



OFFICIAL REPORT
AITHISG OIFIGEIL

Environment, Climate Change and Land Reform Committee

Tuesday 26 January 2021

Session 5



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**ENVIRONMENT, CLIMATE CHANGE AND LAND REFORM COMMITTEE
3rd Meeting 2021, Session 5**

CONVENER

*Gillian Martin (Aberdeenshire East) (SNP)

DEPUTY CONVENER

*Finlay Carson (Galloway and West Dumfries) (Con)

COMMITTEE MEMBERS

*Claudia Beamish (South Scotland) (Lab)

*Angus MacDonald (Falkirk East) (SNP)

Mark Ruskell (Mid Scotland and Fife) (Green)

*Liz Smith (Mid Scotland and Fife) (Con)

*Stewart Stevenson (Banffshire and Buchan Coast) (SNP)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Finlay Bain Kerr (2050 Climate Group)

Dr Richard Carmichael (Imperial College London)

Jess Cowell (Stop Climate Chaos Scotland)

Patrick Harvie (Glasgow) (Green) (Committee Substitute)

Dr Rachel Howell (University of Edinburgh)

Andy Kerr (Climate-KIC)

Elizabeth Leighton (Climate Emergency Response Group)

Eilidh Mactaggart (Scottish National Investment Bank)

Professor Elisa Morgera (University of Strathclyde)

Dave Reay (Edinburgh Centre for Carbon Innovation)

Clare Reid (Scottish Council for Development and Industry)

Tom Shields (Just Transition Commission)

CLERK TO THE COMMITTEE

Lynn Tullis

LOCATION

Virtual Meeting

Scottish Parliament

Environment, Climate Change and Land Reform Committee

Tuesday 26 January 2021

[The Convener opened the meeting at 09:00]

Climate Change Plan

The Convener (Gillian Martin): Good morning and welcome to the Environment, Climate Change and Land Reform Committee's third meeting of 2021.

We have apologies from Mark Ruskell and we welcome Patrick Harvie in his place.

Our first item of business is to take evidence from three panels on the Scottish Government's updated climate change plan. I welcome the first panel: Dr Rachel Howell, lecturer in sociology and sustainable development at the University of Edinburgh; Dr Richard Carmichael, a research associate from the centre for environmental policy in the faculty of natural sciences at Imperial College London and Professor Elisa Morgera, professor of global environmental law at the University of Strathclyde.

I have a two-part, general question about your views on the updated climate change plan. First, is the draft update adequately bold in dealing with the climate and ecological crisis and getting us to net zero in accordance with Scotland's climate change targets? Secondly, does the plan facilitate systemic change and set out an achievable pathway to net zero, particularly from where we are now? There is a lot of technology to come in the future, but what can we do now?

Dr Rachel Howell (University of Edinburgh): You asked whether the draft update is bold enough. There are things in the plan that I am glad to see and that do seem bold. I welcome the commitment to reduce car kilometres driven by 20 per cent by 2030, compared to the 2019 figure. It is good to see that the target date for phasing out new petrol and diesel cars and vans has been brought forward. There are some good proposals regarding heat and energy efficiency in the section on building.

In other ways, the plan is not bold enough. I am particularly concerned about the reliance on negative emissions technologies to bridge the gap between the plans that will reduce carbon emissions—[*Inaudible.*]

That is extremely problematic. The justification for that in the executive summary is that we know

that that is important because of detailed modelling. That is not evidence that it will be possible to meet the targets for negative emissions technologies by the date that has been set. It looks to me as if scenarios have been examined and that there has been concern about the fact that the plans and policies for reducing emissions through other technologies and through behaviour change do not meet the necessary targets, so people have decided that we will need NETs.

The committee must press the Scottish Government on the evidence that it will be possible to roll out NETs at scale. For example, on page 200, we see that

"CCS is an essential part of any NETs project",

but there are no operational CCS plants and no capacity for that in the United Kingdom at the moment. CCS is also being treated as if it were a carbon-neutral technology, but capture rates are 90 per cent at most and are often less to begin with: it is not carbon-neutral.

