OFFICIAL REPORT
AITHISG OIFIGEIL

Net Zero, Energy and Transport Committee

Tuesday 3 March 2026

Session 6

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Tuesday 3 March 2026

CONTENTS

	Col.
DECISION ON TAKING BUSINESS IN PRIVATE	**1**
SUBORDINATE LEGISLATION	**2**
Public Services Reform (Scottish Water) Order 2026 [Draft]	2
Renewables Obligation (Scotland) Amendment Order 2026 [Draft]	8
DRAFT CLIMATE CHANGE PLAN	**12**
SUBORDINATE LEGISLATION	**65**
Scottish Road Works Register (Prescribed Fees) Regulations 2026 (SSI 2026/52)	65

NET ZERO, ENERGY AND TRANSPORT COMMITTEE
11th Meeting 2026, 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:

Sarah Boyack (Lothian) (Lab) (Committee Substitute)
Lucy Drummie (Scottish Government)
Gillian Martin (Cabinet Secretary for Climate Action and Energy)
Dr Emily Nurse (Climate Change Committee)
Emma Pinchbeck (Climate Change Committee)
Madeleine Plater (Scottish Government)
James Simpson (Scottish Government)

CLERK TO THE COMMITTEE

Peter McGrath

LOCATION

The Mary Fairfax Somerville Room (CR2)

Scottish Parliament

Net Zero, Energy and Transport Committee

Tuesday 3 March 2026

[The Convener opened the meeting at 08:40]

Decision on Taking Business in Private

The Convener (Edward Mountain): Good morning, and welcome to the 11th meeting in 2026 of the Net Zero, Energy and Transport Committee. Our first item of business is a decision on taking in private item 8, which is consideration of the evidence that we heard from the Climate Change Committee. Are we agreed to take that item in private?

Members *indicated agreement*.

Subordinate Legislation

Public Services Reform (Scottish Water) Order 2026 [Draft]

08:40

The Convener: Our second item of business is consideration of a draft statutory instrument. The purpose of the order is to amend the Water Industry (Scotland) Act 2002, which sets out statutory requirements for the composition of the board of Scottish Water. The Delegated Powers and Law Reform Committee has made no comment on the instrument.

I welcome to the meeting Gillian Martin, the Cabinet Secretary for Climate Action and Energy, and her supporting officials: James Simpson, the unit head for the water industry division; and Lucy Drummie, a lawyer for the Scottish Government.

The instrument has been laid under the affirmative procedure, which means that it cannot come into force unless the Parliament approves it. Following the evidence session, the committee will be invited to consider a motion recommending that the instrument be approved.

I remind everyone that the Scottish Government officials can speak in the evidence session but not in the debate that follows.

I invite the cabinet secretary to make a short opening statement.

The Cabinet Secretary for Climate Action and Energy (Gillian Martin): I will take the committee through the instrument. Under the Water Industry (Scotland) Act 2002, Scottish Water must have a minimum of three executive members on its board. That statutory requirement is currently fulfilled by the appointments of the chief executive officer, the chief financial officer and the chief operating officer as executive members.

The simple purpose of the order is to reduce that requirement to a minimum of two executive members. It will support governance arrangements regarding executive representation that Scottish Water intends to implement upon the retirement later this year of the chief operating officer, whose role is not being backfilled. The CEO and CFO will remain executive members. The order will therefore help to ensure the effective administration and governance of the Scottish Water board and reflect changes to the senior management structure.

In line with the Public Services Reform (Scotland) Act 2010, I consider that the order will improve the exercise of Scottish Water's public functions, particularly with regard to its economy, efficiency and effectiveness. The order will avoid a

scenario in which Scottish Water is required to designate a new executive member with the associated remuneration when the board does not believe that to be the best course of action.

Effective oversight of Scottish Water's executive will continue through the non-executive directors, whose composition and responsibilities will remain unchanged.

The Scottish Government consulted key stakeholders on the proposal, none of whom raised any substantive concerns. I will be happy to answer any questions that the committee may have.

The Convener: Thank you. The order will reduce the number of executive members on the board from three to two, and the requirement in the legislation is that non-executive members must outnumber executive board members by at least two. Do you propose, in due course, to reduce the number of non-exec directors in Scottish Water?

Gillian Martin: No, the number of non-executive directors will remain at the same level as it is now.

The Convener: I know that it will under this order, but my question is, now that you are reducing the size of the executive board by one member, is it your vision that the number of non-executive directors could, in the future, be reduced as well?

Gillian Martin: There are no plans to do so.

The Convener: There are no plans to do so—okay.

Sarah Boyack (Lothian) (Lab): It was good to get clarification that there will not be a reduction in the number of other board members. However, as part of the evidence that we have taken, trade unions got in touch to say that this is a good opportunity to have trade union representatives on the board of Scottish Water. Is that part of your consideration at the moment?

There are three trade unions that represent workers in Scottish Water and, as in many other cases, they have shared concerns. They think that, in line with the Scottish Government's fair work and fair work first principles, having a worker's voice involved in the forum that has oversight of Scottish Water would be a big step forward. They give the example of the recent industrial disputes that seem to have gone on forever without resolution and say that having union people on the board would lead to a more constructive and accountable framework. In recent days, they have expressed concerns about Scottish Water being privatised by stealth and the fact that it is now almost indistinguishable from the private sector companies down south.

There is therefore quite a lot of concern and, if we agreed to the approach today, there would be a real opportunity for Unite the Union, Unison Scotland and GMB to get properly involved in the oversight, and it would bring many benefits. What is your thinking on that? The unions are looking for three representatives but another option is to have at least a trade union representative on the board to deliver more accountability and constructive working relationships.

08:45

Gillian Martin: I am aware of the unions' calls for that but there are no plans to do it. In 2002, when the Water Industry (Scotland) Bill was being considered, we considered how best to represent staff interests at the board level. At that point, the ability to have union representation on the board was rejected. Indeed, there is no worker representation on the board of any other public body. As per the Water Industry (Scotland) Act 2002, Scottish Water appointed a non-executive member who has specialist knowledge of employee interests. That person was reappointed in May 2025. Following the period of industrial action and strained industrial relations that Sarah Boyack mentioned, we sought greater clarity from Scottish Water's director of people and director of governance that they are clear about their responsibilities to manage any potential conflicts.

To come to the other point that the unions made, I reject the assertion that Scottish Water is being privatised by stealth, if that is the phrase. I am proud to say—we should all be proud—that Scottish Water is a publicly-owned resource. We just have to look at the other parts of the United Kingdom where water is privatised. Last week, there were documentaries on television showing some of the disgraceful actions of private water companies. Every penny of Scottish Water profit is put back into improving the operations of water in Scotland.

We remain committed to a publicly-owned Scottish Water where all profits go into improving the service. Scottish Water is performing well as a publicly-owned corporation. If it contracts private companies, it is largely to do with capital expenditure programmes for improving infrastructure. Scottish Water has a large programme of work to improve its infrastructure throughout the country.

I therefore reject the characterisation that Scottish Water is being privatised. It is not privatised. It is in public hands and not a penny of profit goes to shareholders, which could not be said of other water companies in the UK.

The Convener: Before we leave the subject, I read the letter from the unions and each union

seems to be asking for a representative on the board, so that would be three on a board of between five and eight non-executives, which would be quite a heavy balance, to my mind. Cabinet secretary, could you remind me who the person on the board is who has specialist knowledge of employment so that we know if we are asked?

Gillian Martin: Do you want their name?

The Convener: Yes.

Gillian Martin: It is Steve Dickson.

The Convener: What is his experience?

Gillian Martin: My officials might have his title to hand.

Lucy Drummie (Scottish Government): The 2002 act requires the appointment of a non-executive member with employee interests. Steve Dickson is considered to have the relevant experience for that role.

The Convener: Remind me of what that is, if you do not mind.

James Simpson (Scottish Government): I do not have Mr Dickson's CV to hand but we can certainly provide the committee with that information.

The Convener: It would be useful to know that, so we can be sure that the committee has considered the issue fully. Do you want to come back in, Sarah?

Sarah Boyack: In previous evidence, we heard that the issue is not just about new capital investment; there are concerns among Scottish Water workers that there are fewer workers because contracts are being outsourced. To what extent can a longer-term approach be taken? The cabinet secretary is absolutely right—there will be a lot more investment in our water infrastructure to make it resilient, modern and up to date. Would that not be an opportunity to expand staffing, so that the staff get decent terms and conditions and everything is not outsourced to private companies?

The Convener: Cabinet secretary, I will let you answer some of that, but I ask Sarah Boyack to bear in mind that, although it was a nice push, we are considering a specific statutory instrument.

You may answer briefly if you wish, cabinet secretary.

Gillian Martin: That is an operational matter for Scottish Water as the employer. It currently employs nearly 5,000 staff. If it expands its operations, expanding the number of its employees is up to Scottish Water. All 5,000 staff continue to benefit from being part of the public sector pay policy. It is not right to say that the work, pay and conditions are not fair.

The Convener: That took us a bit far from the statutory instrument.

Mark Ruskell (Mid Scotland and Fife) (Green): It is disappointing that there is no automatic seat on the board for worker representation. ScotRail's board has a representative who has come from a senior position at the Scottish Trades Union Congress. That is the kind of representation that we look for on a public utility.

I come back to the balance of non-executive and executive members. You said that Steve Dickson represents the interests of employees and employee rights, but we do not know what his background is. We will get his CV—maybe we can google it.

I also note that the reduction in executive board directors involves the removal of the role of chief operating officer, who would normally be responsible for all elements that relate to staffing, recruitment and terms and conditions. I am a bit concerned—and I think that the Water Industry Commission for Scotland has also raised this concern—that, with the COO no longer in existence and part of the board, there is a danger that some of the staffing issues, which have been in the public eye through the concerns of unions, could somehow slip off the agenda a little bit more. Who from the executive board team will be primarily responsible for those issues, which are of concern and importance?

Gillian Martin: The chief executive officer will be responsible for those issues.

I am a little confused. No concerns on that decision were raised with me by WICS. In fact, it is quite unusual for public bodies to have three separate executive roles. Scottish Water is being brought more into line with other public bodies.

I also want to reflect on having a member to specifically represent employee interests. The STUC was directly consulted on the appointment of that person. It commented on the scope of the role in 2020, before that was last advertised. The member was reappointed in 2025. Committee members want to know more about the credentials of that member. I am happy to liaise with Scottish Water and get it to give the committee that information. That seems to be the substantive ask of committee members—that you should know a little more about the credentials of the member with responsibility for employee interests.

Mark Ruskell: Your expectation is that the CEO will take over the role of the COO on the board in relation to staffing. However, the evidence that we have had—which we can forward to your team—is

that WICS believes that there is a need for oversight at board level when it comes to previous COO responsibilities, particularly in relation to staffing. That is why I am asking the question. I have had the evidence from WICS.

Gillian Martin: I will bring in James Simpson, because WICS has not raised anything—

Mark Ruskell: I am asking the question based on evidence that has been given to the committee. I am relaying that.

James Simpson: The COO's responsibilities, in the round, will be split across the senior management team. That is a decision for the CEO as accountable officer. When it comes to staffing responsibilities and oversight, there is a director of people in the senior management team, and that role will remain. Any people matters—including health, safety and wellbeing—would be brought by the appropriate person to the board, as is already the case. When it comes to the regularity of the board's receiving that information, the CEO already holds that accountability.

The Convener: To help you, cabinet secretary, WICS responded to the committee on 27 November 2025, and a copy of that letter was sent to you, in which it expressed its concerns and asked you how the cost savings would be implemented and shown. I am sure that you have looked at that letter and will respond to let WICS know the answers.

Given that there are no further questions, we move to the next item—a debate on motion S6M-20592, which calls on the committee to recommend approval of the Public Services Reform (Scottish Water) Order 2026. Cabinet secretary, I ask you to speak to and move the motion, or just to move the motion—whichever you see fit.

Motion moved,

That the Net Zero, Energy and Transport Committee recommends that the Public Services Reform (Scottish Water) Order 2026 [draft] be approved.—[*Gillian Martin*]

The Convener: There are no contributions from members. Cabinet secretary, you get the chance to sum up but, as no one has said anything, I am not sure that you will want to. Do you want to sum up?

Gillian Martin: No, thank you.

Motion agreed to,

That the Net Zero, Energy and Transport Committee recommends that the Public Services Reform (Scottish Water) Order 2026 [draft] be approved.

The Convener: I ask the committee to delegate authority to me as convener to approve a draft of the report for publication. Are members happy for me to do that?

Members *indicated agreement*.

The Convener: I thank the cabinet secretary and officials. I now briefly suspend the meeting, to allow for a change of witnesses.

08:56

Meeting suspended.

09:00

On resuming—

Renewables Obligation (Scotland) Amendment Order 2026 [Draft]

The Convener: Welcome back. Item 4 is consideration of a further draft statutory instrument. The order changes the index that is used to make inflationary adjustments to the renewables obligation buyout price from the retail prices index to the consumer prices index from 1 April 2026. The Delegated Powers and Law Reform Committee has made no comment on the instrument.

I welcome back Gillian Martin, the Cabinet Secretary for Climate Action and Energy, and her supporting officials from the Scottish Government: Madeleine Plater, unit head for energy markets and strategy, and Matthew Lourie, policy manager for energy markets and strategy.

The instrument was laid under the affirmative procedure, which means that it cannot come into force unless the Parliament approves it. Following this evidence session, the committee will be invited to consider a motion to recommend that the order be approved. I am sure that I do not need to remind everyone that Scottish Government officials can speak in this item, but not in the debate that follows, should there be one. I invite the cabinet secretary to make a short opening statement.

Gillian Martin: I will take the committee through the amendment order. It makes one technical but important change to the renewables obligation Scotland scheme. Currently, certain elements of the scheme known as the buyout price and the mutualisation cap rise each year in line with the retail prices index. From April this year, subject to parliamentary approval, those values will be updated using the consumer prices index, which will lead to savings in the energy system.

The renewables obligation Scotland scheme has supported renewable electricity generation in Scotland since 2002 by issuing certificates to generators that can then be sold to suppliers. Those electricity suppliers can use the certificates to meet their obligations under the scheme, or they can make a payment that is known as the buyout price. The amendment order will ensure

consistency across the UK, which is essential for market stability, and it will ensure a level playing field for suppliers and generators that operate across borders.

The consumer prices index is recognised as a more accurate and reliable measure of inflation, whereas the retail prices index tends to produce higher inflation figures, which could lead to the buyout price rising faster than is justified. That would add unnecessary and avoidable costs on electricity suppliers, which are ultimately passed on to households and businesses. Switching to the consumer prices index will ensure fairness for consumers, while maintaining strong investor confidence in our renewables sector.

