps because it is still in draft form, there is no link between the two at the moment.

Professor Roy: That is a key question. If the plan is to be delivered, it needs to be backed up with a budget that delivers it. The budget and spending will be a key element, as will how the final plan reflects the budget documents.

Douglas Lumsden: I guess that, if there is a lack of detail on the finances in this document, it will be difficult to link the budget back to some of the actions that will need to be taken.

Professor Roy: You would think that there would be analysis of, and some scenarios about, what has gone into the activity to underpin the plan. For example, the figures on the net cost and the relative benefits will be underpinned by policies.

The question that is not in there is, as Clare Wharmby said, what are the policies for the broader economy that might be picked up by the private sector, such as changes in behaviour? What are the specific policies that will cost money, when are they taking place and at what points?

Douglas Lumsden: This might be a question for the Government, but does it have that detail? It must have some idea of costs; we are given headline figures, so the working must be there. I guess that it is about trying to get that working from the Scottish Government.

Professor Roy: There are two elements to that, one of which is the underlying detail that underpins the plan over the medium to long term. For any plan to be effective, it has to speak to the here and now, and the proof of that will be in the budget documents and the spending review, where the Government will set out exactly what it plans to do over the next year or the next five years. The key element will then be how that speaks to the plan and whether it will deliver the plan.

Douglas Lumsden: Richard Dixon, do you think that there is enough detail on the financials in the climate change plan as it stands?

Dr Dixon: No. As I said, there is a good amount of very high-level detail that shows overall that we should invest today to save in the future and that, if we do not, we are in trouble. It is very helpful to see that. However, we are missing what each policy is going to cost at the level of actual action.

I will give an example—I always think that it is useful to illustrate things with examples. Appendix 3 talks about package 2, which is measures to encourage modal shift. It has a key policy on car use reduction, which has six supporting policies. Some of them are about concessionary travel, so we should know how much that costs; some of them are about investment in active and sustainable travel programmes, but there is no indication of how much we are investing in those or what the payback might be.

There is a summary of the total benefits and the net costs of those six policies, and the benefits are stated to quite a level of accuracy. In the first budget period, the total benefits will supposedly be £3,670,000—that figure is quoted to the nearest £1,000. There is then some narrative that explains where the biggest part of the costs will come from and where the biggest part of the benefits will come from, although the benefits are a bit too intangible to understand. We do not have a statement for those six policies that says, "This will cost so much in this budget period and so much in the next budget period, and these are the benefits that we expect to see." Yet, to produce those quite accurate—or at least apparently accurate—summary figures in table 21, the Government must have had those numbers to add up. There is a missing annexe 5, which would include all that detail. The same applies to the CO_2 reductions from each of those policies. It is added up into a package figure, which is what the 2019 act says should be done, but what everyone else wants to see is what each of those policies is going to do.

As I say, a lot of work has been done, and the top-level figures are very interesting, but we are still missing the bottom level of what each policy costs, what the benefits are, where they come from and, as Clare Wharmby said, how they are calculated. Some of the benefits are expected wider economic benefits such as less congestion, and some of them are things such as people having more money in their pockets because they have free bus travel. They are quite different things to compare, but they are being added up together. It would be good to understand all of that.

Douglas Lumsden: Do you think that there would be any downsides for the Government of publishing that data?

Dr Dixon: There could be a fear that some of those numbers are quite uncertain. However, if we are proposing a policy that will be active in 2040, everyone understands that anything that you say about it will be quite vague, because things will have changed a great deal. Perhaps the Government has erred on the side of not exposing some numbers that are quite vague, so that it does not get criticised for having vague figures, although any mature observer should say, "Of course, some of them are going to be vague and some of the benefits might be a little intangible, but at least you have put a number on it." If that is the Government's motivation, it is probably a mistake and it should put those figures out there, so that we can see them. That would show us where the uncertainties are.

At the moment, we know that there are six policies and that they add up to this much CO_2 reduction, cost this much and will give this much benefit, but we do not know which ones are the most approximate, which ones might go wrong and which ones have the greatest potential for failure. Seeing how those numbers have been calculated would allow us to say, "Five of those look rock solid, but I now understand that that one could go wrong, and I'd like to know what the Government is going to do if it does go wrong"—because contingency is not spelled out in much of this.

It would be really useful, not only for Parliament but for the general public, to be able to see that next level of detail. It is like the Scottish budget—you want to go right down to the bottom level and understand the detail, so that you can see what the risks are, where the big hitters are and whether you can do something to make a policy that does not produce much reduction do a bit more, and so on.

Douglas Lumsden: We would then be able to see where we get the biggest bang for our buck. We are not really seeing that at present.

Dr Dixon: That is right.

Douglas Lumsden: Neil Langhorn, would you like to add anything on how transparent the costs are?

Neil Langhorn: I would add—and this is much more the territory of the Fiscal Commission—only that we are concerned that it is not clear how much elements of the plan will cost different delivery bodies such as the Scottish Government and local authorities and what the expectations are of private and public bodies. That level of detail needs to come through.

Douglas Lumsden: That will be needed quite soon, too, when local authorities start making their budgets. I might come to you on that point, Graeme Roy.

Professor Roy: It goes back to the point about how a long-term and strategic plan fits with the day-to-day operations of government at all different tiers. How does that feed through to the budget at the Scottish Government level, which then feeds through to local authorities or delivery bodies? It is about having the ability to trace through the actions and ambitions, to see how activity is taking place that will deliver the plan.

Douglas Lumsden: Will it not be difficult for local authorities to set their budgets for next year, because they will not be able to see what they are meant to be doing and what it will cost them?

Professor Roy: There are two parts to that. First, how much flows into local government? Secondly, how much of that is then directive or supportive of local government making the decisions? A real co-ordination issue underpins the reality of how you deliver the plan.

The Convener: Before we leave the issue of costs, it strikes me that some gross costs have been put into the draft plan that have been netted out to benefits. It is so high level—as Richard Dixon suggested—that it is impossible to see where the risks are and, therefore, impossible for the Government to take people with it when it comes to investing in a climate change plan.

My question is whether that is an accurate statement. Are you fearful that, if people do not know what the real costs of adapting to climate change are, they will not buy into the plan? Do you think that the plan will fall on that basis? Graeme, do you want to comment on that?

Professor Roy: I will not comment on whether the plan will fail on that basis, but a real challenge exists in comparing net costs, which account for assessments of different types of benefits and how meaningful they are, with the practicalities of what that means for budget lines and expenditures of different tiers of government or different agencies.

The net cost in the plan is around £4.8 billion, but, in our analysis, we talk about £21 billion purely in mitigation expenditure. Although it is quite clear that we are doing something different over time, we are looking at the expenditures, the net costs and the public investment that the devolved public sector will need in order to deliver the plan.

I argue that the actual expenditure—where you have to make the opportunity cost decisions about spending more in one area and less in another—is what will be in the budget lines in local authorities or national Government. That will require investment and difficult choices in terms of what you prioritise. The difference between gross and net might be seen as an academic conversation, but the reality is that it is the gross expenditure that will hit the budget lines.

The Convener: My problem is that I cannot understand what has been netted off, to see where the benefits are. For example, let us look at heat in buildings. Although I do not think that the EPC system is worth while—I think that it should be reviewed, and the Government is reviewing it—going on such a system gives us a bottom-line cost of making the changes to reach, for example, EPC band C. In a house—I have used this example previously—reaching band D or E could cost up to £40,000, and the net benefit of making changes would be a £323 saving in electricity per year. That system allows people to see what the costs are to them.

Clare Wharmby, do you not think that laying that out a bit more would encourage people to invest where they think they can make reasonable change and to prioritise that investment, instead of just saying to them, “Och, well, there’s a saving for you somewhere, but we can’t tell you what it actually is”?

09:45

Clare Wharmby: I am not totally sure that we need everybody to buy into the plan. I do not think that humans ever look at a plan that comes out of Government and think, “Right—this is the one. This is it. This is what I need to do.” In fact, humans operate in an environment of incentives and disincentives and of clear regulations and signals from Government.

Fundamentally, your question is whether the steer from Government in the draft plan is really clear and sets out what you want people to do and invest in. Do they feel comfortable that the investments that they are making will bring them the returns that they have been promised, or do they feel that they will be penalised for not making those investments as the system shifts over time? The plan is not what people buy into; they buy into whatever will work for them in their households, their lifestyles and their decision making. They will ask themselves, “Do I know what the Government wants to happen? Is it really clear about that?”

The Convener: And is it? You asked the question yourself, so let me throw it back at you. Is the Government being really clear?

In fairness, Clare, I would say that, if I am asked to sign up to a plan—as I have been in my life in various guises—and I do not do so, I will not have bought into it and will not commit to it. You asked the question, Clare—are you signed up to what is in the plan?

Clare Wharmby: I am—ah—

The Convener: Well, maybe that says everything.

Clare Wharmby: I do not know exactly. If we discard my own point of view, which is that of an individual in society, and take the point of view of, say, local government, which is roughly what we do, I have to say that, on the question whether I am signed up to the plan, I do not know what I am signing up to.

The Convener: Okay. You cannot sign up to something if you do not know what you are signing up to. You should never do that, should you?

Clare Wharmby: No, not until I know what I am supposed to do and what I am supposed to spend to get this to work. Until then, it is going to be difficult for people to sign up to this.

I should also point out that the plan will go through Parliament, so it is not people but the Government and the Parliament that will have to sign up to it—

The Convener: No—people are signing up to it, because their elected representatives will make a decision and will speak to it. It might not pass, but we do have to discuss it. The fact is that people have to sign up to this. Did we not learn that from the debates at the latest United Nations climate change conference of the parties? If people do not sign up, it is not going to be achieved.

Clare Wharmby: In that case, it would be worth having a much stronger narrative about households and saying, "These are the incentives, the disincentives and the regulatory framework that we are laying out in the plan, and this is what they could mean for you." However, that will be different for a household with a car and a household without, or for a household in a rural area and a household that is heavily integrated into different industries. You cannot have a one-size-fits-all approach.

The Convener: Graeme, you heard the question that Clare Wharmby asked. Can you sign up to the plan?

Professor Roy: Just to be clear, I would point out that the Fiscal Commission does not take a view on any plan or policy from Government, and we do not advocate for or disagree with anything that the Government puts forward. Whatever the plan is, our role is essentially to put out the information available to underpin fiscal sustainability or the budget.

The Convener: I understand that. It is a pity that Audit Scotland is not here to speak to the figures, but it declined our invitation to come to today's meeting, for a variety of reasons.

Richard, are the public going to sign up to this plan?

Dr Dixon: That is a good question. ESS's job is to ensure that environmental law works, so we will look at the draft plan from the perspective of whether it is delivering what is required by law.