The recent Tyndall report on CCS concludes that it is very unlikely to be significantly deployed until at least 2030. I am therefore worried that the plan suggests that NETs will account for -0.5 megatonnes of CO₂e in 2029 and -3.8 megatonnes of CO₂e in 2030, in order to meet the targets. That is wishful thinking and it is not bold enough.

I suggest that we need a plan that goes for the targets using both proven technologies and behaviour change. If the Scottish Government wanted to include views on which policies would not be necessary if negative emissions technologies came on stream, that would be fair enough. At the very least, the updated plan must include a plan B for what happens if NETs do not prove able to do what the Government wants them to do. The Government recognises in the plan that that may be the case, stating in paragraph 3.8.42 on page 209:

"If new evidence indicates that NETs are not developing at an appropriate rate ... we will reassess the scale and role of NETs in the next Climate Change Plan".

That will be too late. The Government really must include in this update a plan B for what happens if NETs do not deliver enough.

Regarding the boldness of the plan, I am concerned about why the reductions planned in the waste and transport sectors stop at 2026. On your question about the immediate future—you talked about not looking too far forwards—I wonder what is supposed to drive the immediate-term reductions in transport emissions. The emissions reduction pathway is that there are to be reductions very soon, but levelling off from 2026. However, many policies and plans are not

coming on stream now, or will not be fully operationalised for a few years. It is unclear to me which policies will drive emissions reductions in the transport sector in the very near future, and I am concerned that the graph could turn out to be the opposite of what is shown, and that it could involve high-level emissions over the next few years and then reductions when the policies come on stream.

I have examined the waste and transport sectors most closely, as they particularly involve behaviour change. I am concerned that the waste road map to 2032 runs out of road in 2025. There are no new plans or policies from 2025 onwards—there is nothing at all planned—but I think that there needs to be.

My final point on whether the plan is bold enough is that there is a missing section on diet. There are some references to food and drink, but diet will need to be addressed. There is reference to a healthy diet, which the Scottish Government supports and promotes. A healthy diet is basically the same as a sustainable diet—that is one of the best congruences that we have. There are lots of co-benefits to promoting a healthy and sustainable diet, but there is no ambition whatsoever to introduce policies and proposals to promote that healthy, sustainable diet, and I think that there needs to be.

On the question of systemic change, the updated plan does facilitate that in some ways. I am glad that the updated plan does more, compared with previous versions, to recognise the need for push factors to get people out of cars, as well as the need to encourage active travel. In the past there was a sort of assumption that people would get involved in active travel if you made it more attractive. There seems now to be a greater recognition of the need also to make it less attractive for people to be in cars, and that is good. There also seems to be systemic change through some of the proposals for electricity generation and buildings.

There needs to be longer-term thinking in some sectors, however. Systemic change must be planned for in the long term. Returning to the point about waste and running out of road, we need to know, or at least to have some idea, what will happen after 2025 in order for change to continue. For instance, it is good to see a food waste reduction target of 33 per cent, I think it is, by 2025, but we then need to have a further reduction target after that—perhaps 50 per cent by 2030.

The Convener: Thank you—that was helpful.

We move to Dr Richard Carmichael for his views on the questions that I posed.

Dr Richard Carmichael (Imperial College London): On the question of boldness, I like the

tone of the plan—in general, it sounds pretty bold. I agree that it would have been nice to see more on behaviour change with regard to diet and aviation. I like the acknowledgement of an iterative approach and learning by doing, in the sense that you can get started without feeling that you have to know everything and plan everything down to the fine detail. That is important, given that there is an urgency here.

In light of that urgency, the need to accelerate the pace of change could be brought out more. That is linked to a system-wide, co-ordinated approach with cross-sectoral content. It is good to see some thinking about cross-sector connections—especially whole-energy systems—but I would suggest another aspect to a co-ordinated approach. As well as considering a cross-sector perspective and whole-energy systems, it would be potentially valuable to think about a co-ordinated approach, not just in the sense of how energy and the different sectors interact, but in a static “This is how things work” way. How does change happen, and how do we make change grow quicker? For example, there has been quite a bit of interest in social tipping points with respect to behaviour change and system-wide change. I have been thinking about that area over the past 12 months or so; I can share a visual with the clerks at some point, if it would be of interest to the committee.