The change does not alter how the overall scheme works; it is a simple technical change to the annual indexation mechanism only. With the UK Government and the Northern Ireland Assembly, we jointly consulted to seek views on two options, which were an immediate switch to the consumer prices index or gradual realignment. Following careful consideration of the responses, all three Governments agreed to proceed with an immediate switch to the consumer prices index. We recognise that many industry stakeholders were initially concerned about the potential for change to undermine investor confidence and increase the cost of capital, but we consider that that approach strikes the appropriate balance between reducing costs for consumers and supporting continued investment in the renewables industry.

The change has no expected financial impact on the Scottish Government. We will continue to engage with industry stakeholders and monitor the operation of the scheme. It is a necessary and proportionate amendment to keep the scheme fair, efficient and aligned across the UK.

The Convener: If you would not mind, cabinet secretary, can you tell me where the UK Government and the Northern Ireland Executive are in relation to their legislation on this?

Gillian Martin: I will go to my officials for that.

Madeleine Plater (Scottish Government): This order is the first piece of legislation to make the change. All three Governments are looking at amending their respective legislation on the renewables obligation—that includes the schemes in Northern Ireland and in England and Wales—but this is the first committee evidence session on such legislation, so we are the first to consider it.

The Convener: When will the other pieces of legislation go through?

Madeleine Plater: I do not have the dates in front of me, but it will be in the next few weeks.

The Convener: That would be April.

Madeleine Plater: Yes.

The Convener: That is why I was trying to find out where we were.

Madeleine Plater: The legislation needs to come into force before 1 April so that all the arrangements on the operation of the scheme can be made.

The Convener: If the Northern Ireland Assembly did not agree to such legislation, where would that leave us?

Gillian Martin: I think that it will, because that is the recommendation that has been made by the Government, and no substantive concerns were raised in the consultation.

The Convener: The Government does not always get its way—I am sure that you would agree, cabinet secretary.

Do members have any other questions?

Douglas Lumsden (North East Scotland) (Con): Cabinet secretary, you mentioned that this will not affect people's bills at all—is that correct?

Gillian Martin: There will be cost savings across the energy system, but the Department for Energy Security and Net Zero and the Treasury will look at the impact on energy bills. There will be cost savings across the system and, if there are cost savings for the generators, I would expect them to be passed on to bill payers. However, that is not for the Scottish Government to decide—it is for the UK Government.

Douglas Lumsden: Of course. Am I right in thinking that these are the obligations that have been removed from people's bills and moved into general taxation?

Gillian Martin: Yes.

Douglas Lumsden: Thank you.

The Convener: We will move on to the next agenda item and the debate on motion S6M-20600, which calls on the committee to recommend that the draft Renewables Obligation (Scotland) Amendment Order 2026 be approved.

Motion moved,

That the Net Zero, Energy and Transport Committee recommends that the Renewables Obligation (Scotland) Amendment Order 2026 [draft] be approved.—[*Gillian Martin*]

The Convener: It seems that no members want to make a contribution. Cabinet secretary, I assume that you do not want to sum up, but you can do so if you want to.

Gillian Martin: No—I am fine, thank you.

The Convener: The question is, that motion S6M-20600 be agreed to.

Motion agreed to,

That the Net Zero, Energy and Transport Committee recommends that the Renewables Obligation (Scotland) Amendment Order 2026 [draft] be approved.

The Convener: I invite the committee to delegate authority to me as convener to approve the draft of the report for publication. Are members happy with that?

Members *indicated agreement*.

The Convener: I thank the cabinet secretary and her officials for attending, and I suspend the meeting briefly to allow for a changeover of witnesses.

09:07

Meeting suspended.

09:12

On resuming—

Draft Climate Change Plan

The Convener: Welcome back. The next agenda item is an evidence session with the Climate Change Committee on the Scottish Government's draft climate change plan. The purpose of the session is to enable this committee to hear directly from the Climate Change Committee on "Progress in reducing emissions in Scotland—2025 report to Parliament", which was published on 25 February, and to explore how the CCC's findings and recommendations relate to the draft climate change plan, which this committee reported on last week. As the Climate Change Committee's report was published shortly before this committee agreed its own report on the draft plan, the session provides an opportunity to consider areas of alignment and divergence between the two reports and to inform the forthcoming chamber debate on 5 March.

I welcome from the Climate Change Committee Dr Emily Nurse, head of net zero, and Emma Pinchbeck, chief executive. Thank you for attending the meeting, albeit remotely. I invite Emma Pinchbeck to give a brief opening statement.

Emma Pinchbeck (Climate Change Committee): To start with the good news, we find that Scotland's emissions decreased by more than 2.6 per cent between 2021 and 2023. Overall emissions have now more than halved compared with 1990 base levels. It is important to say that those historical emissions reductions have been delivered largely by decarbonising the power sector. A key message from us this year is that we need to focus significantly more on areas in which Scotland has devolved powers. We find that about 58 per cent of the emissions reductions that are outlined in the CCP come from sectors in which the Scottish Government has devolved powers.

Since our previous progress report, Scotland has accepted the advice on carbon budgets, legislated for those targets and produced the CCP. We find that Scotland's first carbon budget, which is for 2026 to 2030, is achievable, and that around 91 per cent of the emissions reductions for that period are covered by credible plans in the CCP.

However, we are concerned about planning for carbon budgets beyond 2030. Net zero by 2045 is achievable, but much clearer plans for delivery will be needed. We draw attention to two particular areas. On heat in buildings, we are concerned that there is not much detail or planning for the next 10 years. There is an assumption of decarbonisation in the last years of the 2030s; we cannot see

evidence that such a delay and catch-up approach will work.

Similarly, Scotland leads the UK on tree planting, and it is important for emissions reductions from Scotland and the UK as a whole that Scotland continues to plant trees at a sufficient rate. However, following the cuts to the forestry grant scheme, those rates, which were previously at record levels, have been plummeting.

09:15

I will draw members' attention to some specific and technical issues with the climate change plan. There is an intent in the CCP to track emissions progress at sub-sector level and to develop early warning indicators, which is very welcome. However, there are some missing indicators and some indicators that are insufficient. In particular, there are no indicators on the deployment of low-carbon heating, livestock numbers, recycling rates and so on.

I will highlight three significant areas of the methodology. First, the Scottish Government has accounted for emissions reductions from peatland on the basis of new evidence. Although it is welcome that it is doing research on peatland emissions, we are worried that the way in which it has integrated that into its assumptions in relation to emissions reductions and the baseline might lead to a possible overestimate of the benefits of that research in its accounting.

Secondly, we think that the significant emissions reductions from heat in buildings are because of people responding to record high energy prices and warmer winters. Therefore, they are not structural or permanent emissions reduction changes. People turning down their heating is not a change that we want to be maintained. However, we think that that has been baked into the assumptions that the Government is making, and we would like that to be looked at.

Thirdly, contingencies have not been given for areas of high risk, including the dependency on negative emissions technologies.

I will make a final brief point, which is simply to flag that, this spring, we will publish our advice to the UK as a whole on climate risk and resilience. It is obvious that Scotland is already being affected by the impacts of climate change on key areas of the economy and on the prosperity and wellbeing of Scottish people.

A central recommendation in our progress report and in our advice to the Scottish Government—and to the UK Government—is for there to be more focus on communicating to the public the risks of climate change and on communicating what the Government is trying to achieve through carbon budgets and what actions will need to be taken by the Government, business and individuals. I noticed that, in this committee's report on the draft CCP, that point was pulled out by people who gave evidence, so I wanted to flag that.

The Convener: Thank you. We will move to questions. Given that part of the questioning will definitely revolve around agriculture, I remind members of my entry in the register of members' interests. I have an interest in an arable and livestock farm in Moray that deals with beef production and herd replacement.

I will begin by voicing some concerns in order to see whether you share them, Emma. We are in the dying days of this parliamentary session: we have three more committee meetings and three—perhaps three and a half—more sitting weeks. We are at the stage where we have just considered the climate change plan in draft, and yet the Government has undertaken to lay the plan before the end of the session, which does not give it much time to reflect on what you have said or on what we have said. Is having so little time to consider what is, in your words, a critical stage of Scotland's move to net zero a happy place to be?

Emma Pinchbeck: The committee will know that, because of delays to the CCP, we were delayed in being able to do the analysis behind producing our own response to the CCP and to weave that into our progress report. There were conversations with officials about trying to bring forward the Government's work on the CCP in order to enable us to produce our analysis and so on. I recognise that that delay has been challenging for the committee. It has also been challenging for us to do our analysis in a timely way.

Regarding the processes and what they mean for parliamentary scrutiny, I note that they are basically political and parliamentary processes that we, as a statutory body, should not comment on.

We will provide updated advice on the final CCP when we produce our progress report next time around. That is also what we do for the UK Government. We would usually respond to a draft plan from Government when we do our statutory progress reporting. That will be the next time that we comment on the final plan.

The Convener: My concern is that we will go into recess shortly and the final climate change plan is still to be laid. Unless I have got this entirely wrong, the whole process will be repeated in the same way in five years' time. That cannot be a comfortable place for us to be in. You will produce your annual reports, but surely it would be better for you to be able to fully consider the final plan

earlier. To be honest, I have found it really difficult to guide the committee through producing our report without seeing yours. It would have been far better for us to see your report before we publish ours. Can you see the difficulties there?

Emma Pinchbeck: I certainly understand that it would be useful for you to have our report when you do your scrutiny. You will know this, but I put on the record that there is a difference between Scotland and the UK. We report to the Scottish Government on progress and how things are going as well as providing formal advice, whereas our progress reporting for the UK is designed to be for Parliament, so it sits slightly outside Government processes.

Naturally, we will respond to what is in the plan and any instructions from the Scottish Government, which is our statutory audience, but we will also respond to any conversations or discussions and any changes in process that are agreed between the Scottish Parliament and the Scottish Government. We will happily adjust our timelines if there is a change to the legislation or an agreement to do something different next time around.

On the point about timeliness, it would obviously be good to have the next plan as soon as possible in the cycle so that we can get our analysis of it done when we are doing our formal progress reporting. We will usually do our analysis of a formal climate change plan or other relevant strategy or policy from the Government in our statutory progress reporting. That is also what we do UK-wide and for other devolved Governments, so we would still look to produce our response to any CCP in our statutory progress reporting. Of course, the earlier that we have a Government's draft plan, the more analysis we can do earlier and the easier it is to get it into a publication.

Although we serve the Scottish Government, we are always happy to try to do things that will help Parliament and enable good scrutiny.

The Convener: The draft plan has been laid and the consultations have been summarised, and our report will be considered and debated by the Parliament on Thursday this week. There will then be a period of only three weeks for the Government to finalise the plan. It seems to me an impossibly tight timescale for the changes to be made and the plan to be laid before the end of the current session of Parliament. It will just be laid and that will be it—there will be no debate on it. As a parliamentarian, I find that unhelpful.

I want to go back to a comment that you made, Emma. I met the Cabinet Secretary for Climate Action and Energy on behalf of the committee to ask for the Climate Change Committee to be in a position to give us evidence before the end of our session. The cabinet secretary, Gillian Martin, said that she would impress on you the need for that, but you were only in a position to offer us a private meeting. Did you not think that an open meeting would have been better? Did the Government not give you the leeway to do that, which the cabinet secretary indicated to me that she had done?

Emma Pinchbeck: We will never do a public hearing if we have not finished our analysis. That precedent is long established in the work of the CCC. As a statutory body, we cannot put information on the public record that has not been fully quality assured or finalised. In this case, we had not finished our analysis of the CCP.

That said, throughout the process, where we can share information or evidence that we are sure of at an earlier point in the cycle, we will talk to officials or parliamentarians to try to give you a sense of the direction that we are going in. That is why we offered a private briefing, but we did that in consultation with the Scottish Government because it is our statutory audience. We spoke to the Government about what we could do for you, and we determined that the answer was to have private briefings. As you know, we offered to come to you privately before publication, and to try to do something publicly for you on the day of publication. I appreciate the difficulty of that, but it is exactly the same as what we did for the UK Government when there was a similar request to bring forward publication.

Finally, the counterfactual would be a request to bring publication forward or to complete the analysis faster. In reality, we have constrained resources for our devolved work and it would have been nigh on impossible to complete the analysis any faster or to allocate resources to that without taking resources away from other statutory outputs. I have said in previous evidence sessions that we would welcome a conversation about the resources that we have to do work for Scotland, because that could enable us to be more flexible in the future or to finish things faster.

The Convener: Before we leave the subject, Emma, please clarify something so that I can understand. Did the Scottish Government, as your client, tell you to give us only a private briefing or did the Government encourage you to give us a public briefing?

Emma Pinchbeck: We did not get an explicit instruction to come and speak to you publicly. There was discussion with officials about what we could do on both sides and it was determined that a private briefing would be the appropriate thing.

The Convener: Are you telling me that Scottish Government officials said that a private briefing was the appropriate way to do it? I am sorry for pushing you on that, but that does not quite tally

with my memory of the conversations and correspondence with the Scottish Government.

Emma Pinchbeck: I am the chief executive of the CCC and, in a conversation with the Scottish Government, we determined that a private briefing would be the appropriate thing. That was based on, first, what is in the legislation; secondly, the fact that we do not think that it is appropriate to share incomplete analysis in public; and, lastly, the resource element, which meant that we were unable to complete the analysis any faster or to change our timelines in order to mitigate either of the first two things.

It is my understanding that we agreed that there would be a private briefing and that that was what was communicated back to you.

The Convener: Thank you; that is helpful.

Bob Doris wants to come in.

Bob Doris (Glasgow Maryhill and Springburn) (SNP): I will ask a question for clarity, in the hope that we can quickly move on to more substantive issues. I want to check that I am accurate in understanding that it would not be appropriate for the Scottish Government to instruct the Climate Change Committee to give a briefing to a committee of this Parliament, due to the independent nature of the Climate Change Committee. Please correct me if I have that wrong, but I understand that to be the situation.

Emma Pinchbeck: Independence is a significant factor in evaluating choices such as this one about the appropriateness of not having a public evidence session on the basis of incomplete analysis or of being directed by the Scottish Government.

My understanding of the 2008 act is that, because we report to Government on the advice and on progress, we are, in effect, giving independent advice to the Government. It could ask us to share that advice with you, but we would be likely to run up against the issues of that advice being incomplete and not being quality assured and of being uncomfortable with sharing evidence before it was finalised.

As the accountable officer for the organisation, and as the chief executive, I am also responsible for the fact that we are there to provide you with really good, high-integrity evidence that you can trust. If we started giving out information while we were still finalising it, there would be a risk to our purpose as an independent body and to our independent analysis being seen as high quality.

It is fair to say that that is a nuanced response, based on what is in the act, but independence is one of the things that we consider.