The answer to your question is, broadly, yes. There are lots of details that could be better or that, indeed, are not there, and there are some policies that individuals might disagree with, but, overall, the plan's aim is to meet the targets given to us by the CCC, and there are numbers in it that appear to add up to meeting those targets. At the very top level, then, the plan aims at the right things and presents a set of policies—albeit without all the detail that you would want—that gets us there. In that sense, we would say not that this is a good plan—we have a set of criteria for that—but that it is definitely on the way.

However, there is a lot of work to do either before it is finished, to make a better final version, or afterwards, in the implementation phase, to do exactly what Clare Wharmby just called for and to ensure that all public bodies, particularly local authorities, understand what the plan means for them when it comes to what they should be putting in their budgets in the coming year and what it will mean for them in 20 years' time. That is the level of detail that needs to come. With regard to the numbers, I agree that more explanation of how the numbers are derived would help people to understand and to question, where they want to do so, but potentially to buy into those numbers.

I will give an example. If the Government spends money on grant and loan schemes for insulating people's homes and changing their heating systems to low or zero carbon, that will be quite a large bill: it will cost many billions to do what we need to do there. However, what would it do for people? Well, it would make their homes healthier places to be. The evidence shows that people would take fewer days off sick, so industry and businesses would benefit, and public sector employees would benefit their employer more. The evidence shows that people would go to see the doctor less often, so the national health service bill—a public bill—would decrease, although it is hard to quantify that. The evidence shows that children perform better at school when they live in a house that is warm enough to enable them to go into the bedroom and do their homework instead of having to sit shivering in the sitting room with everyone else. And if households save money on their heating bills, they do not, in general, buy themselves a holiday in Torremolinos—-they spend more in the local economy, so the local economy is boosted because the Government has invested in making people's homes more efficient.

Those are the kinds of benefits that you want to add up, but each one of them is quite different. Each one is really hard to quantify, but that does not mean that you should not have a go at that. You should explain what you have done—people

might say, “Well, that’s not realistic. The benefit will be half of that,” but at least you have put it out there for people to see. I agree, therefore, that more detail would be very useful.

Overall, should we sign up to the plan? We should keep carping on about what more we want, and what we want during the implementation phase, but, overall, yes—it is a plan that gets us to the right place, so we should support it.

The Convener: Okay. I am not sure that I agree with you, but Kevin Stewart wants to come in, so I will bring him in.

Kevin Stewart (Aberdeen Central) (SNP): I want to come back to Ms Wharmby. You said earlier that providing granular cost and benefit assessments is almost impossible, and yet, just a few minutes ago, you wanted an assessment of costs and benefits for every single household, taking into account whether they have a car or not. Which is it? In your opinion, are granular cost and benefit assessments impossible or possible?

Clare Wharmby: Let us say that you have a group of policies that are all trying to deliver essentially the same outcome. A good example of that concerns walking and cycling. We can build cycle lanes and bike parking, and disincentivise car use—we can make an array of different interventions to get people to walk and cycle—but it is difficult to disaggregate, in a particular location or even across Scotland, what the benefits of each of those individual actions will be. In the round, we hope that they get people to walk and cycle.

We can reverse it: if people walk and cycle more, what is the distribution of costs and benefits to households? That is, surprisingly, an easier question in many ways. Again, we cannot say that every household will experience this, but we might be able to say that a household in a rural area would, on average, receive certain kinds of benefit. The majority of benefits from walking and cycling tend to be in the form of health improvements, so it really depends on how much we can get people to walk and cycle.

There are models that enable us to do the reverse. What is really difficult is to take the groups of things that we do and look at the individual impacts. Is it bike parking that works, or is it cycle lanes? It is a complex system.

Kevin Stewart: To go back to Dr Dixon’s point about some things being “vague”, it seems that this is all a bit vague. That is, I think, one of the reasons why you said earlier, Ms Wharmby, that granular costs and benefits assessments are almost impossible.

Clare Wharmby: I think that it is incredibly difficult to do such assessments for policies, but it is not so difficult to do it for outcomes. With outcomes, we can work out, for example, what would happen for a typical household. However, that will be averaged—what is a typical household? We can do it one way, but we cannot necessarily do it the other way.

I do not think that we need to get down to looking at whether every single policy is costed. What we need to know is exactly what Richard Dixon said: what are the assumptions behind the costs going into this, and are we comfortable with them?

Kevin Stewart: Again, I come back to Dr Dixon’s earlier point—you can feel free to come in as well, Dr Dixon—that, with a lot of the assumptions that could be and may have been made, folk will think, “Well, that’s not right.” Again, arguments galore will come into play if we are as granular as some folk want us to be. Is it fair to say that?

Clare Wharmby: I suspect that there are going to be arguments galore anyway. We could have arguments around the assumptions in the numbers. They are there—if you put out a number, you have based the number on something, so we could have a discussion about what it is based on, or about how we do not know what it is based on. I do not know.

Kevin Stewart: Dr Dixon, as I mentioned you, do you want to come in?

Dr Dixon: It is correct that, if you expose your assumptions in full, that opens you up to people challenging you, but it is much better to have that transparency so that people can see that you have, by and large, honestly tried to estimate some difficult things. If you have really got it wrong, they can tell you that, but it is much better for people to be able to see that you have made an honest attempt to understand what the reduction in health costs to the NHS might be from reducing fuel poverty than to simply have a black box that says, “The number is 423,” without telling you why.

Kevin Stewart: How granular should all this be?

Dr Dixon: The example that I quoted had very accurate numbers, down to the nearest £1,000, and it had some narrative that explained what the big numbers were in terms of costs and benefits, so we are halfway there. Looking at the six policies, however, we see that there is very little detail for the other five that are not included in the narrative. To include some detail for each of those, in order to say, “Here are the assumptions that produced this number,” at the level of individual policies, would represent maximum transparency.

It is something that the Government has already done, because it has been able to add those numbers up, but it is not showing us. If the

Government did show us, we might find that, for one or two of the policies, it would say, "We haven't been able to produce a number for this," and it would be useful to understand that. For others, we might say, "That's great—let's do more of that policy, because that one looks really cost effective."

Kevin Stewart: You gave the example of concessionary fares. If the Government came up with an assumption of how much that policy is going to cost in 2040, I imagine that there would be arguments galore around what the true cost would be. All kinds of things will come into play. What is the bus fleet at that particular point in time? What investment has been made? Has the fleet been completely decarbonised? The list goes on. No matter what figure Government came up with for that, there would be an argument for almost everyone that it would be wrong. Is that not the case?

Dr Dixon: I think that the only thing that is true of predictions about the future is that they are bound to be wrong, but that is not an excuse not to try to make predictions—to make your best effort to make the right prediction, or the best prediction that you can—and to explain how you have done that. That is what we are missing: the explanation of how that has been done.

The Convener: That goes back to what I was always told at school: show your workings, and you might get some marks for that.

We move to questions from Bob Doris—over to you, Bob.

Bob Doris (Glasgow Maryhill and Springburn) (SNP): I had a supplementary, but Mr Stewart has interrogated quite well a lot of the questions that I wanted to ask. Mr Stewart in part quoted Dr Dixon's point about the numbers being understandably "vague". I think that that was what you said, Dr Dixon, but you prefaced that by saying that "any mature observer" would surely realise that the numbers would be understandably vague. One of the issues that the Government has—be it the Scottish Government, the United Kingdom Government or others—is that a lot of observers are not mature and they might want to wilfully mislead people about net zero.

Dr Dixon, do you think that the Government is nervous that, if it makes predictions out to 2040 on something that is not an exact science, the numbers will invariably eventually be proven to be wrong, because life gets in the way of modelling work, and that is why the Government is not showing its workings, as the convener would say? Do you understand the Government's reticence? How would you respond to that? How do we ensure that there is a cross-party, cross-Government view that we need to call out those who are not mature observers?

10:00

Dr Dixon: That is an interesting question. When I said that the numbers were understandably vague, I was talking about 2040. It is such a long time away that you will get it wrong, because lots of things will have changed. If we were to look at what the CCPU suggested five years ago and then at the annual monitoring that shows what has happened, we will see that some things have gone well, some things have gone off track and some things have not happened at all.

The reality is that, as soon as a plan is produced and published, things start to diverge from where it started. The key trick is to have the right governance systems in place, so that, when one policy is underperforming, that can be made up for somewhere else or it can be corrected. The reality of the past is that, when a plan is put out and monitored, things can go off track and suddenly something like rooftop solar, for example, does better than expected, which is great.

Things change, and the same is true for predicting the future. You will predict a pathway, but you will soon diverge from it. The mature observer—I include in that Parliament, when it scrutinises progress every year—is very important.

The CCC will say to us that this policy is going off track this year, that policy is doing really well, and there is a gap here, in transport. The CCC will give well-informed commentary about the progress of policies, but it is the Parliament's responsibility to interpret that for the public and to say something like, "This is the analysis and we think the Government has got a grip on this and is making up for the deficiencies," or "We think there is a serious problem here" and call the minister and the cabinet secretary to account for getting back on track. Parliament has a big responsibility.

I would like to think that the whole of Scotland thinks that the Parliament is a bunch of informed observers but, sadly, some people do not think that. However, many people think that, when the Parliament says something about what the Government is up to, it is worth listening to. You are an important part of making sure that the public cannot have a reactionary view because one policy has gone off track. They need to have an informed view that, for example, this policy has gone off track but that one has been accelerated, so the overall change will be where we want it to be and the trajectory is on track. There is an important job for the Parliament in that. There is an important job for bodies such as ours and for the Climate Change Committee, because it is the independent scientific adviser, but, when such

things come out, the responsible parts of the media also have the important job of showing what has gone well and where we should focus because something has not gone so well.

Bob Doris: I will follow up on that with Dr Dixon and if Clare Wharmby or Professor Roy wants to come in with any reflections, please do, and then I will go to my second question, convener.

Is it about whether Governments get it right or wrong, or is it about the modelling work that they use to predict what will happen? A lot of modelling work will be done on behaviour. Earlier we heard about behavioural change and how households and individuals will buy into it. Clare Wharmby spoke about incentives and disincentives and how to trigger some behavioural change rather than asking people to buy into the overall plan. We want businesses and sectors to change how they do their business, and that will impact every aspect of life.

None of this is an exact science. It is all based on modelling work, which, by definition, gives best guesstimates of what will happen if different inputs are put into policies. No model will ever get it perfect. I suppose, convener, that I am saying that it is not about whether Governments are right or wrong; it is about whether they are using the best and most appropriate set of modelling assumptions to get to those estimates. Maybe the Government has not shown its working, convener.

Are there any thoughts about changing the narrative on that, Dr Dixon? None of it is exact. All of it is about modelling work. Should the Government show a bit more of its workings and be open and straightforward about the fact that, by definition, models are not an exact science?

Dr Dixon: Yes, I think so. It is the mature thing to do. I have said that maximum transparency is the thing to do—you expose yourself to people criticising you, but, if they look at it and say, "I may not quite agree with that, but it is a reasonable assumption," that is helpful. It also lets anybody—a public body trying to deliver something, a member of the public, or a parliamentarian—see that an assumption is completely ridiculous or very brave: it might happen, but it might not and, if it does not, what will we do?