There is real potential for thinking about opportunities within the broad socio-economic systems that we are talking about to maximise the potential for positive feedback effects. You are aiming for behaviour change, and you get some of that, and it can then lead to more behavioural change through social influence effects such as social contagion and shifting norms.

That would be an extremely worthwhile opportunity to seize, but I do not see it coming through in the plan. There is some optimism there, in the sense that, if we can support those feedback loops, we can be optimistic about how much change we can feasibly expect to see in a certain timeframe. As I said, the urgency involved means that we need to look for opportunities to reinforce all the positive feedback effects that we can see in the broad system, not only among citizens/consumers for behaviour change, but then how that links with industry, and how the market feeds back off the behaviour change that has been seen. That could be better supported in certain areas. A positive feedback loop could be going on that could be supported better and with other actors.

With regard to cross-sectoral issues and the system-wide co-ordinated approach, there is another systems model that would involve thinking less about engineering and more about socio-

economic factors and how the actors can support other actors or stakeholders to increase the pace of change. That would include spotting opportunities for where policy interventions, or other interventions, could play a role in oiling the wheels of change or supporting a valuable feedback loop that could build momentum for the pace of change. Those are my main thoughts on the system-wide coherent approach.

09:15

On a related point, that approach could be expanded beyond energy systems. A good point is that transport, heat and power are merging, and will do so more in the future, but you could also think about the data landscape more explicitly.

That is clearly on the agenda for energy, but it should be considered in more detail with respect to food, for example. There is a real opportunity to collect and use better data regarding the impact of food. In some recent reports, agricultural stakeholders have been happy to recommend more of a carbon-footprint approach. I will leave it there for now, but there is a lot more to be said on behaviour change in that respect.

The Convener: My colleagues will probably dig deeper into that.

I come to Professor Morgera for her initial thoughts, and then I will bring in my colleague Liz Smith.

Professor Elisa Morgera (University of Strathclyde): I agree that some elements of the plan are bold and very promising. One example is the emphasis on the twin challenges of climate change and biodiversity, and the need for holistic approaches to both. There is a strong body of evidence from around the world that climate change responses have led to biodiversity loss as well as human rights violations. We need to be clear about the opportunities and the importance of addressing climate change through an ecosystem-based approach. That area is promising and it can deliver a lot in terms of policy coherence.

However, the plan could be bolder in thinking more holistically about environmental challenges. For instance, toxic and chemical substances are responsible for 30 per cent of biodiversity loss globally. It is critical to think across all the environmental issues and consider how they can contribute to the transition to net zero, and Scotland is well placed to do that.

Taking a more integrated approach to all the environmental elements in the various sectors will be crucial. The proposals in the plan for agriculture, for instance, are quite piecemeal and do not seem to bring the transformative approach

that is needed. There are certain elements relating to reforestation and the restoration of peatlands, but there is not an overall view of the transformation that we want in the agricultural sector in order to bring about benefits in terms of biodiversity or the right to food and a healthy diet, as well as addressing climate change. It is interesting to note that the United Nations special rapporteur on the right to food has repeatedly pushed for a transition to agroecology, which is a concept that has been discussed in Scotland previously.

That leads me to my second point. On the one hand, the plan is very promising and quite bold in emphasising that climate change is a human rights issue, but on the other hand, it could be much bolder in making human rights the driving force for transformational change from now on. Looking at Scotland's current work on human rights leadership and the incorporation of the UN Convention on the Rights of the Child, for instance, it is clear that there are other important forces that can work in parallel with, and feed into, the transition to net zero, not only in seeking a fair transition that is focused on jobs but as a force for a coherent approach with core benefits across all the sustainable development goals in Scotland.

I have some specific ideas about how human rights can be used in a practical way in the context of the plan. The emphasis that the plan places on the engagement plan that will follow is crucial, but the approach to engagement should be imbued with human rights concepts and standards. Engagement involves getting genuine participation from all relevant human rights holders—children, women, rural communities and persons with disabilities—and giving them a voice to contribute to the process of devising nuanced, fair and effective approaches to the transition to net zero.

The plan makes the fundamental, and very bold, point about the need to ensure that the benefits of that transition are shared fairly with all people in Scotland. That must become a reality, and everyone must be able to contribute to identifying the benefits that can be derived from the transition and how we can work together and play a role, as individuals and as groups, to enable Government to deliver on the plan.