Bob Doris: That was helpful—thank you.

The Convener: Just to finish that point, before we move on to the next question: as the Government made clear, it is your client, and it therefore controlled that information.

The next question comes from Mark Ruskell.

09:30

Mark Ruskell: I want to turn to the climate change plan itself. You will probably have had a chance to glance at the report that we published last week, in which we highlight a number of concerns about the absence of specific delivery plans. We question whether there is enough detail in the CCP to map out the policies, timelines and responsibilities so that certainty can be provided in relation to delivery, particularly for the first carbon budget period.

You have made similar points, and I want to give you the opportunity to expand on what you think should be described in a delivery plan to build certainty and show leadership on meeting objectives. Are there particular sectors that you want to highlight?

Emma Pinchbeck: I will give a high-level answer, and then I will bring in Dr Emily Nurse, who I think would like to talk to you about indicators.

In general, we think that there are good plans and policies in place for the first carbon budget period, as I have said. That covers the period from now until around 2030. However, there are less good policies and plans beyond that. In particular, we are concerned about plans and policies for heat decarbonisation, because it seems to us that there is not very much action, or any action, or policies or plans in the draft CCP for a period of around a decade of delivery, with an assumption that there will then be a rapid roll-out.

Heat accounts for a significant portion of Scotland's emissions, so that is an area of real concern. We have separate concerns about agriculture, for similar reasons. As you might know, in contrast to the advice that we gave the Scottish Government, it has decided to do less on agriculture and livestock emissions and to make that up, in the CCP, through faster deployment of negative emissions technology than we recommended in the advice that we offered. That is entirely in the Scottish Government's gift. We said that that difference of approach was fine, but that we would need to see evidence of how that faster deployment would be delivered. There are critical risks around negative emissions technology, so there should be clear delivery plans in that area, as well as a more detailed understanding of the plans for agriculture, in the absence of thinking about livestock.

We are also concerned—we flag this up in our progress report—about the fact that there has been a significant change in tree-planting rates, because of changes to forestry grant schemes. From record levels, tree-planting rates have fallen off a cliff. The rates of tree planting will need to pick up if we are to deliver the UK-wide carbon budget, where Scotland has a big proportion of tree planting, and the carbon budget for Scotland itself. Those are some areas of concern.

As for what, technically, we would like to see in the CCP to be sure about delivery and to be able to offer you best evidence, I will bring in Dr Emily Nurse to talk to you about indicators and some of the methods in the CCP.

Dr Emily Nurse (Climate Change Committee): Thank you very much for having me here today.

There are a few more things to say at the higher level. First, the climate change plan is more of an overarching plan, within which other plans are needed. In the absence of the upcoming plans that we are expecting, we do not have the detail that we need in order to understand everything. Emma Pinchbeck has highlighted the issue in relation to heat in buildings. We need to see the heat in buildings strategy and delivery plan, which we are expecting this year, as soon as possible. We also need to see the fourth land use strategy, the industrial decarbonisation programme and the route map for negative emissions technologies that has been alluded to.

As I said, the CCP is an overarching plan. For the first time, it gives quantified emissions reductions by policy and proposal, which is a significant step forward, but the detail on what that really means and what the policies and the delivery will be in certain areas is missing. We have highlighted that that is the case in relation to buildings in particular.

Emma Pinchbeck has talked about the shape of the buildings pathway, whereby very little will happen over the next 10 years. Progress is supposed to accelerate extremely rapidly over the third carbon budget period. We would expect a less risky approach to be taken, which would involve building on the positive progress that has been made so far in heat pump roll-out and building up the supply chains, rather than delaying and then catching up at the last minute, in order to meet the 2045 target for buildings and for net zero overall.

I do not know whether we will talk about this in more detail later, but the other thing that I want to talk about is the monitoring and evaluation framework. It is welcome to look at emissions at a subsector and a sector level and to look at the deployment of low-carbon tech and other indicators of progress. However, what is missing from the plan is what change we expect to see in all those areas, which means that we will not be able to judge whether we are on track or whether more action is needed.

For the final climate change plan to be credible, we would like it to lay out clearly what is expected, and we would like to see what underlies the modelling so that that can be monitored. For example, we do not have annual sectoral emissions pathways; they are given as carbon budget averages. We know that there is an 18-month lag in emissions reporting. The carbon budget averages are similar to the midpoint of the carbon budget, but it is not exactly the same. The midpoint of carbon budget 1 is 2028, but we will not get emissions data for that until very close to the end of the carbon budget, which ends in 2030. That is too late for any action to be taken. We need more annual data on emissions so that we can track it. I am not talking about targets; we need indicative data that we can track.

We also need the indicators that Emma Pinchbeck mentioned. We managed to cobble some together in chapter 4 of our progress report, in which we look at indicators, but we are missing some key ones. For many areas, we do not have annual indicators. They are not all summarised in a convenient place, either. There are no indicators for low-carbon heat and none for heat pumps. We have already identified that area as being a significant risk. We need to know what is needed when it comes to rolling out low-carbon heat. We have called for indicators to be provided in the final plan so that we can properly evaluate and monitor progress. That will mean that, if anything goes off track, there will be time to implement contingency and back-up plans.

Mark Ruskell: There are certainly a lot of hockey-stick-shaped graphs in the plan, by which I mean periods of slow growth followed by sudden shoot-ups in future carbon budget periods.

I am interested in how you tailor your advice and in how this committee and our successor committee can engage with the plan, in the next carbon budget period in particular, so that if there comes a point at which we do not have certainty about how delivery rates will suddenly shoot up in future carbon budget periods, we will know what the early warning signs look like. If there are still contingencies and dependencies that have to be worked out, and if programmes have to change and evolve over time, that cannot be done at the end of the next parliamentary session. We cannot all look at the climate change plan again at that point and say, “We’re not sure how we’re going to deliver that.” There needs to be a process for evolving the delivery plans over time.

What advice would you give us on that? At what point in the next carbon budget period would you give that advice, so that plans and delivery plans can be revisited if we do not have certainty about what the trajectory for the next 10 years looks like?

Dr Nurse: I will quickly say something about that, and then Emma Pinchbeck will come in. In our annual progress report, we look at that as best we possibly can. We look at the indicators of delivery and at emissions, although, of course, there is a lag in emissions reporting.

This time, wherever we have been able to, we have tracked where we think things need to be against the climate change plan. We have a trajectory for electric vehicles, our advice on the roll-out of which is the same as the advice that we gave last year. The 2026 target for electric charge points was met two years early, and there is a target for 2030, so there is a linear interpolation between those.

In addition, there is the annual modelling that we do for many of these areas. Therefore, if there is an absence of a clear trajectory from the climate change plan, we look at what we think should be happening and we judge what is happening against that.

However, it gets difficult when the climate change plan differs from what we say with regard to the detail of how to meet the carbon budgets, although, as Emma rightly said, that is in the Government's gift. If we say that there should be a certain trajectory for livestock numbers, we cannot track against that, because we do not know what the trajectory is in the plan—we can only track against ours, which makes things trickier.

In the annual progress reports, we do our best to look at the indicators. That is a big part of our progress monitoring, and it really informs whether we think that we are on track.

I think that Emma wanted to come in.

Emma Pinchbeck: Thank you. I read the NZET Committee's report on the CCP and noted that witnesses had suggested a sort of dashboard for indicators and that that is being thought about. Just to be clear, that is what we produce in the progress reports. This is a new system for Scotland, but we will now produce a progress report every year as a statutory output, and, as Emily says, that will look at a range of indicators. If we have indicators in the final CCP, we can track against them—that is why that is so important for us—as well as our own indicators on Scotland's emissions.

We will give that report to the Scottish Government. To build on earlier answers, I note that that output is for the Scottish Government under the 2008 act, but we design it as a public document to be used by parliamentarians, policy makers and, indeed, delivery and public bodies. That is the main instrument through which we contribute, and I would suggest that it is quite a good place to start thinking about what you need from, and think would be useful in, the progress reports. Our new chair is very interested to hear from parliamentarians about how to make the progress reports useful.

Aside from that, we are able to offer ad hoc advice and to come up to Scotland to provide the best evidence that we have on things that are of concern to parliamentarians. Our main recommendation to you, though, is to use the progress reports for that, as that is what they are for.

Mark Ruskell: Do you have the resources to do that? If there was stronger engagement between the Climate Change Committee and subject committees in this Parliament—perhaps in the way that Environmental Standards Scotland representatives, for example, often attend committees to speak to the reports that they produce for the Government—would resourcing that be a challenge for you as chief executive?

Emma Pinchbeck: It would. Bluntly, our devolved funding does not really cover the statutory outputs that we already deliver across Wales, Scotland and Northern Ireland. We manage that by drawing on the resources of the whole standing team and the UK-wide team, which serves all four UK nations, and we do additional work with a very small number of staff members—one or two—who are dedicated to all the devolved regions.

Part of the answer to that is that we would obviously love to do more for Scotland, but that would require us having the resources to do it. As you know, we regularly come up to give evidence already; we are very happy to do that when we can, but additional resources would help us to do more.

Sarah Boyack: I will ask a couple of questions that follow on from quite a lot of what you have just been talking about. Our committee and the Climate Change Committee welcomed the move to quantify abatement in the draft CCP, and each committee identified gaps and uncertainties in the modelling, so I want to focus on that a bit.

The Climate Change Committee said relatively little about the costs and benefits analyses of the plan. What is your assessment of whether the costs and benefits estimates are sufficiently robust and of whether the draft climate change plan gives a clear enough signal to households, businesses and investors about where the costs, savings and incentives are likely to fall?

We recommended that more of the underlying data and assumptions that were used in the Scottish Government's modelling of costs and benefits should be published to improve scrutiny. Is further transparency required in that area? If so, what specific information does the Climate Change Committee think would be most valuable to have in the final climate change plan? I do not know which of you would like to lead off on my question.

Emma Pinchbeck: I will provide an overview and I will then hand over to Emily, because there are quite significant differences in how we think about costs, and it will be worth touching on those.

As you know, when we produce our advice, we publish all our costings and data tables, and all of that is available to the public and to parliamentarians.

In our advice to Scotland on the carbon budgets, we talked quite a lot about where the funding would come from. We agree with the Scottish Government that it is broadly an invest-to-save model. We are talking about a significant amount of capital investment, largely going into energy technologies, and then you get efficiencies from using more efficient energy technologies across the economy.

09:45

In Scotland, the savings start outpacing the cost of that investment from around 2043, according to our advice to Government on the carbon budgets. As we talked about in the plan, there are also savings at household level for households that adopt these technologies, so long as policy choices are made to enable cheap electricity and electrification to come through.

We also talked about how we might finance some early stage technologies. For example, in our advice, we assume a polluter-pays model for investing in negative emissions technologies and carbon capture and storage. Although we have modelled the cost to the whole economy, we are assuming that the investment for that comes from the aviation sector, which will be the significant polluter in the late period of carbon budgets when you need negative emissions technologies. Similarly, we have assumed that tree planting might be done, for example, by the farming sector or by landowners with support from Government schemes. Because it depends on policy choices, we as an independent statutory body have not said that one thing should be public financing and that another should be private financing. We have modelled the whole economy costs and savings, which we have shown as net, as well as setting out the up-front costs and savings. We have also given an indicative business model or distributed-at-cost impacts, and we have given the rough split between the public and private sectors. You can find that information in our analysis, which we have published. Some of that is consistent with what the Scottish Government has done, but it is fair to say that its costings work is not complete. As your question implies, the Scottish Government has not published its full costings data either, so it is difficult for us to say exactly how it has reached some of those figures.

I will hand over to Emily in case I have missed anything technical that she wants to add.

Dr Nurse: You have covered most of it, Emma. We were quite confused by how the analysis was done on the costing side. It is clear that some bits are missed out, and it is not always clear exactly what that means and what the interpretation is. For example, there is no cost on the energy supply side. In our analysis, we see that as very much an invest-to-save transition as you roll out lower-carbon electricity generation. Although that sector is mostly reserved, it would still lead to an effect on electricity bills in Scottish homes, because we would expect to see savings as we head towards net zero. The buildings case was quite unclear to us, because some costs, benefits and savings were included, but not for all the carbon budgets.

There were similarities in how we have done it. It is the invest-to-save story, and most of the savings come from the lower running cost of electric vehicles—that was similar to our analysis. However, again, there are differences. The cost is compared with a baseline, but that baseline already includes quite a few electric vehicles, so we are not seeing in those costs all the benefits that you get from electric vehicles. It was quite hard to unpick.

We agree that more underlying data and methodology would be really helpful going forward.

Sarah Boyack: Thanks—that is useful. The challenge is going from very detailed information to actually communicating this stuff. You have talked about the invest-to-save model, and I am thinking about homes and buildings and how we can invest to save in our electricity—for example, using solar energy for heat. It is about trying to get those trade-offs. It would be useful to get feedback on that.

My second question is about annual accountability, which you both talked about in your opening remarks and in your answers to the convener's early questions. We talked about the concept of the dashboard. We will no longer have annual emissions targets, because we have moved to five-yearly carbon budgets. You have recommended having annual sectoral indicator pathways. How do you think that that could be

strengthened in the climate change plan? Would progress be lost if it is not in the climate change plan, which would mean that it would all get a bit vague? One of you said that the 18-month delay could mean that it would be 2029 before we start to get clear progress. How would you make a dashboard work so that we would get the information to the public and so that Parliament in its next session could focus on accountability?

Dr Nurse: First, we need to have annual data. It makes sense to publish five-yearly carbon budgets because that is the legal target, but the pathway is indicative, rather than a target. If the pathway is not hit in year 1 of the carbon budget, it does not mean that you would not meet the carbon budget, but it would tell you in good time that you need to adjust, which is key. Without having indicative annual pathways for sectoral emissions in the plan, it would be quite difficult for us to do our job properly and assess progress each year, because we would not know where emissions need to be for each sector for each year under the plan. We can determine that from our pathway, but it would not be the same; it is a different pathway, which makes it quite complicated. If that information is in the plan and it can be commented on in the monitoring and evaluation framework, annual accountability would be possible. Even if the emissions are provided at sectoral level, which would help, there would be an 18-month delay. The early indicators would help with that.

We have a monitoring framework and we track all sorts of indicators, such as the roll-out of heat pumps and how many heat pumps we are installing each year, which we have spoken about. We also consider how many electric vehicles are on the road and how many new electric vehicles are being sold. Our progress reports track the price difference between a new electric vehicle and a petrol car, because that is an early sign of how the transition will change. As prices fall, we expect sales to increase. There are all sorts of things that you can do to track progress, which can provide a red flag or green flag, depending on the progress. That provides the time to adjust. Having the detail in the plan is key so that it can be brought out and communicated.