When it comes to the uptake of electric vehicles, the current trajectory is very steeply upwards, and the predictions are that that will continue. However, if, suddenly, there is a huge tariff on Chinese electric cars or China has a big spat with the European Union and decides not to export electric cars for 10 years, we will be in trouble. What is the contingency plan for that? I suggest that, for the big hitters in particular, we should see all the assumptions, in order to spot where the weaknesses might be and ask what the contingency plans are.

Another example is negative emissions technologies, which have to work in a big way by 2040 to make the numbers add up. Plenty of people are sceptical that they will ever happen, let alone happen at the scale that is proposed. Again, therefore—and the committee asked this five years ago—what is plan B if NETs do not work at the scale that was predicted? In the draft plan, there is no plan B for that.

Exposing all your assumptions lets people decide which ones might be risky and which look pretty rock solid. I agree that we should see the workings, so that we can make those assessments.

Bob Doris: That is helpful. Before we go on to my second question, does Clare Wharmby or Graeme Roy want to come in? You do not need to do so, but do you want to reflect on any of that before I move on?

Professor Roy: I will make a general point. Without getting deeply philosophical about modelling, the point that you have made is important for policy not just on climate change but on all the big issues that the Government is trying to achieve—long-term challenges such as economic growth, coping with the ageing population and child poverty.

When the model says that the answer is X, there is always a risk of building in a spurious accuracy and certainty that becomes quite challenging. For me, a lot of it is about using modelling to make a general direction of travel for policy, then being very clear about where there is real confidence and more certainty—particularly in the short term, to come back to the point about the upcoming budget—in that, you can be clear about costs, when the expenditure needs to take place and what needs to happen. Things start to get more uncertain as you move over to the longer term, but the point is not that you should just ignore that. The point is that you can say, "If we have these certain assumptions and those things happen, these are the potential costs and benefits that will come down the line."

Care is needed to distinguish between the use of modelling as an excuse to come up with an exact science and the taking of the opposite view, which is that, because the future is so uncertain and far away, we cannot do anything. There is a careful maturity in unpicking the different elements of that to come up with a proper plan that deals with both the short term and the risks around the long term.

The Convener: Bob Doris, I would love to come in on that point, but only after you have finished.

Bob Doris: I had finished, but I wanted to give Clare Wharmby the opportunity to respond—although she may not wish to come in.

Clare Wharmby: A plan is written for the period to 2040 because that is what the legislation asks for. In reality, you will not be able to find an organisation that is operating on a plan that it wrote 20 years ago. We also know that, in five years' time, the plan will be rewritten. The bit that we need certainty about is the short term. We need to know who is doing what, when and how now.

In the future, these things are uncertain, because uncertainty increases as the time horizon goes out—in which case, we could be honest and say, "Our costs and benefits sit within such and such a range when we get to climate budget period 3, but this is what we need to make happen in period 1 in order for those things to happen in period 3." We could be a bit more up front and honest about the fact that uncertainty increases as we go forward—because it does—and also about saying what we need to achieve in the here and now of the first five years to make other things happen. That is where we need a bit more certainty.

The Convener: On that, I accept that the plan will change, but carbon budgets will not change, because we set those to 2045. That was the whole point. It gave us a trajectory.

Am I right in saying that you are asking for more detail in the short term, with a plus-or-minus variance figure to give us an indication of what we need to do to get back on track? Surely, that would be a properly worked out plan. Would it not be worked on that basis—that, if we fail on one thing, we might need to do more on another? Most budgets have pluses or minuses.

Clare Wharmby: The plan is, essentially, uncertain—and, as far as I know, the legislation is also slightly uncertain—about what happens if we exceed or do not meet the budgets.

The Convener: I think that it is agreed that, if we exceed the budgets, we cannot write that off against future—

Clare Wharmby: We cannot bank it.

The Convener: We cannot bank it but have to move on. That is my understanding.

Clare Wharmby: Yes. I do not know how many policies are in the plan, because I have not counted them, but I think that there are around 120. The question is, do we have more policies than we need, assuming that some will not play out, or do we have to hit everything precisely, because there is just enough carbon in those if everything works out? If everything in that plan has to go as planned, that is a massive risk. How much contingency is there in the first five years? How many policies could fall off the rails?

The Convener: It is very difficult. I was taught to use the words "what if" on every policy. "What if it doesn't do this?" or "What if it does that?" There do not appear to be any "what ifs" in the draft plan.

I go back to Bob Doris.

Bob Doris: I found that exchange relevant to understanding how we scrutinise the issue as a committee and as a Parliament.

I mentioned modelling. My set question has a wee bit about modelling, so I will ask it. Annex 3 of the draft plan sets out that there was a

"bottom-up"

approach to analysis, using

"various analytical models and estimation approaches appropriate to each context."

Most people will have glazed over at that sentence. Without really knowing what it means in practice, although I have just read it out, I ask whether, in your view, there has been transparent communication of the data sources and methods that have been used in the analysis? Good luck to whoever takes that first.

Neil Langhorn: I will have a go. We would like more time in which to take a definitive view. We have tried to work through the draft plan in pretty short order. It is probably more for the CCC to look at the detail of the modelling.

Annex 3, the "Monitoring and Analytical Annex" is helpful. It starts to take you through some of how those models have worked and the assumptions beneath them. However, as everybody has just said, that level of detail does not seem to be there for some of them, particularly when it comes to the early years, including expectations of how things should ramp up. That comes back to the point that I made about governance, and our talk about contingency. Do we have certainty about what is expected to happen over the next five years and, if it does not happen, how will we respond?

The annex provides quite a lot of detail about the modelling assumptions, but it is difficult to follow all that through to what we expect to happen in order to meet the targets for a particular policy—for example, how many heat pumps are expected to be installed over the next five years to meet the domestic heat targets?

There is always a lag in the emissions data when it comes to knowing whether we are on track. One positive thing in the plan, therefore, is the talk about the early warning indicators for knowing whether we will achieve a certain number of heat pumps or the conversion to EV of a certain

proportion of the car fleet. That is a great idea in principle, but the level of detail is not there at the moment. We do not know what a lot of the early warning indicators are. In two or three years' time we will want to ascertain whether we are on track with the plan, but I am not clear as to exactly how we would assess that.

10:15

Bob Doris: So, it might be a matter of having a bigger suite of early warning indicators, whatever they may be. The committee would like to know where witnesses believe there are gaps in identifying data sources and gaps in the details of methods used. We are not experts in this area, but we are pretty good at scrutinising. We are relying on witnesses to identify where those gaps might be.

Clare Wharmby: The point that has been made about early warning indicators is a good one. On monitoring and evaluation, we need to know that we have the right indicators of transitions. Are the transitions that we need happening at the rate at which they need to, in order to meet the budgets?

In many ways, exploring the underlying model methods helps us to understand what the indicators of transition are. Say, for example, that the models are built on the premise that the spark gap between gas and electricity is two times, rather than four times. If that changes, we will get closer to what the model assumes needs to happen. If we get away from that, we know that we are off model track. Having access to the relevant annexes helps us to probe and identify the things that need to happen and the conditions, and that helps us to understand what the early warning indicators need to be.

Professor Roy: Returning to my earlier point, the modelling is really useful as a tool to help inform, in this case, the committee's scrutiny and work. However, a model is only as good as the four things that underpin it: the data, the assumptions and the parameters that link it, along with the uncertainties. No one will ever know the exact detail of the models, because they are very complex—for very good reasons. It is a matter of understanding the uncertainties around it.

What would happen if we changed one element of the pathway? What would happen if there was a change in relative technology? Would that have a big or a small impact on the plans? Such approaches give much more reassurance about how models are being used and applied, and about the conclusions that are drawn. If you modify assumptions in a small way, does that fundamentally change what you are trying to do? That is the point at which looking at the modelling becomes really important.

Bob Doris: I will stick with you, Professor Roy. My next question is about risks and uncertainties vis-à-vis interdependencies with other policies, including those of the UK Government. You have talked about how the climate change plan talks to the UK budget that we are about to have. The Scottish Government does not yet know the numbers that will underpin its budget, as that relies on a UK Government decision—and that is just for one budget, whereas there will be multiple budgets, spending reviews and changes of Government, looking way out to 2040—and probably just in the next five years, frankly, in the shorter term.

Does the plan set out those interdependencies sufficiently well? I really do not mean to be political in saying this, but we must be matter of fact about building risks into those interdependencies in a clear and transparent way.

Professor Roy: That is a very important point and is an element that often gets lost in our discussions about how the fiscal dimensions play out. Whether Scotland achieves net zero does not depend only on what the Scottish Government does. It depends on what the UK Government does in reserved and in devolved areas. That then generates the funding, under the fiscal framework, that lets the Scottish Government set its policy. Then it depends on what the Scottish Government does in all that.

It is crucial to be very clear about all those different dimensions and the potential risks and uncertainties. Some of the work that we have done, which takes things forward from that position, asks where Scotland differs from the UK with regard to potential investment opportunities but also what some of the potential risks are. Land use is a good example. Even considering just land use, for example, you can look at where Scotland might have a different position, relative to the rest of the UK, and you can then start to work through what the policy implications might be and what different decisions you might want to take.

However, from a fiscal perspective, that interdependency is fundamental to the resources that will be available to the Government to deliver on its plan. Again, it is really important to acknowledge right up front that, regardless of whether you agree with the current fiscal framework or whether you would like to have something different, that interdependency is absolutely crucial.

Bob Doris: Given that the Scottish Government is being asked for more certainty in its budget commitments to tackle net zero for the first five years, in the first instance, should it be clearer about what it expects that it should get directly from the UK Government in order to play its part, not just with regard to what the UK Government

does at UK level on reserved matters to meet net zero ambitions but with regard to the money that is transferred from the UK to Scotland for the devolved aspects? Should the Scottish Government be quantifying what it expects to get from the UK Government—not in a political way—if there is going to be a partnership approach to funding net zero?

Professor Roy: There are two parts to that. One is how you do effective Government policy across the UK, where you have different tiers of government with different responsibilities, in relation not only to net zero but to economic growth and a whole manner of policy areas where there is a connection. The question that we probably all ask ourselves is whether the joint working on shared problems is as effective as it could be, and there is probably room for improvement on that.

The second part is where that comes through in the spending review. We have had the UK spending review, so the Scottish Government knows, in broad terms, its block grant Barnett consequentials for the next four to five years, which provides an element of certainty. It then comes down to asking, given all that, what spending commitments the Government wants to put in place in delivering the plan and whether there is a potential gap.

In part, that goes back to the question that I asked in responding to Douglas Lumsden about the detail on commitments that we should see in the spending review. That gives the Government a chance to say, "Here is the gap between what we are planning to spend and the funding." It has done that at a high level in other areas. For example, the medium-term financial strategy talks about a gap between spending commitments and funding at an aggregate level, and there is no reason why you could not do that at a more granular level, if you wanted to.