My last point, from my experience and engagement as part of the national task force on human rights leadership, is on the very promising emphasis on derelict land. I have been in conversation with environmental non-governmental organisations and public bodies in Scotland, which have all seen really good practices in that area already. When the opportunities are place based and community based and have the joined-up thinking on co-benefits, that has led to excellent practices from

an environmental perspective in terms of climate change and biodiversity, and also across the board for economic, social and cultural rights. It would be really great to mainstream those good practices in the approach to the transition to net zero.

The Convener: Thank you. I notice that Dr Howell wants to come back in. However, we will hear Liz Smith's question first and perhaps Dr Howell can comment on what she wanted to add in answering that

Liz Smith (Mid Scotland and Fife) (Con): I thank everyone who has just given what is extremely helpful evidence. I am not sure whether you saw the committee session last week when we took evidence from Scottish Government officials. It is fair to say that they recognised the differences between sectors—as Professor Morgera just implied, there is diversity in agriculture, for example. They also recognised the challenges that we are facing. However, we were less successful in eliciting the reasons why there has been such varied progress in the different sectors and how we can ensure that we get better coherence. Why do you think that the challenges are so persistent when it comes to coherence and do you feel that the different sectors are provided with enough detail to let them know exactly what they should do to adhere to the plan?

Dr Howell: Part of the answer is that it is more possible to make technological advances in some sectors. There is more ability to address emissions through technology in electricity generation, for example. Demand is also important, but if we could supply the demand for energy through renewables, that problem would be solved, whereas for other sectors or other types of behaviour, the solution is—[Inaudible.]—reliant on behavioural and systemic societal changes, some of which are not yet, or are less well, understood by the public and some of which might be strongly resisted.

For example, I wanted to come back in on the previous question, because I realised that there is one very important thing that the updated plan is not bold enough about. It is one of the areas in which the challenges are really persistent, which is aviation. In the transport section, the updated plan is not bold enough about all non-road transport and aviation in particular.

On page 127, the plan recognises the Climate Change Committee's recommendation about managing demand in aviation, but the Scottish Government's response is to say that it intends to reduce

"the environmental effects of aviation growth"

and it speaks elsewhere of encouraging "sustainable growth". Personally, I think that that is an oxymoron.

The Scottish Government has heard the recommendation from the CCC, but it has responded by saying that it will not manage demand. Why not? I urge the committee to press the Government on that. In my view, that challenge is persistent because travel is one of the things that people really feel they have a right to. In surveys, it seems that members of the general public do not recognise the differential impact of certain types of activity on their carbon footprint. Many people, if we do their carbon footprint with them, are surprised by how large a proportion of their carbon footprint is—[Inaudible.] I suspect that in many cases the issue is awareness; in others, it might be motivated reasoning, when people have a reason not to take note of how big an impact their behaviour has, because they do not want to have to accept that.

Despite the rise in budget airlines and the perception that that means that everyone can fly, the vast majority of flights are still taken by people in higher socioeconomic groups. The problem of aviation is very much one of a significant proportion of emissions being generated by very well-off frequent flyers, who perhaps have more clout when it comes to their potential to resist policy.

That is one area in which we have been handed a tremendous opportunity by the pandemic, terrible though it has been. Encouraging behavioural change in relation to aviation will be one of the most difficult things, but demand has been managed downwards for the Government by the pandemic. I urge the Government to seize that opportunity to rethink that part of the plan and rethink a green recovery, which does not depend on trying to build up the aviation sector to what it was—and indeed beyond that, with further growth—so that we move towards a just transition and away from relying on aviation.

We have seen during the pandemic that it is possible for at least some business to be carried out online. I have done some research with a consultancy, for the Scottish Government and via ClimateXChange, on employers' experiences and views, and we found that many employers said that it is possible for at least part of their core business to be done online. Therefore, the challenges might not be as persistent as we think that they are. However, if the Government does not seize the opportunity at a time when we are able to recognise that they can be overcome, those challenges will re-emerge.

Is enough detail provided for sectors? I would say no. However, the plan references a lot of other documents. For example, in the chapter on the

transport sector, I cannot see the policies and proposals that will enable us to achieve reductions soon, but I know that there is a national transport strategy, which I confess I have not had the time to read in preparation for this meeting, so perhaps there is more detail there.