Sarah Boyack: Effectively, you would like there to be a dashboard in the final plan or a commitment to it, as well as a sectoral breakdown, so that we could monitor progress. The progress would not be based on an annual target, per se, but having a dashboard would enable you to monitor the rate of progress and flag challenges. What really stood out was that you thought that it would be broadly okay for the first few years, but that the carbon budgets for the next two programmes are quite concerning.

You both mentioned low-carbon heating quite a few times. I will focus on that, before my colleague Mark Ruskell asks about other topics. Low-carbon heating, such as heat pumps and solar panels can be implemented in the short term and it would be quite straightforward. I presume that heat networks would take a bit more planning. If we were to get a sectoral breakdown, would there be a dashboard with a mix of information on heat pumps and solar panels, as well as a progress report on the development of heat networks? You cannot just say, “Tick the box; we will do that tomorrow.” How would a dashboard break down the different approaches so that you could flag progress or the lack of it, which would require the Scottish Government to prepare a catch-up model? Is that how you would make it work?

I am thinking about the benefits and risks for households, as well as businesses. One of you mentioned supply chains, which is a key issue for the business sector. Supply chains need to build up so that the kit is available and installations can be done.

Dr Nurse: That is right. There are different technologies at different stages of development and some things that take longer and need more planning, so an indicator would need to fit those timescales. I have talked about costs, which are key. Monitoring technology costs helps us to understand where we think the market is going. Monitoring anything to do with supply chains and plans and so on helps with the longer-term things. Heat pumps are a well-established technology, so with them what we really need to see is how quickly they are going into homes. We think that it is important to monitor that annually.

Sarah Boyack: Thanks. I was just thinking that it would be straightforward where there are heat networks, but although all of our councils have a heat networks plan, implementing them will be much more of a challenge. I will stop there, convener. I think that my colleague Mark Ruskell is going to go into some of the other—

The Convener: Are you taking over the role of the convener in allocating the next question? [*Laughter*.]

Sarah Boyack: No, I was just being nice in handing over. Sorry—

The Convener: It is a bit late in the day for that, Sarah. Mark, you are next.

Mark Ruskell: I want to get a sense of how you think the Government should be reporting against individual sectors. It is clear from the climate change plan that some policy choices have been made in one sector, such as for livestock in agriculture, which have then been picked up as a higher ambition in another sector, such as the

transport sector. What is your view of that? For example, is there a credible pathway to net zero for aviation within the aviation sector, or is it implicit that other sectors will have to pick up the slack, because, politically, it is too difficult to talk about demand reduction in aviation?

I am interested in how you report and analyse potential political trade-offs between sectors and in how they are made transparent. Alternatively, is your starting assumption that every sector needs to get to net zero, even though that might be politically and practically quite challenging?

Emma Pinchbeck: I assume that the questions about politics are for me.

The value of an independent body is that it does not make those political trade-offs. When the Climate Change Committee gives you our advice and when we report on progress, we are thinking about where you can physically and technically reduce emissions from the economy to get to the net zero threshold. We look at all the available technologies and the best evidence for policies that mean that those technologies can scale up. Where there are no available technologies, we look at demand choices. When we cannot see a way to remove the emissions from a sector, we also look at negative-emissions technologies. We look across all sectors agnostically, and we put the pathway together in that way.

We also cost optimise in our advice. We offer a balanced, middle pathway that shows you what we think is the least-cost route to delivering net zero.

What we often say, though, in our evidence—we did this in Scotland—is that there are political trade-offs and choices to be made that are not for us to make. For example, where do the distributed impacts fall? How do you, as politicians, want to target grant schemes of support? In which sectors, or within which sector, will you target them, and, in the case of heating, which households?

You can, of course, make different technology choices. We mentioned heat networks earlier. The exact mix of technology is, to a certain extent, a result of what the Scottish Government chooses to prioritise in partnership with the private sector and where those technologies are available.

There are also further political choices that do not sit within our mandate but that are relevant. For example, in our advice to the Scottish Government, we talked about the fact that agriculture is important to Scotland culturally as well as economically. We said that it is important that the changes to be made in that sector, including in how people farm, are made sensitively and thoughtfully, on a farm-by-farm basis, and that the Government might make different choices to the ones that we would choose when we are just looking through an emissions lens. We said the same thing with regard to industrial strategy around, for example, Grangemouth. For the oil and gas sector in Scotland, given that industry's heritage in the country and the sector's need for a transition that is alongside, but outside of any commitment to, net zero, those choices will come with implications and trade-offs that will sometimes impact climate choices as well.

We try to provide a very technical, independent analysis. Then, in the narrative of the reports that we give you, we often flag areas where trade-offs might need to be made.

If we think that there are trade-offs, we will sometimes provide you with an analysis to help you to make those choices. For example, in the UK-wide advice, we did a piece of distributed impact work that looked at the impacts across different households of two different kinds of policy changes on reducing electricity prices. We did not make a decision about which route was better; we just showed you what the implications of each approach would be. We do that kind of evidence gathering to help you with those choices, but those choices are not for us. That is the difference between what we do and what you do. I hope that that is useful.

10:00

The work that we have done with citizens and citizens panels is some of the most useful work that we have done in this cycle. We have published all that evidence alongside our technical work, because the point of the evidence gathering was to give the public some of those policy trade-offs and to ask them about challenges and priorities. Again, we have not determined the policy outcome view from the evidence, but we have provided the evidence alongside the technical advice, to help you to make choices about those trade-offs.

The Convener: The deputy convener has some questions.

Michael Matheson (Falkirk West) (SNP): Good morning. I will pick up on some of the risks that you have identified in your report for the CCP. You have identified significant risk in a couple of areas, particularly in relation to buildings, which we have touched on, and agriculture. You flagged up a concern about the areas where overperformance is expected and the fact that there is insufficient contingency in relation to the areas that carry significant risk. You suggest two approaches: a change to the modelling; and the development of contingency plans for the areas of greatest risk. Of the options that you set out, which is your preferred approach?

Emma Pinchbeck: I think that Emily Nurse would like to take that question, judging from the level of excitement and waving. [*Laughter.*]

Dr Nurse: Thank you. I would like to take the opportunity to talk about some of the things that you have raised that we think are risky in the plan as they are based on assumptions that are very uncertain. There are a couple such areas, the first of which is buildings. Emissions from buildings fell 18 per cent between 2021 and 2023, which represents 1.3 megatonnes of carbon. As Emma Pinchbeck said in her introduction, that was driven by high gas prices driving down demand and warmer-than-average temperatures—milder winters, which means less heating demand.

The climate change plan has banked those emissions reductions, whereas we expect fluctuations year to year. In this case, we are not talking about climate change and the temperature gradually getting warmer but about year-to-year temperature fluctuations. When we have colder years, which we certainly will have during a five-year carbon budget, and as gas prices ease off and demand goes up, we expect emissions from buildings to go up. However, the climate change plan has banked those emissions reductions. For context, the carbon emissions reduction of 1.3 megatonnes over those three years is quite a big amount, because, in the pathway, the fall in emissions from buildings is only 0.1 megatonnes a year over the first 10 years. If part of that is rebalanced back up, you will be undoing the progress in the pathway over the first two carbon budgets by quite a high proportion. We really think that that should be accounted for in the modelling.

The other issue is the correction to peatlands and how they are reported in the greenhouse gas inventory. A correction has been applied, based on emerging research, which was commissioned by the Scottish Government from the James Hutton Institute. It is great that that research is being done. The research indicates that the emissions from peatlands are lower than is currently reported by the greenhouse gas inventory, but there is quite a lot of uncertainty in relation to that, and, when we correct for it, the peatland correction is 1.5 megatonnes. Again, it is assumed that that will be in the greenhouse gas inventory over the second and third carbon budgets, but there is uncertainty about what the level will be. As Emma Pinchbeck said in her introductory comments, the way in which emissions from peatlands have been corrected in the pathway does not account for the fact that the correction will also change the 1990 baseline level of emissions. In that sense, the assumptions about emissions reductions from peatland are probably optimistic. Therefore, it is uncertain, and we do not know which way the inventory will go, because it takes time to include things in it.

That is what we were alluding to when we said that the overperformance of the pathway in comparison to the carbon budgets is at a smaller scale than the uncertain factors in the second and third carbon budgets.

Our preference would be to not model the budgets in a way that relies on something that is uncertain. In the case of land-use emissions, land-use inventories change all the time; they are very uncertain, and they move up and down. If emissions reductions are banked on the assumption that land-use emissions will go down, something else might go up. We suggest taking a more conservative approach and avoiding banking on the assumption of something that can change. That is the case with emissions from buildings, as well.

Another methodological case was highlighted in your committee's report. We agree with your recommendation that the ban on sending biodegradable municipal waste to landfills, which has been modelled from the beginning of 2025, should be remodelled because of the delay to it.

Our preference would be to model things in a more conservative way without making assumptions. However, if that is not done, things will need to be closely monitored, which is where contingency plans are needed. If the inventory change for peatlands does not go as assumed, the questions should be, what is the plan, and by when do we need to know that, so that it is not too late? If the figure for buildings emissions rebounds upwards following warmer-than-average winters and high gas prices, what will the contingency be, given that that will affect the carbon budget?

Either approach can be taken, but our preference is the former.

I think that Emma Pinchbeck is requesting to speak.

Emma Pinchbeck: One of the reasons why we keep talking about heat, transport and other areas in which action can be taken now is that it is clearly a better idea to crack on with delivery where progress can be made in getting emissions down, and to do that in every area of the economy, than to depend on early-stage or untested technology and, separately, not to have delivery plans in place.

Alongside the overall approach, it is important for us to have sectoral pathways, clear indicators and policies in place for the sectors in which we know that there needs to be a lot of action and it is clear what the choices are, because that provides greater certainty with regard to hitting the eventual targets. Our overarching advice to you is that there

should be much more focus on what can be done now beyond what is in the first carbon budget. We would like to see more detailed delivery plans for the second and third carbon budgets come forward, with a particular focus on heat.

Michael Matheson: That is helpful. I will ask Emily Nurse a specific question on the issue of buildings. You mentioned that the figure that is being used in the CCP has been modelled to bank a reduction in energy use due to high gas prices and warmer winters. Are you effectively saying that the model and the approach that has been taken in calculating the figures for buildings emissions are unsustainable?

The Convener: I do not know who will answer that question first.

Michael Matheson: Sorry—the question is for Emily.

Emma Pinchbeck: Emily can answer.

Dr Nurse: We have very similar names.

The Convener: I could not see hands waving—I saw only one of you on the screen. I apologise.

Dr Nurse: Sorry, I can wave when I want to speak. I do not know for sure what will happen to heating demand as gas prices change and come down. Some of the reasons why heating demand has gone down could be related to changes in how boiler flow is adjusted and whether homes have been draught proofed a bit. Some of the reduction is likely to be due to people having colder homes because they are so expensive to heat, which is a behaviour that we would not want to encourage.

It is very hard to know the extent to which that reduction in demand will be sustained. In our modelling, we say that around half of the reduction was due to milder winter months, although some of the reduction might be sustained. The UK-wide modelling suggests that demand will rebound, whereas the modelling in the CCP banks the low levels seen in 2023 as a starting point. That is quite a risky approach because we expect the levels to rebound. The variation in temperatures has quite a big effect on emissions. Building emission levels jump around because of that. We see higher heating demand in colder winters, which makes sense. We do not have a crystal ball, but although we had two mild winters, we do not expect future winters to be consistently mild.

As a result, we think that demand—and therefore emissions—will rebound. That will have to be compensated for by faster decarbonisation methods and by the roll-out of heat pumps. As we say, the rate of emission reductions achieved by decarbonising how we heat our homes will be very slow over the first two carbon budget periods. It will take a lot of work to counteract the rebound in demand.

Emma Pinchbeck: There is another way to look at that: the other side of the coin when it comes to evaluating progress—aside from the technical calculations that the CCP makes—is considering whether credible policies and plans are in place to cover any pathway, whatever it might be. On the heating side, we do not think that sufficient policies and plans are in place, and we are not sure about the pathway that is set out in the CCP.

We do not have the heat in buildings strategy and delivery plan—it would be good to see that. We want to see confirmation that the Scottish budget will allocate grants for low-carbon heating systems. There is no certainty of funding support for low-carbon heating technology, particularly heat pumps, beyond 2026-27. We need to look at whether a plan exists to improve standards in the private rental sector and in social housing. Around a third of new-build homes in Scotland have low-carbon heating systems, so what is the plan for scaling up their use?

To add to the point about how we track different technologies across different sectors, housing in Scotland—particularly tenements—differs significantly from the UK as a whole when it comes to how homes are heated. About 25 per cent of the housing stock is tenemental, and a third of those tenements were built pre-1919. Heating tenements is complicated because of the collective ownership and legal arrangements that are in place, but also because the fabric of those that were built before 1919 is so old. Such buildings might not be heated by individual heat pumps or heat networks. Therefore, to answer the question, you are looking for credible plans to deploy heat networks in such buildings, which it takes relatively longer to implement than installing heat pumps.

We highlight that the approach to heating presents a risk in both how the pathway has been calculated and policy.

Michael Matheson: That is very helpful. To stick with contingency planning, you have recommended that the Scottish Government carry that out for areas in which it lacks agency or in which policy is reserved. The emissions trading scheme, CCS, the electric vehicle mandate and so on, as well as energy prices, are areas that the Scottish Government does not have control over.

Is it realistic for the Scottish Government to be expected to draw together contingency plans for areas that are reserved, given that it cannot identify or understand the pace and nature of how policy will be progressed by the UK Government in those areas?

10:15

Emma Pinchbeck: One of the differences between our advice and the CCP is that our advice is less dependent on improvements in reserved areas. We are less focused on negative emissions technologies and recommend greater action—or at least clearer action—in heat decarbonisation, which is largely devolved.

As I said, we say in the progress report that 58 per cent of the actions in the forward carbon budgets come from devolved rather than reserved areas of the economy. That is something to emphasise: even as designed, the CCP puts more emphasis on reserved areas of the economy than we would in our advice. That is for the reason that you have given, which is that we try to give advice in which we can be as sure as possible about delivery, and go for technologies and policies that have been evidenced to work in other countries or UK-wide, or that we believe will work in Scotland.

On whether there are contingencies or areas in which there needs to be shared working between Westminster and Scotland, some of that is about how politics work, which is more your job than mine, but you will need to be able to quantify exactly what those risks are and say where you need the support of the UK Government. The UK reports all its emissions reductions collectively, under its international obligations. There is an incentive for all the UK nations to work together in that regard, and it would be helpful to discussions to be able to say how much you are dependent on working with Westminster on those things.

For example, as I have said, the UK as a whole is very dependent on Scotland for some areas of UK-wide decarbonisation—in particular, for tree planting. Thirty-eight per cent of trees for the UK-wide carbon budgets will be planted in Scotland because the land for doing that is more available in Scotland relative to the rest of the UK. In some areas, it has to be a partnership.