Dr Dixon: Sometimes, when you read a Scottish Government document and you get to the bit about the UK Government, you think, "Oh no, this is the bit where it blames the UK Government for not being able to do anything," but I did not find that in this document. There were lots of sensible sections where it said, "We will need to work together with the UK Government if the UK Government does these policy things," so it was not about money; it was about policy. In other words, it was saying, "If these changes happened, we would be able to do such and such." I thought that that was a sensible approach to how we need to act in these isles to get the best outcomes. The Scottish Government also stressed the fact that, in order for the UK to meet the UK climate targets, Scotland has to perform well on its climate targets. The commentary in the document about cross-border issues was mature and sensible, which is great.

However, I detected one or two areas on which there was a failure of leadership. The Scottish Government talked about most things in aviation and in shipping being controlled by the UK Government. There is a section in annex 3 of the draft plan that basically says, "We're going to do some things on aviation and their net emissions reductions will be zero in each of those areas," as though Scotland cannot do anything about aviation. Of course we can, because there is air departure tax, and the document says quite specifically that we are committed to introducing it—as we have been for more than a decade; perhaps we will finally do it.

ADT is a strong tool, but the implication is that we will introduce it but set it at such a level that it does not make any difference to anyone who is making a choice about whether they will fly. It is a really important tool, because it is a financial message. It is a really important tool to help people to make a different decision about whether they will take a plane for a particular journey. If you were going to fly to London for business, you would perhaps take the train instead, because the cost differential would have changed. ADT could help us to do that, but the implication in that section of annex 3 is, "We are not bothered about that; we will not do that."

There is a similar failure of leadership on oil and gas. There is a section on the regional priorities for the north-east, where it says that

"geological maturity... means production will gradually decline".

Again, it is implicit that the Scottish Government is not taking a strategic approach to phasing out oil and gas, which provide our major contributions to global climate change, but that it is instead letting the market decide. That is the worst of all worlds, because letting the market decide means that we will not prepare as a Government and as a nation. It means that we will not do enough on the just transition or on building up the other jobs that people can go to and that communities can be supported by; we will just be letting the market decide.

We will not be ready when, in five years' time, the oil companies decide, "Oh, operating in the North Sea is all a bit expensive—we will shut this down now," and there is a big fall-off-the-cliff moment. In the same way, we were not ready for the abruptness with which Mossmorran and Grangemouth have shut. We did some preparatory work, but things really fell off a cliff and we are now in rescue mode rather than delivering a solid plan that we already had in place.

I would much rather see the Scottish Government have a plan for how rapidly or slowly North Sea oil production will decline and, beside that, a plan for how the just transition will enable workers to move from oil production to low-carbon jobs and how communities will be supported through that. I know that it is sometimes difficult for Governments to have that kind of detailed plan about communities and industries, but in this case we should be doing that, because it is so important.

Bob Doris: I will not follow up on that, Mr Dixon, but you make an important point. Your point clearly highlights the interdependence aspect, because mapping out those plans will require real, serious, proper and mature partnership work between the UK and Scottish Governments. That is helpful to put on the record.

The Convener: Deputy convener, I am not sure whether I saw your hand up. Do you want to come in, or did I misread the signal that you were giving? You are live, so we should be able to hear you.

Michael Matheson (Falkirk West) (SNP): I wanted to come in on the back of the response from Richard Dixon, particularly on the issues of air departure tax and oil and gas. I have two points. The first is that there are fiscal challenges regarding arrangements for an air departure tax and the potential impact that it could have on interisland flights. The Scottish Government has now been seeking to get that issue resolved with the Treasury for the best part of a decade, but that has not yet been resolved. Are you taking that into account in highlighting any areas in which you think that there is a lack of leadership?

My second point is the issue of the Scottish Government setting out a timeline or process for reducing our reliance on oil and gas production. How do you expect the Scottish Government to deliver on that when it is not responsible for the licensing of exploration or the extraction of oil and gas in the North Sea?

Dr Dixon: On the first point, the initial reason that ADT did not proceed was because we were still part of the European Union. There was a question that was debated with the European Commission about whether we could make exemptions or change the rates for island flights. I do not think that there is anyone in the country who does not think that island flights are a special case. The moral case has absolutely been made, but the question is about the practicalities. Obviously, when we left the EU, that blockage no longer existed.

However, there was suddenly an issue with the UK Government about whether we could make those exemptions. It beggars belief that, for nine years, we have not been able to come up with an answer to a question that everyone knows the right answer to. I am a little sceptical about whether the stalling is actual stalling or whether it is a real blockage. As I say, I think that everyone agrees that flights to the islands are a special case and that ADT could be used in several ways. It could be used quite sophisticatedly.

10:30

Some people have proposed that it could be used as a sort of frequent flyer levy, so that someone who flies to a European capital to go shopping seven times a year would start to pay a large amount, whereas a family that goes to Disneyland in Paris just once would not pay so much. A piece of work has been done and we think there are sophisticated ways in which we could use ADT to target people who take lots of flights. We could do what the French have done and actually ban short-distance flights on journeys that can be made by train. We could maybe do that and we could certainly set the rate of ADT to disincentivise short flights where there is a viable train alternative. ADT is quite a sophisticated tool that we still cannot use because we have not managed actually to implement it, despite having had the powers to put that in place for more than a decade.

Regarding the oil and gas industry, you are quite right that we are caught in a cross-border problem. We do not control licensing, although we control quite a lot of the related onshore licensing and permitting stuff. By simply saying that it is all too difficult and that we cannot do anything, we are actually letting down workers and communities. The Government has just transition plans and a just transition fund and there is activity, but—and this is my personal view—it has always seemed to me that that would be a far more real discussion if communities, workers and the Scottish Government acknowledged that the oil industry is on a declining path and will be mostly gone by a certain date.

We can all argue about when that date will be, but that would help to focus the mind because we would know that we had, for example, 10 years to build up a certain number of alternative jobs in clean industries. The decline path that you specify should be based on climate considerations and you should be saying that Scotland's emissions need to decline by a certain amount over that timescale and that the oil industry is producing a certain amount. We are also actually exporting most of that oil, which means that we are helping to create climate change somewhere else, so we should be thinking about our obligation to gradually turn off that tap and to help communities and workers make the transition.

Environmentalists at one end of the scale would tell you that we have about five years left and many politicians would say, in exactly these words, “We will still be taking out oil and gas for decades to come,” but the truth must be somewhere in the middle.

It seems to me that some clear statement from the Scottish Government about the downward trajectory of future employment within the oil and gas industry would be helpful in stimulating more action and more seriousness from all stakeholders in the just transition debate.

Michael Matheson: That is helpful.

To stick with the issue of oil and gas, we have to be realistic about what we can expect the Scottish Government to do. All decisions about exploration and extraction rest with the UK Government and there is very little that the Scottish Government can do to change the use of the existing gas fields in the North Sea or of those still to be exploited. The timeline for deciding how that will be taken forward rests solely with the UK Government.

The fact that that is a declining basin has been recognised and acknowledged for the best part of a decade, if not longer, and the just transition fund for the north-east addresses that. I put it to you that the Scottish Government has already acknowledged that and that some of the work that it is doing is intended to address those issues. However, actually setting a timeline for when we will stop extracting oil and gas from the North Sea is not something that is in the gift of the Scottish Government.

Dr Dixon: As with everything that we have been talking about, this is a case of defining an ideal pathway by which we think things should happen, even if we do not control those things.

There was an important moment when Nicola Sturgeon said that there should be no more oil and gas licences.

We have gone a little backwards from the rather strong position of a previous First Minister, which was helpful in putting political pressure on the UK Government.

The UK Government, of course, went into the election saying that it would issue no new oil and gas licences; it is now looking quite wobbly on that. It depends how you define “new” licences. Is it brand new licences or licences that are already in the pipeline? Do you still let licences that are at an early stage in the pipeline proceed? That commitment is therefore looking less interesting than it was.

One of our biggest contributions—perhaps our biggest single contribution—to damaging the global climate is the oil and gas that we produce in Scotland, most of which we sell. If we think that climate change is really important, that there is an emergency and that we are going to do lots about it, but we do not do anything about the many millions of tonnes of emissions that are produced by the oil and gas that we sell somewhere else—if we just think that that is someone else’s problem and that those countries need to think about their own emissions and do something about their use of oil and gas—that seems to be a morally incorrect position. Even if someone else burns the oil and gas, we produce it. We should be thinking what to do about that.

The Convener: Kevin Stewart wants to come in on that point.

Kevin Stewart: The oil and gas situation is very interesting. The North Sea is a declining basin. One of the major difficulties in all of this is saying, as Dr Dixon did there, that even if the use of oil and gas is not in your control, you should be dealing with it anyway, which I think is a bit nonsensical.

We also have to realise that there will be a continued need for oil and gas in years to come. Does Dr Dixon think that it would be better for us to continue extraction from the North Sea to meet the demands, or does he think that it would be better to import liquefied natural gas from the likes of Qatar or other regimes, at a much greater carbon cost?

In all of this, what is sadly lacking—and this is entirely down to the UK Government—is a strategy on energy security and assessments of what the needs will be and, of course, the carbon outcomes. It would be a bit daft, and it would blow everything out of the water, if we were to create an even greater carbon footprint by importing lots of oil and gas from elsewhere.

The Convener: Before you answer that, Richard—I think that it was more of a statement than a question, but I am sure you will find a question in there to answer—I am just going to allow a wee amnesty. About three times during this meeting, somebody’s telephone has bleeped. If it is yours and it is in your pocket, could you silence it? I find it really distracting and it is something that I feel very strongly about, so if it happens again, there might be a bit of a hunt to find out who is to blame. On that basis, I ask you to turn it off now if you are guilty. We will now move to Richard to answer the question.

Dr Dixon: I do not find my statement about saying something on the future for oil and gas nonsensical. The Scottish Government has never found it hard to say something about what should happen on issues that are reserved when they are important issues. On nuclear weapons, for example, the Scottish Government has plenty to

say, even though it does not control what will happen.

I was merely suggesting that the Scottish Government should say, ideally, what should happen and how that would mesh with its own just transition plans, even though it does not control what will happen, because that would then be an input to UK Government considerations.

Secondly, clearly nobody wants to ship containers full of LNG around the place. There is a very high energy intensity to producing LNG and, then, releasing the potential of it back into the fuel that you want, so nobody is suggesting that that is a good idea. Should we need to use oil and gas after we no longer produce it, there are much closer, much lower-carbon European sources, particularly from Norway, should we need to import some.

However, setting an end date and a descent path will set the trajectory for how quickly we have to adapt our society away from oil and gas. We are already doing that in some ways. Soon, you will not be able to install a new gas boiler in homes, and you will not be able to buy a petrol or diesel car or van by 2030. They will get phased out eventually; in fact, market economics will pretty much make them fall off a cliff. The demands for which we need oil and gas are disappearing, and we should not let oil companies decide for how long North Sea oil gets produced. We should have a strategic discussion and a decision by the Government about that.