On the detail, I want to make the point that, in the table at the end of the document and in the graphs on the emissions pathway in each section, we have figures for the sector as a whole but no figures for what each policy and plan will contribute. That is what we need to see. The Government obviously needs those figures, so that it can see whether its policies and plans are working, and it would be useful for the public to have those figures, so that we can do that analysis, too.

Dr Carmichael: As I was looking at the plan, I reflected on whether there is enough detail on the sectors. I wanted to see more concrete examples, which could go quite a long way towards bringing the plan to life and demonstrating feasibility. That is perhaps tricky in a document that is setting out a broad ambition. However, I like to think about and work on the concrete interventions that will deliver the ambition. We need more detail on the how.

09:30

On why coherence is so tricky, sometimes the market is not set up to provide the innovation that is required and there are not sufficient incentives for stakeholders to step up and fix what is missing in the system. For example, as the committee is probably aware, smart energy tariffs are not currently on price comparison websites, which is what a lot of people use to switch tariffs. That issue was not being fixed by the market, so it is good that the Department for Business, Energy and Industrial Strategy has stepped in with a project to allow smart tariffs to be incorporated in digital comparison tools such as price comparison websites. Not spotting such instances in which no one is doing what needs to be done to ease a bottleneck or move things forward is one reason why there is not as much coherence as there could be.

Another example in the same area, which I have worked on, relates to smart metering, smart tariffs, electric vehicles and heat pumps. To a large degree, work on those issues is done in silos. There are targets for the number of smart meters and for the number of time-of-use tariffs that are adopted. However, if we put those parts together, there is an opportunity that they all become more attractive. The data side of things should be layered on top of that. On price comparison sites, for example, those things would not necessarily come together naturally. Guidance needs to be given through policy and regulation by

Government to bring those elements together and present them as a much more interesting and holistic proposition. When the benefits of smart tariffs, renewables and saving money are better communicated, that gives people a reason to get a smart meter that they might not have appreciated fully. If someone wants to get an electric vehicle, it should be communicated that there are savings to be made through smart tariffs but that a smart meter is needed, so the three things are connected.

As I said, that needs to be combined with the data landscape and consumer engagement, which is—

The Convener: I am going to stop you there, because you are straying into reserved issues relating to the UK Government. We are keen to look at what Scotland can do.

I am very conscious that time is ticking away from us. I allowed the witnesses to give full answers at the start of the session, so I wonder whether they could now be more succinct, in the interests of time.

I will bring in Professor Morgera.

Professor Morgera: I will try to do that.

I have two points of reflection. The problem with sectors is that they are sectors—they operate and think about themselves in isolation. They look at issues in self-referential terms as opposed to looking at their role in the broader system and at how changes in a sector can bring systemic co-benefits. Changes in agriculture that contribute to biodiversity and reduce toxics have huge quantifiable benefits for everybody's human right to health. That is an area in which there are clear public savings and benefits. The Government should discuss with the sectors the system-wide co-benefits, because that is one change that could lead to a different pace in progress.

How can that be done? It is, in part, about sectors and public authorities working together and thinking about monitoring as a learning process, which I think is mentioned in the plan. We should share good practice and data. For example, the implications of medical data on children's health are very different from those on adult health.

My second point goes back to what I said about human rights and participation. Different systems and sectors are more or less accountable to the broader public. Those systems and sectors tend to respond to certain parts of society, but they might not see themselves, or be seen, as responsible for the changes to broader society. Engagement with children, persons with disabilities and other human rights holders such as women and people in rural communities can bring two potentially

transformative elements to the discussion within sectors.

First, it brings in different systems of knowledge, and that contributes to a systemic understanding of what the options and implications are as well as resulting in more nuanced and thought-through approaches that can help us to avoid unforeseen negative impacts. Secondly, some rights holders are widely recognised as agents for change. I understand that public bodies that have already engaged with children as part of the process of incorporating the United Nations Convention on the Rights of the Child have found themselves energised and full of ideas about how to step up their efforts in their sectors.

The Convener: Stewart Stevenson has questions about leadership, climate literacy and individual behaviour change.