In our advice, we have tried to minimise contingency depending on reserved areas of the economy. Given where the CCP is, quantifying that as much as possible and being able to work out what you need for negotiating with Westminster is a good idea. How the politics of that goes forward is more of a political question.

Michael Matheson: Thanks. There are challenges for the Scottish Government to bring together credible contingency plans, given the level of uncertainty that it may have over reserved policy areas—which, I think, by your calculation, make up just over 40 per cent of what has to be achieved in the CCP. Will you remind me, what recommendations did you make to the UK Government in your advice on the actions that it should take in order to make sure that it sufficiently supports the other nations of the UK?

Emma Pinchbeck: In the seventh carbon budget, we have a whole chapter on contingencies, which will include some of the things that we have talked about for Scotland that are UK wide, including the development of removal technologies, carbon capture, the zero-emission vehicle mandate and the emissions trading scheme. I refer you to that chapter for advice on similar approaches. When it came to recommendations on devolved areas in particular, we drew out areas in the advice to the UK Government in that publication in which it needs joint working with Scotland and the other nations of the UK. I have flagged some of them in this meeting: for example, tree planting and electricity generation, in the acknowledgment that Scotland has been the place in which we have developed a significant amount of offshore wind, which is responsible for emissions reduction UK wide as well as in Scotland. In that advice, we have signalled to the Government where it needs to do more joint working. Regularly, if we are asked for advice on a UK-wide issue such as the ETS, we flag the need for there to be a shared conversation.

Stepping back from that, I noticed that, in your report that responded to the CCP, you mentioned that there is a regular ministerial meeting across the devolved nations and the UK Government. Such structures are a good idea, and we regularly point to the need for cross-Government structures—within Whitehall but also across the Governments of the UK—to make sure that we are aligned on UK-wide emissions reduction and UK climate risk and adaptation, and to make sure that devolved Governments are supported with their climate change actions and plans.

Michael Matheson: Thanks.

Douglas Lumsden: I will move on to public and business engagement. While both the Climate Change Committee and this committee highlight the need for clear, trusted information, we place a focus on enabling community-led and place-based action as part of delivery. Where does community-level delivery fit in the wider system changes that we need for net zero?

Emma Pinchbeck: We look at that as part of our advice. The first thing to say about such questions is that our mandate is national so we tend to look across the whole system, across the economy and across sectors. As much as possible, we are agnostic about the exact delivery route—that is, whether it should be private sector or public sector, and at what level—because some of that comes with a political choice about where to allocate funds and resources. That said, if we can see in the evidence that we look at that a

place-based or community-led approach has been effective, we will draw that out.

I can pull out particular examples. In the agricultural advice for the UK and for Scotland, we talk about the need for the fourth land use strategy and the UK Government's forthcoming land use framework to take a sensitive—we describe it as farm-by-farm—approach to implementing some of the changes in agriculture because, when you look across the whole system, the distribution impacts and how change is delivered on the ground can be quite different. You do not want to allocate a change to an entire region that would not work for an individual farm.

We often commission separate analysis, and the information that I am talking about in that case came from a separate piece of work that the National Farmers Union and farming stakeholders did for us on how delivery might work in practice. We have done similar work with business groups and community groups on how delivery might work. We are producing work on how local authorities might interpret and use our overarching plan.

The other way that we think about this is in flagging whether there is a particular risk to particular areas. I have talked about some of this already, but in the Scottish advice, we talk about the transition in the North Sea, what it means for Aberdeen and the need for a just transition and thoughtful transition plans. Similarly for industrial clusters, we talk about thinking carefully about Grangemouth, project willow and project Acorn. Where there are specific place-based bits of evidence or advice, we often refer to those. In Wales, we did something similar for Port Talbot, for example.

Finally, within the main advice, we look at questions of distributed impact, which can sometimes be place-based but which are also highly individual, and we do that quantitatively with a distributed impact model. We did that for the UK-wide advice, but we also do it through social research by talking with the citizens assembly about how delivery might work, what people think of the trade-offs and what sort of actors they will listen to, and we also offer advice.

Although the mandate is national, broad and across the whole system, where we think that it is appropriate, we try to give layered advice further down.

Douglas Lumsden: You mentioned the north-east of Scotland and the people in the oil and gas sector that are affected by some of the changes. From the Climate Change Committee's perspective, what does effective engagement with those groups look like in practice?

Emma Pinchbeck: The team will tell you that the work that it found interesting and of real value in pulling together our advice in Scotland included going up to Aberdeen with some of the unions, meeting some of the workers and talking about the transition and the situation that they are already experiencing as the basin declines. Our chair, Nigel Topping, went back to Aberdeen last week and talked to some of the same groups about what they think now that they have seen the carbon budget advice and some of the plans from Scotland.

The industrial planning piece and the just transition piece do not sit with us as a statutory body. In Scotland, they sit with the Just Transition Commission and others. However, in partnership with them, we recognise the need to bring people with us on this transition and to have particular plans in place for places that are going to have to make significant change. We flag Aberdeen as one of those places in our advice. We would like to see thoughtful approaches to training, redeployment, development and so on in those communities. If you look at the advice that we have given, you will see that we talk specifically about Aberdeen, the work that we did up there and what the recommendations were, having spoken to the workers and the unions. Also, you have had evidence from the Just Transition Commission.

Although that is not entirely in our mandate, we recognise that it is important. We really enjoyed going up to Aberdeen, meeting those workers and being able to offer some thoughtful advice on the situation in our report. We would also very much signal that the Just Transition Commission, the unions and others are the people to go to for more detailed plans; we also recognise that the Government needs plans, too.

We have not found that that community is opposed to the idea of change. Regardless of net zero, the basin has declined 75 per cent since 1999 and, regardless of plans for net zero, it will decline further. The people there are aware that there will have to be a change. They want early intervention and support.

What we said to Wales about Port Talbot was that there was a complete failure to plan for something that everyone could see was coming, not because of net zero but because of rising electricity prices and pressure from competition and global trade. If you do not engage early and have plans in place early, you do not get good decarbonisation—you get consequences for your key industries. That needs to change. We would like to see significant and early intervention.

Douglas Lumsden: I know that this is not in your remit in terms of transition plans, but you almost said it there: does something need to

change faster in making sure that communities are aware of what the consequences are, where they can change and how they can play their part? I feel that a lot of these communities are pushing back against net zero because they feel that things are being done to them, and they do not see a future for themselves.

Emma Pinchbeck: As I said earlier, communication across the piece is something that we are really keen to see Governments do more of. I say Governments, but it could also be about Governments enabling community groups and other trusted actors to do more of that communication.

We find in our own citizens panels, which have been a new thing for us in this cycle of carbon budgets, that people are not opposed to action. Actually, once they have seen the science or the evidence, they will quite readily move to the understanding that something needs to be done. The core themes that come out are, as you say, that people want to be partners in that change, they want to be able to give their opinion, and they want a sense of fairness—that comes out quite often, across the economy. They want a sense that vulnerable people are being looked after and they want clarity about why particular trade-offs and choices are being made.

The polling in Scotland and the Scottish social attitudes tracker show that 83 per cent of the Scottish public know that climate change is happening and they want something to be done about it. That comes out when we speak to communities—even communities where there is significant change. They want that dialogue: they want deliberative dialogue, and they want it early.

On oil and gas, my background is in the energy sector and I think that presenting the change in how we consume fossil fuels as a choice to do with climate is not an accurate reflection of the story of the energy transition. Fundamentally, more money is now going into clean technologies internationally than is going into fossil fuels. These are very energy-efficient technologies; there is a race for them internationally. Battery prices and electric technologies prices are dropping; of course, that is about emissions reduction, but it is also about a big energy transition, along the lines of the energy transitions that we have had before. We moved from coal to gas and now we are moving from gas to electricity.

I think that those pressures, as well as the fact that the basin was mature, will mean change for those communities and, to answer your question, they know that when we speak to them. That is not something that they are not aware of. What they are looking for is a plan for that transition.

Finally, place is obviously important to people and I think that this is the same as farming. When we talk to the farming community, they want to farm. It is about making sure that things are not being taken away, but that there are plans for a way forward that can be positive for places that have a proud legacy of a different industry.

Douglas Lumsden: We will come back to fossil fuels later, but I want to ask this now. When the Climate Change Committee recommends that the Scottish Government should

"Work with the UK Government to communicate a clear vision"

and

"Provide trusted information about … low-carbon choices",

what specific actions do you envisage?

Emma Pinchbeck: I realise that this sounds like a public servant dodge, but I think that that is for politicians to decide. You are the people who talk to constituents and the public and you will have a better idea than we have of exactly the right thing to do here.

10:30

I can speak only from the experience of our evidence collection, which is that we have found those deliberative processes with the public really useful. Having time for the public to ask questions, to debate trade-offs and to have open dialogue has been a really positive thing for us, and I hope that that information and evidence has been useful to you.

I think that the question of how to run a big public communications campaign, at what level and with which audience is a job for politicians more than it is for us.

Douglas Lumsden: Okay, thank you.

Emma Pinchbeck: Emily has a strong view on this.

The Convener: Well, as long as it is a brief strong view, because I would like to pause for a minute before we go on to the next bit.

Dr Nurse: It is a very brief strong view, although it is not actually a direct answer to the question. I want to highlight the results from the Scottish climate survey. Only 21 per cent of respondents thought that moving from a gas boiler to a heat pump was among the four most effective things that a household could do to tackle climate change, yet we know that moving to an EV and moving to a heat pump are the two biggest things that people can do. There is a disconnect between what households think has a big impact and what really has a big impact. Usually, they think that it is all about recycling and less about shifts to low-

carbon technologies. However, I do not have an answer to the question about the best way to communicate that.

The Convener: We will pause at EVs, because we are about to come on to them. I suspend the meeting for five minutes. We will end the session at 11:30.

10:31

Meeting suspended.

10:37

On resuming—

The Convener: Welcome back. The next question will come from Mark Ruskell.

Mark Ruskell: I will turn to the issue of electric vehicles, because there is heavy dependence on those vehicles in the climate change plan.

As Emily Nurse said, using an electric vehicle is one of the biggest changes that an individual can make to reduce their carbon emissions via technological approaches. The Climate Change Committee has stated that the CCP includes "credible plans" for electric vehicles, but you also note that there is not a lot of detail about specific Scottish Government incentives and programmes to support EV uptake. Why are you confident that the assumptions about EVs in the climate change plan are solid and credible?

Dr Nurse: The plan is very dependent on the transition to EVs. Transport is now the highest-emitting sector in Scotland and, in the plan, 40 per cent of required emissions reductions in the first carbon budget come from the transport sector.

The trajectory for EV roll-out is actually in line with our modelling, because we think that the sector can move rapidly. I will speak a little bit about that. We say that there are credible plans for a big chunk of that roll-out, but we also say that there are risks. In the year to September 2025, the number of EVs on the road in Scotland increased by 38 per cent, so we know that use is increasing quickly.

There is strong policy in the ZEV mandate and there has been targeted funding and support in Scotland. We are monitoring the position UK-wide and we are seeing the price premium for an electric vehicle compared with a vehicle with an internal combustion engine really falling. In 2023, an electric vehicle was 37 per cent more expensive. That figure dropped to 24 per cent by 2024, and as of September 2025 it was 19 per cent. For many drivers, electric vehicles are already cheaper to run and maintain, and the second-hand market is starting to get cheaper. The number of electric vehicles is still fairly low, but we expect it to really accelerate. We expect price parity to come soon, depending on vehicle size, and we will then see S-curve dynamics as the new technologies take over. They are good, efficient technologies.

We have also seen progress on the number of charge points, which increased by 34 per cent to over 6,000 by 2024. That target was met two years early, although the distribution of charge points varies and we have noted that satisfaction with them is low, so the enabling factors need to be looked at. There is therefore some risk in the early take-up, but that is assumed in the pathway and we have highlighted it. The take-up may be a little behind, but it is not going to be really behind. We predict that it will catch up because of the economics.

Another thing to note is that there may well be some underreporting of the number of electric vehicles in Scotland. Because of the way that the reporting is done, company vehicles—both cars and vans—that are registered in England but driven in Scotland might not be captured, so sales might be higher than is being reported. The Scottish Government is looking into that to try to understand it.

We note that there has been some risk in the early days and there is some risk going forward. The trajectory is ambitious and there is a lot of reliance on it. However, sales are continuing to go up and the use of electric vehicles will start to eat into emissions soon.

Mark Ruskell: It certainly looks positive, and the cost of purchasing a vehicle is definitely coming down. However, I am interested in the cost of electricity and charging. I remember that, five or six years ago, charging at a public charge point was free. Now, if people are lucky enough to have a driveway at home, they can get on an EV tariff and pay about 8p per kilowatt hour, which is a very low cost. However, the cost at some public chargers is up to 60p per kilowatt hour.

I am interested in hearing your reflections on the charging regime, because it seems that, in effect, some companies are now profiteering. The cost of electricity on a basic tariff at home is 28p per kilowatt hour. How can people justify charging 60p per kilowatt hour? People consider real-world factors such as the accessibility of cheaper charging when they decide whether they could switch to an EV.

To what extent are you factoring that in? Is there a role for the Competition and Markets Authority to look at the price of electricity or other aspects?

Dr Nurse: We are factoring that in. Some people do not have off-street parking and cannot charge

at home, and we recognise that those people are not seeing the benefits of EVs to the same extent.

The cross-pavement charging grant pilot is really positive, because we need more people to be able to access the cheaper tariffs. As you pointed out, when people can access them, they can get incredibly cheap rates. Emma Pinchbeck might want to say more about the costs of charging. However, we hope that, as we get more and more electric vehicles, the costs will come down. We do not have any evidence of profiteering, but it is definitely true that there are big differences in costs, and we should look at that.

Emma Pinchbeck: It is not for us, as a statutory body, to say whether the CMA should look at the issue, but I am sure that others are looking at it and will make recommendations to you.

What is a matter for us is whether we think that charging is a barrier to the delivery of emissions targets and a risk in the plans. As Emily said, that is factored in. We look at how much parking is on street versus off street and we make our recommendations on what is feasible with regard to the deployment of electric vehicles. It is factored in in that context.

10:45

In the citizens panel evidence, some of our social research and some of the evidence from other countries, that difference in charging was noted. The public have said that fairness is important and that the balance between who has access to off-street and on-street charging is notable in that context. If you think that there is a distributed unfairness there, that would be something to look at.