Kevin Stewart: That is the UK Government, which is in charge of those strategies at the moment, of course with input from the Scottish Government.

Dr Dixon: The Scottish Government should come to its view and argue that with the UK Government, I would say.

The Convener: I think that you have argued that point eloquently enough, Mr Stewart, so we will move to the next questions, which are from Monica Lennon.

Monica Lennon (Central Scotland) (Lab): I am lost for words now, convener.

This has been very interesting; it is always good to have you here, Dr Dixon. I will come to you first, because I want to turn to the importance of monitoring and evaluating the climate change plan, but I also want to pick up the thread about just transition. What you have been saying to the committee is really important, and I hope that both the UK and Scottish Governments are listening.

This is a very obvious question. How important is monitoring the progress of the climate change plan, and what are your perspectives on the two-track approach to monitoring that is set out in the plan at the moment and the inclusion of just transition indicators for the first time? Obviously, I want to hear from the rest of the witnesses, but I will come first to Dr Dixon. If Neil Langhorn wants to add to that, that would be great.

Dr Dixon: I think that Neil might have more technical insight into some of this. It is very welcome that just transition is woven quite firmly throughout the plan. The section that talks about each sector's emissions also talks about just transition. The fact that there is a proposal for a monitoring framework for just transition is really important because it is quite a hard thing to monitor; the fact that it is proposed in the plan for us to debate and refine is really positive. I am very glad to see that.

Something that concerns me is what we will do when we find that we are going off track. Under the Climate Change (Scotland) Act 2009, there was the section 36 report, and, if the Government missed an annual target, it had to produce a report saying what new policies or accelerated policies would help to catch up for the missed emissions. That was a direct annual process for catching up when we went off track. Sometimes it worked and sometimes it did not work, but it was a good mechanism, and I think that we have lost that. We do not have annual targets, having moved to five-year carbon budgets, so the annual pressure is not really there.

We will have reports from the CCC telling us how we are doing, so we will know if we are off track, and we will have the Government's own monitoring that will tell us if we are off track. However, how the Parliament will hold cabinet secretaries and ministers accountable to ensure that we get back on track is a bit less clear in the five-year budget world than it was in the annual target world.

Therefore, the monitoring and evaluation have been really good, including the reports that the Scottish Government has done every year to monitor the progress on implementing the climate change plan update. Hardly anyone reads them, but they are really good and very honest about where we are on track and where we are not. I would like exactly that kind of format to continue, so that we have that honest picture.

We have the view that comes from the CCC and we have the annual monitoring reports, and adding just transition into that is very helpful. However, it will require the Parliament to ensure that it calls in all that information and interrogates it and, in particular, interrogates ministers about where things have not gone so well and what they are doing about it. Since the section 36 reports disappeared, that is now more of a proactive than a reactive activity for parliamentarians.

Monica Lennon: Thank you. Neil, do you want to add to that?

Neil Langhorn: The twin-track approach is welcome. As I mentioned earlier, there is a two to two-and-a-half-year time lag in getting the emissions data, so if you are relying purely on that, you will not know for some time whether you are on track. The idea of using early warning indicators is welcome but, as I said earlier, we do not yet know what a lot of those indicators are because they have not been set out yet. The proof of the pudding will be in the eating when it comes to what those indicators are and whether we are on track with them.

10:45

That speaks to the point that we made earlier about the governance arrangements around the plan and whether we will know we are on track. I think that Audit Scotland picked up on that in one of its reports about the governance of the plan. It comes back to whether it is going to be delivered and whether we are going to make the progress that we need to make. The twin-track approach is welcome but, as I said, it sounds a bit like we are always asking for more detail. However, we need to know what those indicators are so that we can tell whether they are realistic enough and, therefore, what we need to see.

That comes back to the point about modelling. If those indicators show that we need 100,000 heat pumps a year, are we getting 100,000 heat pumps a year, or are we getting 110,000 or 90,000? The key will be how that plays out in practice and whether we can monitor and evaluate it. From the ESS perspective, that would mean us looking at the effectiveness of the delivery mechanisms to deliver on the legislation.

Professor Roy: The monitoring and evaluation point is really important. It comes back to my earlier remarks about the links to the annual budget process and the importance of having a clear connection between decisions that are being made in the budget and how they feed through to the delivery of the plan and, crucially, how the plan is being monitored to see whether budget decisions need to change on the back of the evidence that is coming through.

It does not have to be just about the budget. Every year, the Government publishes a medium-term financial strategy, which, by definition, looks beyond the immediate horizon of the budget. That also needs to speak to the monitoring and evaluation of the plan.

There is an important fiscal dimension to the point about just transition. So far, we have talked a lot about how, if you take oil and gas, you might look at what you might do with the policy elements in there. However, an important element of the just transition is about the net tax contribution of different sectors to the economy. From the evidence that we track on net tax positions on income tax, we know that one of the key challenges in Scotland in the past few years has been the decline in the relative contribution of the high-earning oil and gas sectors and jobs in the north-east. A key element of a just transition is how much you protect that prized income tax contribution over time. If the sector can transition to high-value, supportive jobs, that will be a successful answer. It is an important fiscal element that the plan cannot ignore. The contribution that the sector has made historically and is still making will matter to the overall fiscal position, and how that is managed will be crucial.

Monica Lennon: I would like to explore that issue more before I bring in Clare Wharmby. I assume that the pace of the transition is important, particularly given that there is a declining basin. The number of jobs in the north-east of Scotland has dropped off, what happened in Grangemouth has been well documented, and we now have a live situation in Mossmorran. There is a feeling across Scotland, particularly in those key communities, that there is not really any evidence of a just transition. It might be that, in terms of the connection with place, things will look quite different in the future. However, from a Government perspective, how important is it that there is an acceleration of pace with regard to the fiscal element of the transition?

Professor Roy: If you look at it purely from a fiscal perspective, whether you agree or disagree with the fiscal framework that we have for Scotland, we know that what really matters is that there are high-quality, well-paid jobs. The framework concerns Scotland's relative position compared with the rest of the UK, and a situation in which we are losing high-value jobs and not creating high-value employment has a fiscal implication for Scotland relative to the UK. Therefore, whatever your views about the pace of transition and the importance of different sectors, protecting and creating high-value jobs in whatever sector is fundamental to Scotland's long-term fiscal position and sustainability. That is not to dismiss what happens in communities—of course that is important—but there is also a hard-edged budget implication that we need to get right.

Monica Lennon: Clare Wharmby, to add to the original question, does the national approach that is set out in the plan align with local data sources and local approaches?

Clare Wharmby: In many ways, yes. Our recommendation to local authorities is that they take an approach that is almost the same as the one that the Scottish Government has taken. We

cannot use emissions to track the transition, because that approach is too slow, laggy and fuzzy, so we need to track indicators of transition. For local authorities, those will involve modal shifts such as EVs being registered, heat pumps being installed and heat networks being connected. Those things will help us to map out whether we are moving at the right pace.

If we are going to have monitoring and evaluation, we should be monitoring and evaluating policies. The first question should be whether a policy has been delivered, and that involves a consideration of whether we know what delivered looks like in the context of each policy. Sometimes, the necessary action will involve a target being set, sometimes it will involve research being done and sometimes it will involve a lever being pulled, and we have to think about how we know that those things have been done.

The second thing that we need to consider is whether those actions are working, which means that we need to be a bit more nuanced about what we expect the policy to do and what we expect the shift to be.

I have read some of the monitoring and evaluation reports, and it made me wonder whether we could build a dashboard so that people can see what is going on without having to read through a 50-page PDF. That would allow them to find and track the policies that they are interested in.

If this work matters to us—and we want it to matter to people—we could make it easier to see what is working well and what elements have stalled, and we could then explain the process for restarting them.

At the moment, the monitoring and evaluation process is hidden, and it needs to be up front and presented on the internet in ways that people can understand.

Monica Lennon: That is an important suggestion. Is it your assessment that more work needs to be done to make sure that the information is more accessible and understandable to the public? Do you think that the public dashboard that you talk about should have not only a national focus but local and regional data, so that, wherever people are in the country, they get a sense of how things are going in their own community?

Clare Wharmby: Ideally, yes. It would be lovely to be able to do that. We could say what parts we are winning on nationally and also allow people to drill down into data on, for example, fuel poverty in their local area to see what is happening there. A lot of data would have to be pulled in.

For a lot of the indicators, a year-on-year increase is seen as a win. However, clearly, when we look at the plan, a year-on-year increase does not cut it. We need year-on-year exponential growth. Therefore, we need to be clear about what we need to do.

I understand that we have moved away from annual targets and people are reluctant to set new ones. However, annual targets are implicit in the plan, so maybe we need to make them explicit and see whether we are on track in terms of our tempo because, if we are not, we need to do something differently. I would like progress to be more apparent.

That approach helps to see the policies that are not actually policies. Sometimes, we look at a policy and we do not know what it is meant to do, how it is meant to work or what it is going to deliver, and we cannot think of a monitoring and evaluation indicator for it. If we do not know what a policy does, how it works, who will do the work, how much it is going to cost or what it is going to do, it is probably not a policy. Either we know what the policy does and why we are doing the work, or we do not know, in which case we could knock that policy off the list and end up with the ones that actually matter.

Monica Lennon: When you say that some policies are not really policies, do you have any in mind?

Clare Wharmby: If a policy has three verbs in it—if it says, “We will explore the possibility of convening a group to discuss” something—it is not a policy. It is a case of fiddling while Rome burns. If a policy is just about setting a target that is consistent with other targets that have already been set, with nothing firm about it and no consequences for not meeting the target, it is probably not a policy. If a policy is to do some research into what we should be setting a policy on, it is not a policy—it is research. If a policy does not do something, make something happen or pull a lever, it is probably not a policy.

Monica Lennon: We are getting down to basics here, but that is a helpful answer. I think that everyone agrees that we need clarity and policy certainty.

I will try to be brief with my next question. There has been a delay in emissions reporting, and we have moved to five-year carbon budgets as opposed to annual targets. Will the witnesses say a few words about the importance of early warning indicators, which have been mentioned a few times, and the kind of data that we should capture for the benefit of not just the Scottish Government but other stakeholders that are part of this journey? How do we get more immediate feedback on progress and risks?

Professor Roy, you have talked about some of the risks to fiscal sustainability, so, I will come to you initially.

Professor Roy: The point about early warning indicators is crucial. There will be regular reporting in relation to the climate change plan, but I come back to my earlier point about the fundamental importance of how the document speaks to the budget and how that feeds through to budget decisions, because that is the element that will show whether action is being taken.