Stewart Stevenson (Banffshire and Buchan Coast) (SNP): As a mathematician, I note that we have used 60 per cent of the time to answer 14 per cent of the questions. I will therefore direct each of my questions at a single panel member—I have three, so you will each get one. I am looking for an answer of no more than 180 words or, in other words, 90 seconds, because that is the only way this will work. Right—that is the whip cracked.

I will direct my first question to Rachel Howell and in particular to the sociology part of her academic expertise. How will we make the asks that are inevitably articulated by politicians and experts—and, in the current Covid environment, by clinicians—relate to what people see as something that they can actually do? An awful lot of people are talking about “they” and not very many people are talking about “I”. How do we bridge that gap in sociological terms? I ask for a crisp, sharp and focused answer, please.

Dr Howell: We need to relate the asks to what people care about. There will definitely be something that somebody cares about that will be impacted by climate change, and we just need to make those connections.

We also need to think about social norms, which were mentioned earlier. A lot of our behaviour is driven by norms, but that is underrecognised. People think that they are not impacted by norms but, actually, norms have a strong influence on our behaviour. Therefore, if we can change norms and, in particular, simply let people know about changing norms, that helps a lot. It makes people think that something is normal and usual and that they want to do it.

For example, in relation to diet, the number of people who are vegetarian and vegan is tiny, but that does not matter. Survey research shows that, back in 2017, for example, about 39 per cent of evening meals did not include meat. If you let

people know about that, they start seeing it as not weird, as something that they could try and as more normal.

We need to find out what people care about and then show them how that will be affected by climate change. We see that through the fact that so many people are now getting involved because of concern about the future for their children and grandchildren.

Stewart Stevenson: Thank you very much—well done.

I will direct my second question to Richard Carmichael. It is about the implementation of policies and public administration as well as individual members of the public. To pick up the point that Rachel Howell made about what people care about, we know that, if people use their cars less, they will have more money in their wallets, but how many people twig that? Of course, people grossly underestimate how much it costs them to run a car. I am well aware of that because I now spend about £1,500 a year less on car travel—in an adjusted amount of money—than I did 20 years ago. I also spend an awful lot less on aviation. How do we get people to identify and implement changes in their personal lives that will make a difference? How do we change behaviours and give people a benefit in doing so?

Dr Carmichael: I agree with everything that Dr Howell said. On how we show people the benefits, I have already mentioned the smarter tariffs—smarter comparisons project. That confronts the issue head-on, in that it shows people the co-benefit of how much money they will save if they switch tariffs and links that with buying an EV, which is a step forward from previous tariff switching—[*Inaudible.*] That is a good example of how something that is fiendishly complicated can be dealt with; we would not be able to work things out for a flat-rate tariff never mind a smart-rate tariff. It can also show the financial savings that could be made by having an EV and an EV tariff put together. That is the sort of co-benefit that is very motivating and which requires heavy number crunching by such digital tools.

I am very interested in using smart meter data to give personalised financial savings and using the same sort of approach to show people what changing diets would mean for their carbon footprint benefits and potentially their nutrition benefits. There is a good opportunity for diet change to be nutritious and for that and the carbon information to reinforce each other. That heads towards better labelling and collecting better data. Personalised—[*Inaudible.*]—for that is possible, as well. That would require support for reporting the necessary data as well as collecting it.

We are talking about how to explain the benefits to people. As we know, there is already willingness. If there is willingness, we should go with it and, once behaviour change has been achieved, we should leverage that. As Rachel Howell said, we should show that people are changing. That is an example of supporting a feedback mechanism. If people can see other people doing something and that becomes more normal, the snowball will pick up pace and gather momentum. People are already motivated. They want to save carbon and money, and they want to get healthier. There is already something to work with as well as thinking about how people can be persuaded. People are already persuaded. If we lower the barriers and make things easier, we can leverage what has been done.

Stewart Stevenson: My question for Professor Elisa Morgera picks up on the infrastructure point that we have heard a bit about. It seems that, if members of the public see money being spent on particular infrastructure, they will take that as an endorsement of their right to use it. To use a simple example, if a new road is built, people will think that they are being encouraged to use it. How well will the plan lead people to new behaviours through the expenditure that they will see in their communities and at the national level? Will it lead them back to old and unhelpful behaviours?