Lastly, it is important to say that cheap electricity and cheap charging are part of what makes the roll-out of electric vehicles beneficial for costs in the economy overall and costs for households. As Emily said, one of the indicators that we are tracking in relation to the uptake of electric vehicles is absolutely that capital cost of investment. We know that capital cost is a barrier to deployment. For things such as leasing arrangements, financing, household savings and economy savings on fuel costs, you do need a cheap electricity price. That is not just about the price being charged to the consumer at a charge point; it is also about the price of the electricity bill for people who are charging at home.

We have managed to get through almost an entire evidence session without mentioning that cheap electricity is an essential underpinning for a lot of emissions reductions. We appreciate that much of that is reserved to Westminster, but it is important for Scotland's roll-out of these electric technologies. More than half of the emissions reductions in the carbon budget advice is coming from electrification, so cheap electricity is really important however people are charging their vehicle.

Mark Ruskell: It is clear that cheap electricity is available, but only at night, and that is the problem with EV charging. If people do not have access to that personal EV tariff, they are really stuck using public chargers. Do you think that there should be a cap on the price of EV charging at public chargers?

Emma Pinchbeck: Those are policy decisions, because they involve trade-offs and choices across the economy, so they are for policy makers. We have flagged questions around fairness that matter to citizens and might affect how you think about net zero policy as policy makers.

There also need to be cheap and available services for charging your vehicle or running your heat pump in your home. That is a mix of how Government allocates policy costs and the electricity bill. It could mean reforms to wholesale electricity prices across the whole of the market. It could be about looking at the market arrangements for things such as on-street charging and how that industry functions. It could also be about making sure that the energy retail market is able to offer the sorts of services and tariffs that you are talking about for those people who can charge at home or for everyone who has an electric heating system in the future. That is about cheap electricity at different times of the day.

It is about being able to do things such as load shifting and really making the most of these fundamentally more efficient and cheaper energy technologies, because we believe that, if we have those in place, at household level, people stand to save money relative to a fossil fuel counterfactual. However, you can only enable that if the price of the input fuel is as cheap as it should be.

The Convener: I will stay on electric vehicles, but I will move away from cars and talk more about heavy goods vehicles.

As a farmer, when I look at tractors nowadays and think about putting batteries in them, I am probably convinced that they could never go into a field, because they would sink. However, HGVs go on the road. We have heard from the industry that the proposals to move HGVs to electric vehicles are probably unachievable in the medium term, not only because of the price of electricity per unit, which is three times the cost of a diesel unit at the moment—a lot of small operators could not afford that—but because of the fact that the vehicles sit idle for a huge amount of time, recharging so that they are able to carry out their work. Economically, those vehicles are not viable, because the price

per mile that HGV drivers get is pretty minimal anyway.

What about drop-in fuels? Do you accept that there is a place for them, because HGVs are not going to go electric in the timescale that the Government and you might like?

Emily Nurse was quicker and Emma Pinchbeck sort of looked at her thinking, "Well, she can answer that," so I will go to you, Emily.

Dr Nurse: In our modelling, we have some biofuels as a transitional fuel. We know that bio is a scarce resource, and we have to look across the economy. We need to use biofuels where that is most beneficial for emissions reductions and where there are no alternatives. However, we see a role for biofuels as a transitional fuel as we work towards electrification. We recognise that there are some difficulties with HGVs, that the upfront costs are more expensive and that support might well be needed along with the regulation that is being consulted on.

The Convener: I will just push back on the term "some difficulties". We have heard from the industry that, in the short to medium term, the electric vehicle targets for it are unobtainable. That is slightly more than "some difficulties", is it not?

Dr Nurse: We think that support might well be needed for the transition. There are some difficulties—it is difficult—and we think that there is some risk in that transition. As I said, we see drop-in fuels as something that can be used for transition, but it must be seen as a transition. We are transitioning, and we think that the end game is electric HGVs.

The Convener: Will it be electric for tractors as well?

Emma Pinchbeck: Ha! Last week, I was at the NFU conference talking about electric tractors. I do not know whether we have discussed this before, but I live in a rural area, so I know the size of tractors that you are talking about. Thinking about how we put together the advice, because of the cost of drop-in batteries, their improved efficiencies, the sorts of machines that we can now put them in and the applications that we are using them for, and given the global context for electricity supply, you would take the bet on an electric alternative where you can see one that can scale up. That said, as Emily Nurse said, if we cannot see that as a plausible scalable alternative, we have used alternative fuels across the carbon budget advice.

We have talked about this, but more than half of Scottish emissions reductions come from clean electricity. That means that the other half are from some combination of alternative fuels, demand changes and others. In the UK-wide advice, the approach is similar. We use a mix of drop-in fuels, including biofuels, but we also look at hydrogen. We have looked at other low-carbon fuels and how they might be produced. As Emily Nurse said, in the long run, either you think that the battery or electric equivalent will eventually catch up with the transition fuel, or there is a limited feedstock. When you look across the economy, you find that other sectors need to use the land that is used for biofuels, or we need to use things such as hydrogen for other areas of the economy where there is no clear alternative. In that regard, I am thinking about things such as cement. That is what we do.

In short, small vehicles are clearly going fully electric. With more complex vehicles, including large tractors, we have alternative fuels and we have flagged that as a risk. On how the industry feels about actually delivering that change, one thing in the Scottish advice that is not in the UK advice is a recognition that freight and logistics in Scotland look a bit different from the UK-wide industry. We think that many of the firms are small and medium-sized enterprises that own three vehicles or fewer and, on average, a different delivery roadmap is required for small companies. That will mean thinking about different access to capital and how to finance that change. Therefore, I completely understand why those firms are signalling those risks.

In terms of technical delivery, we think that electrification is the way forward. In terms of how the industry delivers that and the policies and support that it needs to get that done, it is for the Scottish Government to have a clear delivery roadmap. Separately, we do a lot of work with the industry. Logistics UK is one of the trade bodies that we speak to regularly. We are always happy to hear from industry about where it has constraints so that we can think about that in producing our advice.

The Convener: I will come back to that at the end, Emma. It is fine to make recommendations and say what the way forward should be, but it always concerns me when the plan is to then pass the work of costing and paying for that to someone else.

Douglas Lumsden: I will move on to waste. The committee has asked the Scottish Government to review figures in the waste and energy chapters of its plan, in the light of the delayed enforcement of the landfill ban and, belatedly, to consider whether the energy-from-waste emissions are likely to peak in 2026. Has the Climate Change Committee considered the impact on emissions of the delay, and what is a credible baseline for energy from waste?

Dr Nurse: We very much agree with your committee's recommendation that that aspect needs to be updated in the modelling. We highlight the fact that it includes the ban as though it had already been in effect during 2025. The delay to the ban means that there is more waste in landfill and therefore more emissions from that, and less waste is being diverted to energy from waste than would have been the case, because it is still in landfill. When the ban comes into effect, more waste will be going into energy from waste, so it is about where the emissions are counted. They are counted in different sectors and they are different—the sources of the emissions are in different places. We very much agree with your recommendation that that methodological change should be made.

More generally, we are concerned about the rise in emissions from energy-from-waste production. So far, figures for energy-from-waste emissions do not include all plants, so they are probably underestimated, and they rely on connecting to CCS and having the required infrastructure, so we flag that as a significant risk.

Douglas Lumsden: Will carbon capture for energy-from-waste plants be available across the board in the near future?

Dr Nurse: I will have to double-check, but I think that the plan had the date for that as 2032. We think that that is at risk. The planning requirements could be clearer, to ensure that all energy-from-waste sites will have a viable route to connect to CCS. They should be built only where CCS viability can be demonstrated and there are proposals to connect to CCS, which derisks that. That obviously depends on the Acorn project and there are risks in that regard, which we have flagged, so we very much need to keep an eye on that.

Douglas Lumsden: On energy supply, there is a difference between you and the Scottish Government in relation to Peterhead power station. I think that the Climate Change Committee is of the opinion that the new power station should not go ahead. Is that correct?

Dr Nurse: I would not say that we think that it should not go ahead. Emma Pinchbeck might want to come in on this. The way that we do our modelling, technology is deployed at a plant level for least cost; it is a Great Britain-wide system; and it is influenced by a range of factors, such as relative electricity demand, generation from other sources and network constraints. We do not look at project viability in that way. If Peterhead 2 goes ahead and we have gas CCS, which we very much model as part of our GB-wide system, that will still be low-carbon production of electricity, which is a perfectly viable route for decarbonisation in Scotland. Therefore, we should not take those differences as a recommendation on Peterhead; that is just how it came out in our modelling.

Douglas Lumsden: To clarify that, if Peterhead 2 goes ahead, CCS would be there to capture the emissions, so there would be an almost zero-emissions power station. Is that correct? Is that why there is a slight difference?

Emma Pinchbeck: We do not have Peterhead 2 as an unabated plan in the pathway, so there is an assumption that you would need the project to be connected to carbon capture, utilisation and storage infrastructure. If it goes ahead, that would be a recommendation, because of the impact on emissions otherwise.

11:00

However, as Emily Nurse has said, we do not analyse plant by plant in that way. That is because our job is to look across the whole economy—or, in this case, the whole energy system—and make a cost-based recommendation on the overall mix. That gives us an output in our energy modelling that assumes that Peterhead or a similar-sized plant is not there.

However, when it comes to the delivery and the decisions that Governments make, there might be very specific reasons to go ahead with plants, including perhaps a connection to an industrial cluster and therefore good industrial reasons, or wider emissions reduction reasons—for example, if it is essential to getting a carbon capture, utilisation and storage infrastructure away—that are about delivery and delivery choices that we cannot analyse because, again, they require particular trade-offs across the economy or across sectors in which there is a wider set of evidence than we are looking at for emissions reduction purposes.

When it comes to your report in response to the CCP, it is good to have an opportunity to clarify that we were not making a specific recommendation on Peterhead in our advice. That is absolutely not what the committee was doing.

Douglas Lumsden: That is helpful.

What is the Climate Change Committee's view on the future of oil and gas production in the North Sea? Should it go ahead or should there be an accelerated decline?

Emma Pinchbeck: We have not looked at it for the purpose of setting the carbon budgets. That is due to a technicality, which I will repeat because carbon budgets are new in Scotland. Emissions accounting for the purpose of setting carbon budgets is territorial. Because North Sea oil and gas are literally offshore, they are not caught as

part of that emissions accounting framework. We have therefore not considered them in how we set our advice.

The last advice that the committee gave on North Sea oil and gas was a separate piece of advice to the secretary of state some years ago. We have not looked at it as a question since then. We have said in the advice that an energy transition is happening across the Scottish economy that will affect oil and gas demand. We can see that the North Sea basin is in decline, and we recognise the work of the North Sea Transition Authority, which reflects a further decline. For that reason, because of our interest in place-based approaches, which was mentioned earlier, and the sense that we got back from the citizens assembly in talking to affected communities and workers and getting ahead of where there are particularly changing communities, we have flagged that the Scottish Government should be looking specifically at Aberdeen; however, that is as far as we have gone in our advice.

Douglas Lumsden: To clarify, the domestic production of oil and gas does not have any impact on the emissions figures. Is that what you said, Emma—that that was because it was offshore?

Emma Pinchbeck: Yes. It has some implications for the inventory. I will ask Emily Nurse to come in if I slightly mangle the methodology. We look at imports separately and try to give a sense of what imported emissions are doing. Imported oil and gas would be part of that calculation and there is therefore some relevance in how much we use domestic production.

We have a chapter in the seventh carbon budget advice, which is UK wide, in which we think about fuel supply more generally, including the balance between import and export. It comes in a bit in that. Separately, in our industrial analysis, we would treat the emissions from some of the North Sea oil and gas supply chain as being pertinent to territorial emissions. Things such as refining are included where appropriate in the industrial sector calculations.

However, we do not look at the North Sea as a whole or the emissions from production, because those are offshore for the most part. Neither, for example, do we look at the impact or trade-off or counterfactual of more or less imported or domestic consumption of oil and gas.

Douglas Lumsden: Even though those are offshore, they are still in UK waters. Are you saying that they do not count towards our emissions?

Dr Nurse: They count towards UK-wide emissions. As Emma Pinchbeck said, Scotland's carbon budget includes some emissions in terms of the operation of terminals to manage the import and onshoring of oil and gas, leakage of gas from pipelines and so on, as well as onshore production. However, the offshore production is not in scope for Scotland; it is counted as another category. It is included in UK-wide emissions. It is quite technical and a bit confusing.

Emma Pinchbeck: We will be happy to talk you through it in more detail if it is of particular interest. It is about how the accounting works—we have thought it through, as we are meant to do under the various acts, and we have done that up to our mandate, but we have not considered it as a separate question in the way that I think the sectors would.

This is something that we often hear when we are talking to particular industry groups. I come from the private sector, so I know that most industries will think about their sector and their supply chain independently from the rest of the economy. Sometimes, if we are looking across the whole economy, we treat emissions in quite a different way from how sectors or parliamentarians might think about them. That is why, for example, there is a difference between our analysis and how the Government thought about things such as energy from waste: it is because we have treated waste emissions in a waste section of our analysis and the Government treated them in an energy section. I think that I have got that the right way round.

Sometimes, there is a technical choice in putting the accounting together, because of how we report up to the United Nations and other bodies and because of best practice for emissions accounting frameworks. I appreciate that that can be quite different from how you think through the issue. We are happy to come and talk it through, if that would be helpful.

Douglas Lumsden: Thank you.

The Convener: I will leave it to you to take the witnesses up on that offer, Douglas, if you want greater clarity on it.

Mark Ruskell has a couple of questions. I remind you that we have about 20 minutes left—I am keen to make sure that I do not exclude Kevin Stewart, who has sat quietly, waiting his turn.

Mark Ruskell: I move on to the subject of negative emissions technologies. The assumption in the draft climate change plan is that there will be about 12 megatonnes of emissions reduction in the third or fourth carbon budget. That is double what the Climate Change Committee has recommended. What are your thoughts on that? Is it really credible to double down on that emissions reduction? What are the key risks and contingencies, particularly given that some of the main sources of carbon that were going to be fed

into Acorn at Grangemouth and Mossmorran are no longer going to be feeding in and that there are questions about delivery in relation to Acorn?

Dr Nurse: Thank you for the question. I will set out the difference in how we have approached it. In our advice, we consider NETs—negative emissions technologies—in a UK-wide way in the first instance. How much of that do we need to get to net zero in the UK? As Emma Pinchbeck said, we have a polluter-pays principle, so it is mostly aviation emissions that are offset by those technologies. That is a policy choice; in our modelling, we assume that it is the aviation industry that then pays for those.

When we know what is needed UK wide to get to net zero, where those technologies sit within the UK depends on several factors. For example, about 25 per cent of our direct air carbon capture and storage is in Scotland because there is abundant renewable generation. We define it in that way.