Historically, the Government has published the carbon emissions from all the various budget activities. That information is useful, but it is very broad and at a very high level. The proof will come down to saying, "This is what we plan to do with our carbon budget over the next five years, and these are the fiscal levers that we are pulling and the fiscal expenditure that we are using to deliver that." On Bob Doris's point, the Scottish Government could also say what needs to happen at the UK level and set out the interactions in that regard.

Having a laser focus on the things that the Government will do to deliver its plans is key. That will allow the Government to pick up on areas in which it is lagging behind, or in which a decision has not been made, and come back to that. You will get that every year through the budget process.

The Convener: Before we have a brief pause to allow people to stretch their legs ahead of the second round of questioning, I will ask a final question. It sounds as though Clare Wharmby, Graeme Roy and, to a certain extent, Richard Dixon are suggesting that we need some early warning indicators to let us know whether we are not achieving targets. Richard, you mentioned transport, which is one of our biggest emitters, and suggested that we know some of the things that are happening, such as developments around concessionary fares and electric vehicles. Should the plan include early warning systems that say that, if we do not achieve a certain thing, we need to pay more attention? Is that what you are suggesting? I do not want to put words in your mouth.

Dr Dixon: Whether it is through a formal set of indicators that we examine regularly or a narrative discussion, we need to strongly keep track of the policies that are supposed to produce big reductions, such as the growth in the number of EVs, so that we know very quickly whether things are going wrong in some way. If we know that a major geopolitical shift will have an effect, that is fairly obvious. However, we might find that, for some reason, consumers have decided that they do not really like EVs, so the transition is taking place much more slowly. If that happened, we would need to get on that really quickly and either do something that puts progress back on track or understand that we have to do something else in another sector, or elsewhere in the transport sector, to make up for those emissions that are not disappearing because that policy is not delivering as quickly as we wanted it to. For the big reductions, we definitely need to be on the ball to know whether something is not working, or is not working to the extent that we predicted that it would.

11:00

Professor Roy: Of course, the flipside of that is that opportunities can arise, or things might move in a positive direction in areas where you were going to make changes. In many ways, the discussion that we are having is no different to the discussion that the Social Security and Social Justice Committee might be having about the plan to reduce child poverty. How do you track progress over time and then take corrective action in the key areas where you have policy levers?

It is another area where, as Bob Doris said, decisions will be made at UK level, or things will happen in the economy, that will impact on the target. However, if you are able to track and monitor things regularly, you will be able to see where you can make the policy decisions that are needed.

That brings me back to the point about the need for clear indicators on progress and, crucially, the need to be very clear about the policies that you are setting out and what they cost, and the read-through to what you think the reduction in emissions will be.

The Convener: Clare?

Clare Wharmby: Yes, I mean—

The Convener: I am sorry—that was very perfunctory. I did not mean it to sound like that.

Clare Wharmby: You can call them early warning indicators, or you can call them success indicators, because, hopefully, that is what they are. They kind of show you whether what you are doing is working.

I come back to Richard Dixon's point. If a policy area is critically important in the first five years, you can set the system up for those five years—it does not need it to go all the way to 2040—and you can say, "We are concerned only with the next budget, essentially." In other words, you can be a bit nuanced. For example, the number of EVs getting registered might be going up, but the proportion of EVs in a fleet might have stayed the same. What that means is that your fleet is getting much bigger. At that point, you have to ask, "Is there something that we need to track, and are

there other things that we need to track, too, to ensure that this approach is actually doing what we want it to do?" After all, there is a lag with emissions, and they take a while to show up. The point is: the more important the policy is to delivering the budgets, the more warning we need that it is not working.

We also need to think about the money that is associated with budgets and what is being spent. What if, for example, we are spending £188 million a year on active travel and public transport, but we are not getting any modal shift? That means that we need to spend more money, we need to create bigger disincentives, or we need to do something slightly different, and we need to use the data to work out what we need to push in the system.

A straightforward indicator to the public, and what partly gives them a sense of security about this, is their knowing that the plan is delivering the transitions that we think that it should deliver. People feel secure when they know what is going to happen and they have a framework that lets them say, "Yeah, we know what we're doing. We know why it works."

The Convener: So, it is all about buy-in.

On that note, I suspend the meeting. We will reconvene at 11.10.

11:03

Meeting suspended.

11:11

On resuming—

The Convener: Welcome back. We will go straight to questions from the deputy convener, whose team has been clearly emblazoned over the monitors as he drank from his cups of coffee.

Michael, over to you. Your question cannot be about football.

Michael Matheson: Thanks, convener.

I will pick up on the issue of governance, which was touched on in the earlier part of the meeting. We have discussed the issue of data and being able to track progress, or the lack of it, the need to have clarity on policy and the distinction between targets and other broader aspects. Richard Dixon also touched on the fact that there is no provision for the additional catch-up reports that the Scottish Government had to produce annually under section 36 of the 2009 act, on where it was not making sufficient progress.

I would be grateful for the witnesses' views on whether the governance arrangements are sufficient or whether they think that there are measures that the Government could take to support the governance process around its draft climate change plan.

I will come to Clare Wharmby first, particularly given that governance aspects will have a role to play in accountability. That could be at different levels of government, with local government being a key part of the delivery mechanism for the climate change plan. Are the governance arrangements sufficient?

Clare Wharmby: It would be useful to have a bit more detail, probably in the form of a diagram, around how progress against delivering the plan feeds into the parliamentary checks and balances, such as which committees consider the plan and which boards are accountable. However, if, as I suspect, it is a plan of many policies across many departments, in many ways, it is important to be clear about which department holds which policy and then who is the delivery agent for that policy. Is it the Government itself, local authority partners or the private sector, or is it something that households need to do?

We need to know who owns the policy and who delivers it. Then we need an overall umbrella of who is in charge annually of deciding whether we are winning.

Neil Langhorn: At the moment, the governance arrangements for the plan are not sufficiently clear. Part of that goes back to our earlier discussion of the modelling assumptions and expectations. How many of what we expect and by when is not yet clear enough for us to be able to track it.

I spoke earlier about the early warning indicators, which we think are a positive step forward. In principle, they will help us, but we do not know what they all are yet, and it is not yet possible to trace them back to individual policies and proposals so as to know what is expected to happen and by when.

11:15

Ownership of and responsibility for delivering various of the policies in the plan are not yet clear enough. If I was reading the plan for a public authority or a local authority, would I know what was expected of me and when? The short answer is no, I would not—I would possibly know for some of it, but definitely not for all of it.

Michael Matheson: If there is a lack of ownership in the governance processes, can that compromise accountability for the progress, or lack of progress, in key areas?

Neil Langhorn: I think that it can, and it jeopardises progress against the plan in the future. Will we be able to keep to it? We have already talked about contingency. In knowing whether we

are on track, which policies are doing well and which policies are not doing well, we also need to know who is responsible for them, and we need to be able to think through what we can do to make up for any gaps that appear. It is critical to delivery of the plan that there is clear accountability, with clear ownership and clear responsibility as to what is expected of whom and by when.

Michael Matheson: That is helpful.

I turn to Graeme Roy. A considerable part of the change that will be needed to meet our climate change targets will require private sector investment. I would be interested to hear your views on this. If there is a lack of clear leadership for and ownership of policy within the Government's climate change plan, does that run the risk of making it difficult for the private sector to develop a clear understanding of the Government's priorities and of how firms should target their investment in this area? If there is a lack of clarity, that could have an impact on our economy in the medium to longer term.

Professor Roy: That is a really great question, and it comes back to some of the points that we have discussed about uncertainty and the different agents that are involved in delivering the plan.

There is one aspect that I think is really important. I keep going on about this, but I think that it is fundamental, both in terms of actual action and to provide certainty and clarity of direction of travel, and it is about how the document speaks to the annual budget process. Where are the very clear plans saying, "This is what we, as the Government, said we would do, and these are the investments that we are making over the next financial year and through the spending review"?

The spending review will be really important, as it will clearly set out what the Government intends to do over the next five years, and potentially beyond. It is a matter of being very clear. For example, what levels of investment is the Government committing to the decarbonising of the housing stock? That clarity can provide private sector investors with certainty, allowing them to see clearly what the direction of travel is and what action the Government is taking. It is similar with transport and in other areas. That clarity is important: it will be clear what the Government is doing, and it can be held accountable for that.

However, what about the other agents and actors that are involved in the process? They can be held accountable as well, whether they are in the private sector or elsewhere. As we discussed earlier, there is the question of what the UK Government is doing in this space. That brings us back to transparency and being clear about the key things that the Government can do around spending and the broader policy narrative, ultimately improving accountability.

Michael Matheson: Richard Dixon mentioned that there is no section 36 report in the process now. What would help or enhance the governance process and the monitoring and tracking of progress, or lack of progress? What positive step could the Government take to change the existing draft plan to make it more transparent and accountable?

Dr Dixon: There are two points in the year when someone tells us what is happening with the climate change plan. When the emissions figures come out, the CCC will tell us what is happening, whether we are on track and what it thinks should happen. That is a very strong steer. There is also the Government's monitoring. Assuming that that continues in the same fashion, we will have annual reports saying what has happened with the policies in the CCP.

The bit that is missing is that there is no obligation for the Government to come to Parliament and say what it is going to do when things are not satisfactory. That is not in the law, but it could be in the plan. The plan could say that, every year when those two things happen, ministers will make a statement to Parliament to explain what they are doing and where things are not on track—and to celebrate where things are overperforming.

We could fix this after the fact by putting it in the plan and making it a commitment that that will happen. However, if that does not happen, it will be up to this committee's successor, as a leader on the issue, to make sure that it is proactive in summoning the people from the CCC who have done the analysis and the Government's statistical people who have done the monitoring and assessment of progress on the plan. It should then put what they say to the appropriate cabinet secretary or minister and ask them, "Right, what are you doing about this policy that is not working? What is happening with EVs? That does not seem to be on track," and so on.

The onus will be on the committee, or the whole Parliament, to be on the ball to do that, given that we will no longer have a statutory obligation for ministers to come and talk about the plan and, indeed, do something about it.

The Convener: I should point out that the committee has asked for future legislation to show where the Government is moving towards net zero, and for budget scrutiny to look at where it is achieving the net zero objectives in the plan. The committee has been at the forefront of that.

Kevin wants to come in with questions on a different area.

Kevin Stewart: I want to have a wee look at how the plan is communicated to the public, who are often quite confused about these issues and who face messaging from various polarised viewpoints. I have been sitting here thinking about how we would communicate what is going on at the committee this morning. If we put it into a play and got it out there, we would baffle people. What needs to be done on the public messaging around the plan?

Clare Wharmby: Net zero is a surprisingly technical concept, particularly when you look at the plan and see what is below the line, what is above the line and what is a long way out.

Net zero is almost like a product that people do not know they need or what it is good for. What we do know, and what the plan is good at explaining, is that, putting the net zero concept to one side, it is about all sorts of things that people want. It is about clean, warm homes. It is about sustainable and accessible transport options for all people across Scotland to be able to get to jobs, schools and services. It is about safeguarding environmental processes. Those are all things that people want.