Professor Morgera: That is a really interesting question that leads back to what colleagues have already said. Being explicit about the motivations for investment, detailing the expected benefits, asking people what benefits they need and expect, and showing, in the justification for investment, responsiveness and understanding of the benefits that different groups have identified for themselves will clarify individual responsibilities and expectations. It is really about both.

More evidence about benefits that people might not be aware of can be shared—the relation to human health, for instance, is essential—and people, including the holders of different human rights, can be asked what benefits they want without expecting them just to passively receive our understanding of the benefits. We should be responsive to their needs. How the Government has been able to balance those self-identified needs with the ones that are systemic can then be shown, which is highly motivating. In participating in the process of elaborating the justification for investments, people will have a stake in that process and will see their contribution recognised. That very much feeds into the willingness that already exists.

From all my conversations on human rights leadership, I can confirm that although children and persons with disabilities are willing to

contribute to climate change measures in Scotland, they do not feel that they have enough voice to suggest solutions and benefits that Government work might not yet have captured—or, indeed, a clear structure in which to do so.

09:45

Finlay Carson (Galloway and West Dumfries) (Con): I want to consider the question of promoting and embedding positive action. Does the updated climate change plan go far enough in reflecting on opportunities that the lockdown has created for positive behaviours? I am thinking of working from home, less travel and so on. How can we mitigate the potential for us to bounce back to where we were, and not to make improvements?

I will put my questions together to speed things up. Part of the solution might be in the reduction of demand for travel—not just for air travel, about which we have already heard, but for other types of travel too.

Politically sensitive issues also exist: we are divided on the contentious issue of red meat consumption, for example. How can we adapt behaviour around those issues and find a way through the conundrum of locking in behaviour in areas of political sensitivity?

Dr Carmichael: On bouncing back, you mentioned the obvious candidate, which is working from home. Aviation is another, and I agree with Dr Howell's earlier comments on the matter. There are understandable reasons why people are reluctant to bash aviation right now, but we have one of the clearest opportunities to think about not wanting things to bounce back to business-as-usual in the aviation space.

Despite the state of the industry—[Inaudible.]—think about tackling aviation, because, among other things, it is a high-emitting activity. As Dr Howell mentioned, the amount of flying that goes on is extremely unevenly distributed.

With regards to political sensitivity, a targeted policy that considered the provision of strong price signals against frequent flying, for example, would not necessarily upset a lot of the public. Research has shown that that approach is actually popular, because most people would not be affected by such a policy—more than 50 per cent of people do not fly in a given year. When you consider frequent flying and the fact that 15 per cent of the population take about 70 per cent of the flights, you can see that the issue is not as tricky or politically sensitive as you might sometimes think.

I do not know much about working from home, but there is a good opportunity there, and there are good tools that allow people to do so. The

localism that comes through in the draft is a good sign that people will be able to get the social interactions that they want locally. However, something could probably be done about management culture and whether people feel that they have permission to work from home.

On the meat question, there is again a good opportunity for the issue to be less tricky for Scottish producers. I go back to the idea of collecting producer-specific data on the carbon footprint of the produce that comes out. Consumers want better labelling on nutrition and carbon footprinting. If we collect that data and go down the labelling route—Scotland could perhaps look into that independently—there should be an upside for local producers of meat in Scotland, with regard to their competitiveness with imported meat on the carbon footprints vectors. The issue will not necessarily be divisive among stakeholders: labelling is the route to go to take heat out of the topic and provide a potential upside for everyone.

Finlay Carson: Thank you. I would like to hear from Elisa Morgera now.

Professor Morgera: It was a great question, but I think that we should turn it around. Studies on leadership show that people react well to why they are being asked to do something as opposed to what they are being asked to do. There are two crucial whys that everybody has learned from the experience of the pandemic. The first is the fact that everybody's mental and physical health is dependent on contact with nature. We have all experienced that in different ways, and some people have experienced high degrees of discrimination and negative impacts in that respect. What we have learned about that has never been as clear for humanity.

The second thing that we have learned is that the causes of the pandemic that have brought all of us to experience such hardship are environmental. Biodiversity loss, wildlife trade and climate change have all contributed to the exacerbation of diseases and their transmission. At the outset, the key motivations for us are to understand what we have learned and why we should not do the things that we are doing, which have led to the current situation. That is crucial in enabling people to understand that what might seem like sacrifices are actually huge investments in our wellbeing.