The CCP lacks detail—I will come to that—but our understanding is that it is a bottom-up feasibility approach to what could be done. We do not understand how that aligns with UK-wide plans for NETs. If, by 2050, there will be a polluter-pays principle in the UK that will be paid for by the aviation industry, why would the NETs be in Scotland in particular versus in other parts of the UK? The issue is about making Scotland an attractive location for NETs. We do not know how joined up that is with other plans, in terms of the goals for 2050 or 2045 and in terms of the ramp-up of the carbon budgets. How does the amount of NETs assumed in the Scottish draft climate change plan align with that assumed in the UK-wide carbon budget plans? Is there a link-up and have there been discussions about what is being assumed in the UK plans? That is what we do not understand.

The plan says that, by the end of 2026 there will be a route map to deployment of NETs at scale by 2040. We need to see that before we can make a judgment on whether that is feasible. We have flagged it as a significant risk. As you said, it goes beyond what we have in our pathway. In terms of what that means compared with other sectors, there is a lot more in negative emissions technologies. There is less in buildings. We have talked about that, although the end point of 2045 will have to be more ambitious in Scotland. There is much less in the near term and not as much even by carbon budget 3, so you will have to accelerate. There is also less in agriculture.

We see Acorn as a significant risk and it is a decision that was made—

Mark Ruskell: Can I just intervene? You are giving useful context, but there is only one negative emissions technology proposal on the table at the moment, and that is project Acorn, which is on track 2. There are concerns about the deliverability of and risks to that. I am interested in your thoughts about that, particularly in relation to the climate change plan. The cabinet secretary was in front of the committee a few weeks ago and she said:

> "If CCUS did not develop at the level that the Climate Change Committee has modelled in its calculations, that committee would have to go back to its assumptions and provide additional advice".—[*Official Report, Net Zero, Energy and Transport Committee*, 10 February 2026; c 45.]

So, on the point about the Scottish Government having a plan B if project Acorn does not materialise, it is clearly saying that it is for the Climate Change Committee to think that one through. If project Acorn does not happen, what do you see as the contingency plan? What would that plan B look like?

Dr Nurse: It is a good question, and there are also questions about delays because of the carbon budgets. As you say, the majority of removals is in project Acorn. There are other things such as enhanced weathering and biochar, which are at a much lower level in our modelling. We do not know what the balance is of the different removals in the climate change plan.

Looking at the other sectors, such as buildings, we have already pointed out that project Acorn could be going faster and we think that it should be. It is putting more reliance on negative emissions technologies and the contingency for that is monitoring what is happening in all the sectors. Is it ramping up? When we see the route map, do we think that it is going to happen? We have flagged project Acorn as being definitely at risk.

We would have to think about a plan B but, as you have said, because there is more reliance on negative emissions technologies in the climate change plan than in our plan by quite a way, the Scottish Government pathway would also have to look at it.

Mark Ruskell: The difficulty for the committee is that we are trying to understand the implications of project Acorn not going ahead. You have flagged up one sector where it has been difficult for the Government to make progress, and that is buildings. Are you saying that we are going to get a 12 megatonne reduction in emissions from buildings and that that is the way forward? If you are not able to point to what a plan B might look like at this point, when could that advice be given to the Scottish Government? It is clearly asking the CCC for the advice.

Emma Pinchbeck: The size of Acorn means that, having said that we do not do plant by plant

where we can avoid it, it is one of those that I flagged where there is a place-based or a single infrastructure project decision that we recognise as a contingency.

Emily Nurse did not talk about how we view NETs and whether that is different from what the Scottish Government is doing. Broadly speaking, in our pathway, NETs are there to accommodate areas of the economy where there will still be emissions. By the time that you have delivered emissions reduction in all areas of the economy, what you will have left is agriculture and aviation, with a few industrial emissions. The exact proportions look slightly different in the UK and Scotland but that is the deal—there are no mechanical sheep and cows and there is no complete equivalent for a plane for people to travel internationally, so we assume that those sectors will continue to emit.

The way that we have done our advice on negative emissions technologies is bottom up and top down. What technologies are available? Are they scalable? Are they credible? What can we see in the international market? A project such as Acorn is that kind of project.

11:15

We have also looked at negative emissions technologies and removals from trees and peatland, which are a natural kind of removal, in the context of the sectors of the economy that are still emitting. Where there are agricultural emissions, trees and peatland set those off, and we have assumed a polluter-pays model where the aviation sector is bringing forward removals technologies and negative emissions technologies. The answer to your question is that you have to look at those sectors, but by the time you get to 2045, you are looking at other things in those sectors.

In the chapter on contingencies in the seventh carbon budget advice, we talk about the things that will happen if you do not get the kind of change in, for example, diet that we would anticipate through making healthier alternatives more available and the things that we have recommended on flying. The alternatives if those technologies do not come forward are a mix of things. Demand management is one of them. I encourage you to look at that.

For the Scottish Government, the risks, which Emily Nurse highlights, are that it is using negative emissions technologies to do things instead of the abatement that we see is possible in other areas of the economy. The contingency is to do those things. Roll out the heat pumps that need to be rolled out. Think about potential changes in agriculture. Those are important.

Interestingly, just to be specific, in the CCP, the Scottish Government has said that it is going to make up a shortfall in, for example, agricultural emissions or the differences from our pathway through a faster deployment of electric vehicles. However, we think that the numbers show that that shortfall will be made up of negative emissions technologies, which is why we are saying that the contingency for that is to go harder in the sectors that it has chosen, which is completely the right of the Scottish Government, to do different things in.

I hope that that is a clarifier. Again, we can share with the committee evidence that sits in the seventh carbon budget in the UK-wide advice that would be useful in this context.

The Convener: Now we come to Bob Doris, who has questions on agriculture. We have talked quite extensively about agriculture, and I could talk all day about it, but concise questions and answers would help me to get to Kevin Stewart within the timeframe.

Bob Doris: I am sure that we can make that happen.

I will ask a few brief questions on agriculture, and in particular on the Scottish Government not taking the pathway advice in relation to production and livestock. Some of the narrative around that from the Scottish Government has been that reducing livestock to grow crops may not be best for Scotland's geography. I am sure that there other reasons as well, but the Scottish Government did not take that option.

Emma Pinchbeck, could we have some brief reflections on the Scottish Government rationale for that?

Emma Pinchbeck: The rationale that it has given is—[*Interruption*.] Excuse me for coughing; I have two small children who made me ill over half term; I am still ill and they are fine.

The Scottish Government has said that its decision is about both political choice and delivery on the ground. That is the difference between what we do as an independent body and the choices that policy makers face all the time. When the Scottish Government initially signalled that it was going to do something different to our pathway, we all said, "That's absolutely fine". Ultimately, our main aim is to give advice on that target level. The pathway that we provide is to illustrate that the targets are feasible, so it is fine for the pathways to differ.

Away from that, in order for us to think that the analysis was a credible alternative pathway, we would need all the things that we have talked about in relation to how fast the Scottish Government is going to go in other sectors. Just to illustrate our approach—

Bob Doris: Can I just come in there, Emma? We have already discussed negative emissions technologies and peatland restoration as part of that pathway. What I am trying to explore is whether the Scottish Government's rationale jars with you—in other words, given that this is its own political choice, whether you are fine with that and the alternative pathways are valid.

The one aspect that the committee has not really discussed is reforesting and tree planting—and I apologise for cutting across you earlier, but I just wanted to ensure that there was time to ask this question. My understanding is that the Scottish Government is front loading much of its tree planting, and that what is in this first climate change plan is actually ahead of what the Climate Change Committee has recommended. I guess that that will be welcome, but I just wonder whether you can confirm that.

However, in the work that the Government has carried out under what is called the CARBINE model, the benefits of reforesting are more stated, and the Government thinks that that modelling is more informed and that—and I say this with total respect, Emma, because I have no idea which I should opt for—the Climate Change Committee's model is based on more limited knowledge and, therefore, is less accurate. Some comments on that would, I think, be quite helpful.

Emma Pinchbeck: I am not familiar with that particular bit of evidence, so I will get Emily Nurse to come in on that.

Very broadly, though, what I would say is that we look at all the peer-reviewed and published evidence that we possibly can in time to do the analysis. If new evidence comes forward—and if it is credible and the CCC feels that it is useful—we will update our pathways accordingly. That is best practice.

As for any concerns—or, indeed, alignment—that we have on the CCP advice on peatland and woodland, I have to say that there is very good news for Scotland on peatland restoration. Rates over the past two years have doubled to 14,900 hectares in 2025, so there are good signs that that policy has been working.

Similarly, tree planting doubled between 2023 and 2024. It is absolutely true that you need to front load tree planting, for the really obvious reason that it takes 25 years for trees to grow. Therefore, you need to plant them early in order to get the emissions benefit in time for the net zero goal. We also think that about 18,000 hectares of woodland will be needed this decade, which will require a significant amount of tree planting. As I have said, we think about tree planting in Scotland both UK-wide and in the Scottish context, and that message about going early and maintaining support is still important.

When it comes to differences, it would really help if we had some of the underpinning assumptions in the CCP in this respect. We have modelled our change in agriculture—that is, livestock numbers and land use changes in general—alongside what we are saying is possible for tree planting and peatland restoration, and it is not clear to us whether the Government has made that same calculation. Is there, in effect, some double counting in the use of land that it thinks is possible in a managed context? How do you have livestock farming and crop production going on alongside peatland restoration and tree planting? We have thought about that in our own analysis, and we have also taken a completely closed-loop approach by looking at changes in consumption habits and diet and the needs of production on the land. We do not think that the Scottish Government has taken the same approach, so it would be useful to understand how it is sure about the land use piece.

Secondly, we are concerned about the funding for tree planting and nature restoration and the plan in that respect, and we are waiting for not only the fourth land use strategy but the agricultural reform programme tier 2 payments to come forward. As we noted at the beginning, tree planting rates, which had been high and successful, have dropped off since the change in the forestry grant scheme. That is a real concern, given the levels of ambition.

Bob Doris: Those points are well made.

I will make this my final question, convener—I will not come back in, because of time constraints. It was important to put all of that on the record, Emma, and it will be helpful to the committee, but I would just note that the Scottish Government's target for tree planting over the lifetime of the plan as laid out does not go beyond what the Climate Change Committee has suggested. The difference is that the modelling that it is using to assert the benefit of tree planting is, it says, more accurate and more informed than—and, again, I say this respectfully—the information available to the Climate Change Committee. The quantum of trees being planted is no greater, despite its being an alternative pathway. Will the Climate Change Committee, at any point, take a view on the Scottish Government's modelling work? I suppose that that is the substantive question.

Emma Pinchbeck: We will take a view. I see that Emily Nurse has put her finger up, so I would like to bring her in to say whether we have seen this particular modelling from officials directly.

This is similar to the issue that we have raised about peatland, for example, where the Scottish

Government has very positively invested in more detailed evidence collection about emissions from Scottish peatland and that has caused some of the difference between their pathway on peatland and ours. It is not just about having the evidence but about how it is applied in the modelling. In that case, we think it is possible that the Government applied the changes in a way that gave a benefit bigger than there should have been, even with the updated evidence. That evidence was either not out in time or was not sufficient for us to use it in our own peatland numbers. However, we will always integrate good evidence when we have it. Emily Nurse can speak about forestry.

Dr Nurse: I will say just quickly on the modelling—

The Convener: Emily, sorry—I will just say to do it briefly, please. I am conscious of timing. The clock does not stop for you, either, I am afraid—it does not stop for any of us.

Dr Nurse: The main difference in modelling is for peatland. In chapter 3 of our report, we make that correction and then our pathways are much more similar, as you can see in the report.

As for the forestry modelling, we are in discussions. We are both using a CARBINE-aligned approach, but there may well be some differences in exactly how they are used. That is a very uncertain area, so we have a continuing dialogue on it.

The Convener: Thank you, and thanks, Bob, for getting your questions in as quickly as possible. We move to questions from Kevin Stewart.

Kevin Stewart (Aberdeen Central) (SNP): Good morning. The witnesses have said this morning, and it is quite clear from the vision that the CCC has put out there, that a lot of these ambitions are based on electricity being cheaper. You said that earlier, Emma, and you said that a lot of the decisions around that issue are for us as policy makers. Well, neither the Scottish Government nor the Scottish Parliament has any say over electricity prices, so this is obviously a massive risk to take if prices do not drop.

It is also the situation at the moment that electricity prices are pegged to international gas prices. We have seen reports that there has been a 93 per cent rise in gas prices in the past 48 hours. The European benchmark has risen by 33 per cent and the UK benchmark by 30 per cent over the past day.

Is it not about time that the UK Government helped us all to gain that cheaper electricity, so that we can reach our ambitions, by removing the linkage of electricity prices and international gas prices? That question is for Emma, please.

Emma Pinchbeck: You are going to dislike this answer, but if you had asked me in my last— [*Interruption*.]

The Convener: He disliked it so much, he cut the microphone off and you had not even got there. Sorry. Just wait a moment while we get it reconnected.

Kevin Stewart: I did not cut you off. [*Laughter*.]

Emma Pinchbeck: I bet a lot of people wish that they could do that more often.

The Convener: We can hear you now.

Emma Pinchbeck: In my last job, I would have been able to talk to you about energy market design, but that is not in the scope of what the Climate Change Committee does.

Significant economic and other trade offsets that sit well outside climate are involved if changes are to be made to energy markets. However, we would say—analysis on this is in our seventh carbon budget for the whole of the UK—that exposure to fossil fuel volatility is real. If we have another price shock of the significance of the shock in 2022, though, if households have electric technologies they will be 15 times less exposed to that price shock than they would be if the technologies in people's homes continue to look like they do today. There is a significant economic risk from that volatility that we have modelled—

Kevin Stewart: Can I stop you there? You mentioned 2022. Because of what has happened over the past 72 or 96 hours, we are seeing that volatility again, with a rise in international gas prices, which our domestic electricity prices are pegged to. You are saying that there will be less volatility for those folks who rely on electricity only. I am one of those folks, and I have to be honest and say that my electricity bill has gone through the roof over that period of time.

Surely the only way that we will persuade others to move away from fossil fuels to electricity is by reducing the cost of electricity and not pinning it to international gas prices, as is currently the case. That is logical.

11:30

Emma Pinchbeck: I am conscious that we should give short answers, so perhaps I will not explain the whole thing now, but the figure that I gave applies in a net zero world to households that have a heat pump and an electric vehicle.

Due to the efficiencies of those technologies, we are confident that a household that has them will be less exposed to future fossil fuel price shocks than one that does not. That is compared to a household that has the electric heating that we

have today, and it involves action being taken to remove the levies from electricity bills. That will not happen through further energy market action, but instead through a rebalancing of how policy costs are calculated. Because of the way policy costs flow through the system, and due to the increased percentage of renewables on the system, households would be less exposed, and the economy would too.