In fact, there is a huge amount of evidence that people also want Governments to take action on climate change, so I do not think that we need to change that too much. However, I do think that we need to tell a clear and compelling story that net zero is about achieving those things.

We are trying to do it in Scotland in a way that distributes those benefits relatively equally across society, with the costs of the transition borne by people who have the ability to pay them and not by the households that produce the smallest amount of emissions.

In many ways, the messaging in the plan is actually fine. However, on the communication of that message, 300-odd pages is a large document, and although I know that there is a shorter plan, I do not think that many people are going to read that. When you do an environmental impact assessment, you do a non-technical summary. It would be nice to have a non-technical summary that says, “This is what we’re trying to do, why we’re trying to do it and how we think it will help.”

Dr Dixon: We start from a good place in Scotland. As Clare Wharmby has said, surveys of the public show that the vast majority think that climate change is important or really important and that we should do something about it. Until recently, we have had a political consensus among the parties in the Parliament that net zero is the right place to be aiming for. The fact that some noise out there is generating more scepticism does not seem to be impacting the public that much at the moment.

I absolutely agree that part of the way to communicate the plan is to present that vision of what people’s lives might be like, where they will live, the better transport options that they will have and so on. It is also about showing that someone is thinking about the future of people’s jobs. If you are in a high-carbon industry, someone is thinking about what low-carbon industry you might be able to move into and how you might be helped to do that, or, if you are in a community in the north-east, someone is thinking about what that community will be like when there are no oil jobs but there are offshore wind jobs, and about how to ensure that that community remains vibrant and healthy.

However, although painting that positive vision is really important, we must not do so to the exclusion of saying that, because this is such a big problem, some things will be a bit difficult. Some people say, “Oh well, we’ll go to net zero and your life will be pretty much the same—don’t worry.” That is not really true. Some things will have to change.

If people’s situations were magically transformed into ones in which they live in a nice, energy-efficient house that costs them almost nothing to run, their job is from home, the shops are only 2 miles away and they are able to cycle on a nice, safe cycle track, they might find that they love it. However, people will not necessarily find that vision attractive—even if they would like it when they got there—from where they are today, living on an estate and driving to work every day through the crowds with their fast car, which they think that they like. We need to be a bit careful with visions that we think are attractive, as so-called normal people will not quite put themselves in that place.

I agree that visions of what the future might look like and of the benefits are really important, and the plan itself is good at thinking about the positive opportunities. However, we also need to ensure that consistent messages are coming from the top.

John Swinney has set achieving net zero as one of his four big missions, which is a strong top-line message—he gives speeches about it that are well received. However, let us look at the actions of Government over the past year. The warm homes bill has been postponed twice and is not even mentioned in the climate change plan; the ban on biodegradable waste has been postponed for the second time, even though it is an important measure in driving more sustainable waste practices; and we have abandoned the 2030 and 2040 targets and massively weakened the car kilometres 2030 target. If you are an observer of Government, you see that some of the things that

you thought were essential to deliver on the last climate change plan update seem to be disappearing or weakened.

There is an issue of political consistency in the actions of Government. People can observe the Government and say, "It's serious about this issue because it's still doing this, this and this." I agree that visions and top-level messages are really important—we are getting those. The political consensus that we mostly have in the Parliament is also very important. However, it is also about consistency in day-to-day announcements and ensuring that we do not appear to be slackening off on net zero when things are delayed, postponed or cancelled.

Neil Langhorn: That comes back to some of the points that I mentioned earlier about clarity on what we expect to see happening and when.

The plan does a good job of setting out some of the high-level benefits and how we will try to move in relation to the just transition, but the issue comes back to the point about the need to be clear about what is expected and by when. People need to know what that looks like. For example, how many warm home projects are we going to have, and what percentage of the fleet is expected to be EVs by a certain date? As Clare Wharmby said, it is important to be clear about what support and incentives are available to individuals.

There needs to be a high-level message about where we are going, what we expect to do and what will be delivered by a certain date, so that we can see whether we are on track, but there also has to be information about what that means for individuals and communities.

11:30

Kevin Stewart: Professor Roy, would you like to comment?

Professor Roy: You are asking an economic forecaster to comment on how good we are at communication, so I should add a caveat immediately.

It is naive to think that this is a document that everybody is going to pick up, read and work with. One of the core issues is how we communicate with the people who really need to understand the document and will act on and scrutinise it. From the point of view of the general public, it is important to have that reassurance that such things are being scrutinised, actioned and planned.

Building on the conversation that we have just had, I would say that a lot of the stuff that we do in the economy involves how we make such plans real to people. We need to tell them what those things mean in terms of their jobs, their homes, the way that they travel to work and so on. That is what people care about and what matters to them.

Kevin Stewart: That is the bottom line. To take folk with us, we have to get that message across, without a doubt.

I am interested in the fact that lots of folk have spoken about vision. Dr Dixon talked about consensus and the fact that there has been consensus in this place. However, I think that that consensus is disappearing and that, in the next session, this might be a very different place when it comes to such discussions. Where does logic, rather than vision, fit into our communication?

Professor Roy, your mic is still on, so let us go to you first.

Professor Roy: We deal with that quite a lot in our economic work. You start off with assumptions that you believe are logical, but, in reality, they are potentially open to challenge because people have different opinions or because of issues of nuance. There is a risk that we can start by just saying, "This is obviously right—why don't you agree with it?" We have to be more open, humble and aware that there are different opinions about various issues.

The role and value of evidence is important, as is how we communicate that. To come back to an earlier point, when you present a plan by saying that the modelling that you have done has come up with a specific number, that creates a long-term risk around how you communicate that, because that number will change, which potentially risks undermining confidence in your broader narrative.

There is a balance between being clear about evidence and the parameters and uncertainties around that on the one hand, and presenting that evidence as complete fact on the other, because there will be some variations around that, so how you communicate that will be important.

I would make a point about the resilience of the plan to changing economic outcomes, preferences and technologies. That is the test of the ultimate success of a plan: how resilient it is to differences that we know will emerge over the next 25 years.

Kevin Stewart: So, you are basically saying that, because things will inevitably change, the plan must be a living document that can change as we achieve certain things and discover that we are unable to achieve certain other things, and that we must communicate that to the public, if we are going to be logical about all of this.

Professor Roy: Yes, and that is no different from what we have to do in relation to some of the other big challenges, such as how we tackle child poverty and how we deal with an ageing population. There are a lot of uncertainties and unknowns around those issues, but we know that

we must meet those challenges. The specific path that we take will vary and evolve over time, but, ultimately, the overall objective is clear.

Kevin Stewart: Does anyone else want to come in on the idea of the plan as a living document and how we communicate that?

Dr Dixon: There are two things that help us with communication. I hear what you say about how there might be more sceptics in the Parliament in the next session. That will be difficult to deal with, but we have two important things on our side in making the case for strong action on climate change. The first is our international obligations. As an industrialised country that, during the industrial revolution, pioneered quite a bit of the stuff that made climate change happen, we have a moral obligation to do the right thing. For many audiences in Scotland, it is important that we have a moral obligation to do our bit for the international community. We should not forget to keep talking about that.

Secondly, a lot of what we do is based on advice from the Climate Change Committee, which is a group of scientific experts who are independent of Government. As well as defining the pathway—which we have mostly accepted—and the recommended budgets, in some cases, it gives us specific details on what we might do in policy. It is helpful for the Government and for anyone who is trying to defend the plan to be able to say, "This has come from well-thought-out, independent scientific advice from a body that works for the UK Government as well, so it is well integrated across the two Administrations." From the point of view of saying, factually, where the advice comes from, that is also on our side.

Kevin Stewart: Does anyone else want to come in?

Clare Wharmby: It must be a live, agile plan, because this is a fast-moving area. That is one thing that makes it tricky. The people who put the plan together were given an incredibly difficult job. It is a difficult task to write something that will last for five years but which covers 15 years. I give the example of Sweden, which has a live online plan that is updated every two weeks with the latest policies—policies that have changed, new policies and policies that have finished and been retired. It is highly likely that, at the end of this five-year period, some of the policies will have evolved, some of them will have been dropped and some will have been added. It is incredibly difficult to keep track of that evolving policy landscape.

If we want people to be able to come along on this journey and deliver what needs to be delivered, we need to keep people up to date with what it is that they need to deliver. This is where we have ended up—we have a lot of plans, strategies, policies and route maps, and if those were what made things happen, we would be well on the way by now, because we have plenty of them. It might be that a slightly different approach is needed that involves more live and agile planning.

The idea that the plan can be delivered only through consensus is probably not the case. There are plenty of places where we do not have consensus on all sorts of matters. What we constantly do in a democracy is find the transitions of consensus. We do not need to agree about how everything will be in 2040, because we do not know who will be making decisions in 2040, but we need to agree what we are going to do next week. We have a fairly clear idea of what we need to do next week. We do not need to agree on everything; we just need to agree on what we do next.

Kevin Stewart: I agree that we will not always get consensus—it would be nice if we all reached logical positions, but, in today's world, the chance of that is going out the window.

I turn to the issue of effective oversight. We have discussed what our successor committee should do and what the Parliament should do. I would extend that beyond this committee, because climate change is a thread that runs right through Government, and every committee has an obligation to scrutinise that. How can independent bodies provide oversight for climate policy over the course of the next parliamentary session? What needs to be done to achieve effective oversight?

Dr Dixon: We have the Climate Change Committee, which has a role in assessing annual progress and advises on carbon budgets and on policy programmes to reach emissions targets. It is a key player, and we in ESS have a duty not to duplicate things that it is doing. We have a memorandum of understanding to make sure that we work effectively together but do not duplicate effort.

The CCC has done a great job of saying to the Government each year where things are at, what needs to be fixed and how things could be improved. The CCC is an advisory body, but, when it suggests something, the Government often follows that suggestion. However, ministers do not have to go Parliament to respond to that advice—that statutory function has been lost. Therefore, we need to replicate that in committees and in Parliament.

On the role of other bodies, the CCC does a comprehensive job of saying whether things are on track and asking—on forestry, for example—why X number of hectares are not being planted in a given year. There is a lot of detailed analysis of the right kind of stuff. The CCC communicates in a

way that is not only excellent for a technical audience, including this kind of audience; it is also reasonably easy for the public to understand and for journalists to write something about. It does a really good job of that.

Kevin Stewart: Does anyone else want to come in? I see that Professor Roy's mic has come on.

Professor Roy: I will make two quick points. I agree entirely with you about the importance of the committee structure and committees looking at policies such as net zero across the board. It cannot be a segmented approach. If a lot of the policy issues that we are looking at are to do with transport and housing, that needs to be disseminated across those areas. Since devolution, Parliament has faced the challenge of how to deal with cross-cutting issues.

On the fiscal side of things, the Scottish Fiscal Commission has a role in looking forward to the medium term. However, Audit Scotland has an important role in looking backwards and saying, "This is what you've spent. This is what you've done. Have you achieved the outcomes?" That approach needs to be embedded across all portfolios and all aspects of the Parliament.

Kevin Stewart: It was mentioned earlier that investing in net zero is the ultimate case for preventative spend—I am sorry, but I cannot remember who it was who said that. As we move forward, will the Fiscal Commission take an in-depth look at preventative spending and at what that can achieve on our route to net zero?

Professor Roy: The legislation that set up the SFC places limits on our remit. We can look at Government policy, but we cannot look at alternative options. When Government sets out a policy, we can look at what the trajectory of that policy would be, but we cannot get into what the options and timescales would be for preventative spend, because that would stray beyond our remit.

Our remit is to look at what the planned spending is, what commitments have been made and how that feeds through to what the Government is trying to achieve with regard to emissions reductions.

Kevin Stewart: I will leave it there. Thank you, convener.

The Convener: Thank you, Kevin.

I thank everyone for giving evidence this morning. The formation of the new Parliament will be a direct result of elections and the choices of the people of Scotland. If it becomes a more difficult Parliament, that will be what the people of Scotland have chosen.

I have found this morning's discussions very interesting. I have set views on plans being about what, where, how, by whom and at what cost. They should also include what-if scenarios. I will be interested to see, over the next few months, how the climate change plan meets those criteria.

The other thing that I should clarify is that our consultation will finish on 5 March 2026, which meets the statutory requirement. There is no legal requirement to lay a climate change plan before the end of this parliamentary session, but the Government has indicated that it intends to do so. There is no statutory requirement for that.

The meeting was slightly longer than I had anticipated, but the draft plan will be a key focus of the committee between now and the end of the parliamentary session, so it is important that we drill down into some of the issues.

I suspend the meeting for five minutes to allow the witnesses to leave before we move on to our next item of business.

11:45

Meeting suspended.

11:50

On resuming—

Subordinate Legislation

REACH (Amendment) Regulations 2026

The Convener: Welcome back to this meeting of the Net Zero, Energy and Transport Committee.

The third agenda item for consideration is a consent notification relating to a proposed UK statutory instrument, the REACH (Amendment) Regulations 2026.

UK registration, evaluation, authorisation and restriction of chemicals—or UK REACH—is the principal regulatory framework for chemicals across Great Britain. It is designed to control the risks that chemicals pose to people and the environment, and allows restrictions to be placed on their use, manufacture or sale. The instrument proposes to amend UK REACH by adding certain types of lead ammunition to the restriction list.

The committee's role in relation to UK SI notifications is to decide whether it agrees with the Scottish Government's decision to consent to the change being proposed by the UK Government. If we are content for consent to be given, I will write to the Scottish Government accordingly. In doing so, we have the option to draw matters to the Government's attention, pose questions or ask to be kept up to date on particular matters. However, if the committee is not content with the proposal, it may make one of the recommendations outlined in the clerk's note.

Before we go any further, I invite members to speak if they wish to make any comments. I do wish to make some comments, but I am happy to take other members' comments first.

I will be clear, open and honest with the committee, as I always am. I use lead ammunition to control vermin and deer. I remind the committee that we banned the use of lead shot over Ramsar and wetland sites in Scotland in 2004, and that that was different from what the rest of the UK did. That ban took away the risk that wildfowl might ingest lead, because it was no longer being used over wildfowl areas.

We are discussing a proposal to remove the use of lead shot, but I would argue that no adequate alternative is yet available and that what is available is extremely expensive bismuth or, in some cases, steel. The other issue is that, should you choose to replace lead shot, it would become impossible to use certain calibres or types of guns. For example, shotguns made prior to a certain date—probably around the 1970s—would not be proofed to use steel shot and many of them would become redundant. Some lower-calibre, high-velocity rifles would also become questionable in their use. For example, a .243 rifle would not develop sufficient ballistic energy at the point of impact, meaning that it would no longer, to my mind, be suitable for use on large animals such as red deer.

There are also issues about the risk of ricochet when using lower-density bullets. For example, copper has a far lower density than lead and is therefore more likely to ricochet, causing problems, whereas a higher-density bullet is less likely to ricochet.

To my mind, there is nothing in the financial resolution that has been put forward. Although I support the principle of moving away from lead shot, I am not sure that we are in a position to do that at the moment. I also find it quite odd that that very minor use of lead seems to be being singled out when the use of lead pipes in the delivery of water to many properties across Scotland is still considered to be acceptable, even though it causes a far higher risk. There is a similar situation with the use of asbestos pipes in a huge number of public water mains across Scotland, especially in the Highlands. There are thousands and thousands of kilometres of asbestos water pipes, but those are not being dealt with at the same time as lead shot.

For those reasons, although I support the principle of what is being proposed, I cannot actually support the proposals themselves, and I will have to abstain if the matter is put to a vote. I hope that I have made my reasons for taking this position clear—I support the principle, but not the delivery at this stage. I think that another three years on top of the proposed three-year transition period—or a minimum of two, taking it to five—would be far more suitable.

Bob, I think that you indicated that you wanted to pass comment.

Bob Doris: Yes, convener. I just want to put on record what is on page 8 of the briefing that has been prepared for us on this matter. It says:

"A voluntary phaseout by 2025 on the use of lead shot that was led by UK shooting organisations has been shown to be largely ineffective at minimising the use of lead ammunition, and therefore effective regulation is required in this case."

If UK shooting organisations were content to go for a voluntary phase-out, they must have thought it a practical thing to do, even though it turned out not to be successful in driving the change that we want to see.

I also note that—and this is verbatim from the briefing in front of us:

"The Agency only considered a restriction where appropriate alternatives were available, therefore small calibre bullets (≤6.17mm) for live quarry shooting have not

been included in the restriction as there was insufficient evidence that viable alternatives were available."

I do not have any background in this matter, convener, but a briefing that has been prepared for us ahead of this committee meeting seems to substantiate the idea that this was a reasonable thing to do.

I get that your experience in this is very bespoke, convener, but it is only fair to put the alternative view or position on the record this morning, given that it is in our briefing papers.

The Convener: That is absolutely right and fair. The point you have made about small-calibre bullets relates to such small calibres as .22, where there is no alternative. I think that most people would accept that .243 becoming, or remaining, a suitable calibre for red deer is questionable. You would have to go up to a .270, probably with a 95 to 100-grain bullet as a minimum, because a .243 would not have the effective knock-down capacity.

I certainly take your point, Bob. I do have experience of actually doing this, and I am just trying to get that on the record.

Bob Doris: Okay. I appreciate that, convener. I do not intend to try to block the policy intent here, and I appreciate that that might mean our having to part ways in relation to how we cast our vote. However, that is no reason to ignore the individual concerns that you have raised, convener, which we could take up in correspondence with the Scottish Government.

The Convener: I appreciate that offer, and I think that raising some of the issues with the Scottish Government might make the implementation of this proposed ban, should it be agreed across the United Kingdom, easier for lots of people. After all, it will affect the Scottish Government, too, because it employs stalkers in Forestry and Land Scotland, and they will probably have to change a lot of their rifles and weapons to allow them to carry out their duties as rangers.

Are there any other comments?

Monica Lennon: Now that there has been a fuller discussion, convener, I note that you have indicated that this will probably result in a vote, because there is division on this. I welcome the advice and background papers that have been provided to the committee, and what really stands out for me is that the notification outlines the reasons for lead ammunition being restricted and the fact that it impacts not only on wildlife, but on human health, too. Our papers advise that

"ingesting lead from ammunition is known to cause excess deaths in wildfowl and poison predatory species that eat contaminated prey or carcasses. It also highlights that humans can be exposed through consuming game meat that has been shot with lead ammunition."

Those seem like quite serious matters that we should take into consideration. I have not heard anything that would persuade me not to support the proposal today, but I thought it important to put that on the record.

The Convener: Having shot certain things, I have eaten quite a lot of lead in my time, and I seem to be fine on the back of it—although you might argue that point.

Monica Lennon: That is debatable. [*Laughter*.]

The Convener: Mr Stewart, I like that you smiled at that.

I am now going to move to the substantive question. Is the committee content that the provision set out in the notification be made in the proposed UK statutory instrument?

Members: No.

The Convener: There will be a division. Because Michael Matheson is online, we will have to do a roll-call vote. I will go around the table and ask each member to vote.

For

Doris, Bob (Glasgow Maryhill and Springburn) (SNP)
Lennon, Monica (Central Scotland) (Lab)
Matheson, Michael (Falkirk West) (SNP)
Stewart, Kevin (Aberdeen Central) (SNP)

Abstentions

Lumsden, Douglas (North East Scotland) (Con)
Mountain, Edward (Highlands and Islands) (Con)

The Convener: The result of the division is: For 4, Against 0, Abstentions 2. The proposal is agreed to.

12:00

The Convener: Is the committee happy for some of the questions that I have raised regarding calibres, financial matters and alternatives to be put to the Scottish Government so that we can get a response?

Bob, I see that you want to come back in on that.

Bob Doris: I am happy with that, convener, but—and I say this with complete respect and courtesy—as long as the wording of the letter does not recount the comments that you have made as the factual position. They might very well be the factual position, convener, but we have not taken evidence on the issue. If the letter were to talk about a suggestion being made, highlight some of the matters that you have drawn to the committee's attention and then ask for a response, that would seem reasonable. We could also just refer the cabinet secretary to the *Official Report* and ask for a comment on that.

The Convener: My answer would be that I would let the clerks draft the letter, and I would be very happy to share the draft with Michael Matheson once I am happy with it. In accordance with the way in which I generally respond to these things, I will do so without fear or favour to myself and ensure that we have got it right.

Kevin Stewart: I know that this is a statutory instrument, convener, but I just wonder whether the Scottish Government is the right body to write to. At the end of the day, this is UK legislation.

The Convener: The clerks have told me that, because the Scottish Government is acceding to this request, it would be the right body to write to, although it might well have to contact the UK Government to clarify some of the details. We will follow the procedure and the direction of travel, if you are all right with that.

Thank you very much. That is all that we are going to do in public, so we will now move into private session.

12:02

Meeting continued in private until 12:43.

Official Report
Room T2.20
Scottish Parliament
Edinburgh
EH99 1SP

Email: official.report@parliament.scot
Telephone: 0131 348 5447

The deadline for corrections to this edition is:

Monday 5 January 2026

Published in Edinburgh by the Scottish Parliamentary Corporate Body, the Scottish Parliament, Edinburgh, EH99 1SP

All documents are available on
the Scottish Parliament website at:

www.parliament.scot

Information on non-endorsed print suppliers
is available here:

www.parliament.scot/documents

For information on the Scottish Parliament contact
Public Information on:

Telephone: 0131 348 5000
Textphone: 0800 092 7100
Email: sp.info@parliament.scot

The Scottish Parliament
Pàrlamaid na h-Alba