In answer to your question, the committee has recommended that action is taken on levy reform. The UK Government did a bit of that in the budget, but the critical thing is to close the gap between electricity and gas prices, and we do not think that that was done sufficiently. Other things could be done, including the market reforms that you talked about, and I am sure that the energy sector and others are talking to the committee about those.

There are devolved powers that can be used to help people to get the benefits of clean technologies and lower bills. That might include things such as solar deployment and storage, alongside thinking about the heat pump roll-out. Those technologies help people get the benefit of cheap electricity generation at either the community level or household level, and we are considering that as we think about how we get cheap electricity.

Kevin Stewart: You pointed out earlier that Scotland is somewhat different because there are so many tenement properties. I live in one, so I am never going to have a heat pump. I am also never going to have solar panels, because nobody will agree to have them at this moment in time. And I do not drive, and never have, so I do not get the EV benefit. However, I pay huge electricity bills—as do many others.

In order for folks to move to electricity, we need cheap electricity. I recognise that you are not a policy maker, you are an adviser, and you said that the energy secretary will be listening to us—I wish the energy secretary would listen to us—but surely the Climate Change Committee must have some opinions or advice that it will give to the UK Government, which is responsible for that at this moment, to ensure that folks who cannot have heat pumps, solar or battery storage can get cheaper electricity. That will enable them to make the choice to move from gas to electricity. At the moment, somebody in my situation, in a tenement and with the bills that I have, would not move to electricity from gas.

Emma Pinchbeck: I hear that. As I said, the desire for fairness has come out of our social research. We have also looked at that quantitatively in the seventh carbon budget advice. We have made the recommendation to the Government, which is shown in the analysis for the seventh carbon budget.

We did two things in our advice to all the devolved Governments of the UK, and then specifically to Westminster, on the carbon budgets. We said that we need cheap electricity prices across the UK. That is an economic policy and a social policy as well as a carbon policy. There are multiple ways to deliver that reduction, and some of them sit well outside the mandate for what we think of as climate policy.

I spent 15 years in the energy sector, and if you had asked me to give evidence when I was in my previous job, I would have talked to you about market reforms to help economic growth, involving wholesale low electricity costs and energy costs in general. We might also have spoken about some of the markets that are under electricity market reform, retail policies and how we get lower tariffs to people in all-electric households, and the roles of regulators. However, that is all firmly outside the CCC's mandate, because it speaks to wider economic and social policy.

There are other things that Governments can do, such as providing grants and targeted support for households that are particularly vulnerable, but again, that sits in social policy and outside of climate policy.

However, in the seventh carbon budget analysis, we modelled different household types. We have been up front in showing how the impact of low-carbon policies and electricity costs will fall on different households. The analysis models 12 different household archetypes for different technology mixes and different kinds of properties. One of them is for something like your tenement building. Our model demonstrates the case that you are making, which is that you are one of the rare households that will not benefit from the transition without targeted support.

Kevin Stewart: I am not one of those rare people—

Emma Pinchbeck: In Scotland, as we noted, you make up 25 per cent of the population.

Kevin Stewart: In my constituency, it is the majority of folk, quite frankly. In energy-rich Aberdeen, we are the ones who are being screwed, which, unfortunately, has always been the case.

It may well be that the Climate Change Committee does not have the remit to look at every aspect of market reform and all the rest of it, but you are advisers to the UK and Scottish Governments and, surely, because you have talked about all the risks—change at the level of households is one of the biggest risks—those

conversations have to include a drive towards cheaper electricity.

Emma Pinchbeck: I completely agree with you. I am saying that I would contest the idea that we have not repeatedly said that to the UK Government. In all the advice that we give it, and in every select committee appearance, every media engagement, and every public engagement that we do, that remains the committee's number 1 recommendation. We have even gone as far as illustrating different ways that the price of electricity could be reduced, being careful to stay inside our mandate. We completely agree that reducing the price of electricity is essential. We have also flagged that it is particularly essential in Scotland, given the number of people who live in tenement properties, which have a different commercial arrangement and a different technology mix. Some people are already using electric heating.

We violently agree. I think that we have done our job in that we have said that to Westminster and will continue to do so. It has been disappointing that we have not had more action on that, although there has been some action in the budget and in the warm homes plan.

Kevin Stewart: I am glad that we violently agree; we got there eventually.

I will turn to another point that you covered earlier, which is about utilising the North Sea basin rather than importing resources. You talked about the counterfactuality of using domestic supply compared with importing oil and gas, and you said that that is a complicated area. I do not disagree with you on that front. You offered to brief the committee further, which we would welcome. However, the difficulty is that briefing the committee will not get the message about your reasoning on the counterfactuality out to the public.

You may say that this is not in your remit, but surely it would be wiser to utilise resource here, which is often less carbon intense, than to import liquefied natural gas from Qatar. With the current volatility, who knows whether that will even be possible in the future?

Beyond that, what are you and others looking at regarding jobs? Utilising our own resource, rather than importing, would protect jobs here, rather than in Qatar, the United States or elsewhere.

Emma Pinchbeck: I realise that some of my answers are not entirely satisfactory for the questions. The question of the North Sea and the impact on things such as jobs and the counterfactual of importing and exporting fuels versus using domestic production is much richer than the accounting framework for carbon budgets. Some of that is about economic policy and industrial decision making as much as it is about decision making on net zero.

We have looked at the extent to which Scotland's oil and gas industry matters for its domestic carbon targets. Beyond that, there is a question about the offshoring of emissions and how we ensure that we do not push industries overseas, and we looked at that when considering what advice to give on the North Sea. We also looked at jobs, and we have spoken to workers in Aberdeen about their skills and what is needed for a just transition.

In response to the jobs question, I direct you to the Just Transition Commission, which does a lot of good work on the issue in Scotland. That is its mandate, which is similar to that of the North Sea Transition Authority, and I think that the committee has spoken to Offshore Energies UK. Those bodies are tasked with looking at the North Sea with a level of complexity. We have looked at the issue to the extent that we have needed to in order to give advice on domestic emissions.

Kevin Stewart: I get all that. It is fair to say that all the members around this table have spoken to all or most of those bodies, and I get your point about your remit. However, when it comes to dealing with the public at large, you are the advisers on climate change and the ones who push Governments to meet net zero ambitions, yet you say that we should speak to all those other folk.

The public think—quite rightly—that there is a level of fragmentation and that the jigsaw has not been completed. In an age in which many climate-sceptic politicians are on the go—the number seems to be increasing—surely we owe it to the public to complete the jigsaw so that they can see exactly what is required. Do you agree?

Emma Pinchbeck: I have two quick thoughts. First, the reason why addressing the issue is not only our job is that the decline in the North Sea basin is not really the result of actions that are being taken to meet domestic net zero targets; the conversation is much more complex. You need the other bodies and the wider perspective, which comes from talking directly to those in Aberdeen communities, in order to do justice to that conversation.

On the communication point, we need to give you the information that you need in order to have good conversations with people, but we are not a body that has been set up with the resources and expertise that are needed to speak directly to the public. Alongside other statutory bodies, we aim to give you information so that you as parliamentarians can have such conversations with people. We completely agree with the recommendation that we need to do better

communication with the public, which is why better communication is a continuous recommendation to the Governments of all four nations of the UK, alongside cheap electricity prices as an enabler for everything.

As we have said to other groups in the Parliament, I am always happy to receive any information, evidence or feedback on how we present our advice—on the language that we use, its format and anything else that would make the job of communications easier. We are absolutely happy to hear about that and about what we can do to contribute to the conversation. However, we cannot be the body that directly communicates with the public.

Kevin Stewart: My point about the jigsaw was not entirely about oil and gas in the North Sea basin; it was about the overall picture, which has come up in my questions and in other folks' questions. I recognise that you are only an advisory body and cannot do the entire thing, but on the point of communication, I have recently seen you on various programmes. To a degree, the communication is fine, and I am not being critical of you, but the public need the complete picture. Frankly, they expect the Climate Change Committee to be the organisation—the neutral organisation, some would say—that provides that message.

This is my final point. You mentioned that your chair, Nigel Topping, was in Aberdeen recently. I knew about that only because he visited the hydro plant on the River Don that is run by Aberdeen Community Energy, which is an organisation that I follow quite closely. It is a pity that some of us did not know about that. Many of us, including elected politicians, might have benefited from accompanying him; people might even have indicated to him where he should visit. I will leave it at that, but perhaps you could take that away.

11:45

Emma Pinchbeck: Just for the record, we wrote to the leaders of every political party in Scotland that is represented in the Scottish Parliament and invited them to meet Nigel Topping when he was on the trip. We heard back from some but not others, and some were unable to make that work with their diary. Nigel wants to meet the party leaders, because he is a new chair and he thinks that that is appropriate.

I agree. Nigel is keen to come back to Aberdeen again. He really enjoyed his time there, so I am sure that he would meet you then.

The Convener: I always think that it is courteous—of whoever is visiting—to reach out to local elected politicians so that they can be involved. The likes of Kevin and I will never be the leaders of our parties, but it is always nice to meet people when they come into our patch.

Emma Pinchbeck: I will ensure that that is passed on to the team for next time.

The Convener: Thank you.

Emma Pinchbeck: Can I say one more thing about communication and outreach? It comes back to what was said at the beginning about being able to do more. We already do a lot with the resources that we have. For communications and stakeholder work, we have a very small team—in fact, we have no dedicated resource for that in the devolved nations. It is just what you see—us doing the media when we have a statutory report.

If there were a desire for the body to do more, to give the independent and expert view in more ways to the public, to work more with local politicians and to undertake stakeholder trips, we would fundamentally need more resources. That is the constraint on doing more, but I would be happy to talk about that.

The Convener: Thank you.

I ask Mark Ruskell for a very brief question, because I would like to have the last one, if I may.

Mark Ruskell: Thanks, convener. First, I thank Nigel Topping and his team for the meeting that we had last week.

I will go back to buildings and ask particularly about the point-of-sale regulations that the Scottish Government proposed and has now dropped. Does the CCC still support that approach, or, given the current price of electricity, do you consider that an approach in which there is in effect a trigger point for introducing those regulations that is linked to the electricity price could be another way forward?

Emma Pinchbeck: Emily, you have traditionally had strong views on point of sale. Would you like to respond?

Dr Nurse: We were really positive about the proposal when we saw it in the draft heat in buildings bill. We are not saying what the exact policies need to be, but there is a need for a combination of support at the beginning—getting the markets going, providing grants and so on—and having a longer-term plan for possible future regulation, as well as public engagement, leading by example and so on.

As Emma Pinchbeck has said, we need to look at what has happened with electricity pricing. We have had the warm homes plan, and some steps have been taken. We have not assessed that plan yet—we will be doing that in our UK progress report. However, it includes measures to bring down bills for people with heat pumps and, more

generally, through the use of solar and batteries. It is worth looking at things again through that lens—that is, considering what households can save and then building up a plan that combines short-term incentives with what will happen in the longer term.

We are not being prescriptive on what exactly needs to happen policy wise, but there needs to be a clearer plan in the short and longer terms.

The Convener: Thank you. I asked the first question, and I am afraid that you are going to get one from me at the end. This is coming to Emma Pinchbeck. Let us consider your history as CEO of Energy UK and some of your comments about costs this morning. I have spent hours poring over annex 3 to the climate change plan and, like you, I have struggled to understand what all the facts and figures mean—well, I understand some of the facts, but I certainly did not understand the figures. As you know, the committee has made it clear that it would have been helpful to see more of the workings out so that we could understand them.

I think that you suggested in response to Kevin Stewart that there are 12 different building types in Scotland. As you well know, Emma, being a CEO, if you are going to get people to sign up to a plan, they must understand what it will cost them, how it will be delivered and what they are expected to pay. I have not been able to work that out. Is it unreasonable for me to expect people, on all levels across Scotland, to be able to understand the costs of achieving the plan? If they do not know, they will not sign up to it. Am I being unreasonable?

Emma Pinchbeck: We would agree with you that having costings where the method is clear and transparent, with clear inputs and assumptions about technologies and costs, is a good thing. We publish all of our costings work and our methodologies when we issue our advice, and we try to show the costs of investment, the savings that you can expect and the overall net picture—which we can say is positive for the Scottish economy overall. We also make suggestions about likely business models and how things fall.

You have mentioned one instance where we do that: we consider how costs fall across different households. To be clear, we talk about 12 household archetypes across the UK, one of which is similar to a tenement building in Scotland. They cover all different kinds of household archetypes, and we do the same for farming, with different farming archetypes.

As well as distributed costs, we are thinking about areas of the economy where there might be a private sector-led polluter-pays mechanism or something that is public sector driven. That sort of approach means that, even when it is not our job to determine where exactly the trade-offs are, where exactly targeted support should be put in or how exactly the mechanisms should work, you at least get a sense of what you should do. I am sure that, as parliamentarians, you are looking for similar evidence when you make such decisions.

The Convener: As parliamentarians, we are looking to get people to buy into plans that we are putting forward. To my mind, they can do that only if they understand what the costs are.

Perhaps that is a good point at which to leave it. Thank you very much for the evidence that you have given us. It has been quite a long session. Yet again, I failed to keep to the timings that I had set myself, so I apologise for that, although it was not all my fault—some long and detailed answers helped.

Subordinate Legislation

Scottish Road Works Register (Prescribed Fees) Regulations 2026 (SSI 2026/52)

11:52

The Convener: We move straight to our next agenda item. Item 7 is consideration of a Scottish statutory instrument that was laid under the negative procedure, which means that it will come into force unless the Parliament agrees to a motion to annul it. I can say at this stage that no such motion has been lodged.

The regulations prescribe the fees that are payable as a condition of access to the Scottish road works register for the period from 1 April 2026 to 31 March 2027. The Delegated Powers and Law Reform Committee has made no comment on the instrument.

I am looking to see whether members have any comments. I think that this is the ninth such instrument that I have looked at, and I always struggle to understand all of it—but there we go.

Sarah Boyack: I have a question about the implementation and purpose of the regulations. Do they link to incentives to deliver joined-up road works and better-quality outcomes? Minor road works can lead to poor standards and to potholes forming not long after they have been done.

Could we ask a question about the joined-up approach being taken and about what outcome the regulations are expected to have, given the range of organisations that often change our road surfaces, which can lead to problems X years down the line?

The Convener: That is an interesting point, on which we could write to the Government when we give notification of our position. That would be useful. We have all noticed the issues that you have mentioned.

Members have no other comments to make. We are therefore making no recommendation in relation to the instrument. Do we agree to note that to the Government and to write about the specific point that Sarah Boyack mentioned—ensuring that repairs are long lasting?

Members *indicated agreement*.

The Convener: We now move into private session.

11:54

Meeting continued in private until 12:14.

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