Dr Howell: I will focus on just one area—transport—so that I can give a short answer.

I welcome the mention of plans to work with local authorities to make the reallocation of road space for active travel permanent, where appropriate, and further measures regarding, for example, bus prioritisation and parking

restrictions. However, I do not think that the plan goes far enough in building on the pandemic situation.

I have already mentioned aviation, so I will not—*[Inaudible.]* The independent review of the cleaner air for Scotland strategy recommended that trunk road expansion should end. That has been ignored, although it would have tremendous benefits in reducing air pollution. Building trunk roads is an example of the kind of policy that Stewart Stevenson alluded to. If roads are built, that gives a signal to people to use roads, so if new roads are built, we see more traffic on the roads.

During lockdown, people really appreciated the fact that there was less air pollution, the air seemed clearer, the roads were safer and so on. There was a very obvious change. That is one area where it would be possible to adopt what might seem a bold policy, but which is a very necessary policy—to end trunk road expansion. I think that that might be more popular than people would expect, as long as alternatives are made easier and more normal.

The Deputy Convener (Finlay Carson): Unfortunately, our convener has dropped out because of connection problems, so I will take over her role for the time being.

We will move straight on to Claudia Beamish, who has some questions on the just transition and a green recovery.

Claudia Beamish (South Scotland) (Lab): My questions follow on seamlessly—I hope—from the questions about behaviour change. The witnesses will all be aware that the just transition commission has given advice on a green recovery. Among the issues that it has highlighted are the need for a sense of direction and for conditions to be attached to funding. It also said that skills development needs to be aligned with the transition to net zero, which the committee thinks is important.

Please comment if you want to, but do not feel that you must, if you think that it would not be useful. We have discussed frequent flyers and consumers of flights, but we have not talked about the implications for workers in the aviation industry. Communities will be affected, too.

I invite the witnesses to explore the transition, starting with Elisa Morgera.

Professor Morgera: One opportunity for transformation that has not yet been used is the requirement for impact assessments, which already exists in the Scottish legal system. Those are usually treated as box-ticking exercises, but they can be genuinely transformative chances to understand what the impacts and the opportunities

are for different groups. The point about communities is crucial; there might be opportunities to work more coherently and on better-integrated assessments in order to understand the effects and potential benefits of different solutions.

If we use the existing impact assessment tools for island communities, for equalities, for children and for the environment, that will create opportunities for dialogue. We could talk about the options and benefits and about any other ideas that communities and workers—who might be facing great sacrifices—might have. That would be one way to go about things. It must be done in context and systematically, and it must give people a real chance to participate in co-development of solutions. That is how a transition can be just and inclusive.

Dr Howell: The setting up of the just transition commission is a good step forward. In the “Just Transition Commission Interim Report” and “Just Transition Commission: advice on a green recovery”, the commission made several detailed and specific recommendations, including on the creation of a large-scale fossil-fuel decommissioning programme. It is not clear in the draft climate change plan whether the Scottish Government intends to act on those recommendations.

There is a lot of good talk in the plan about a just transition; it is good that the plan recognises that that is necessary. However, from the reference—[*Inaudible.*]

—but the Government gives no detailed analysis in the plan of the impact of those policies. The commission called for that and it is necessary.

When I suggest that the Government should seize the moment to act on aviation, I am, however, also concerned about the jobs of the people involved. I am not cavalier about the fact that there will be job losses. We need analysis of how many jobs will go, what sorts of jobs they will be and what retraining might be required. There might be a need for retraining in some cases, but not in others; there are jobs in the aviation industry—such as admin and hospitality jobs—that are similar to jobs elsewhere.

There must be an analysis of the policies that we have suggested should be added and of those that are already detailed in the plan—analysis of the impact that the policies will have on jobs and of what training or new jobs can sensibly be suggested for the people who will lose their jobs.

This is not about taking people’s jobs away from them; the jobs will eventually be lost anyway, in many cases. We have seen that in the oil and gas industry, where there is currently an unplanned transition and people are losing their jobs because

of the fall in prices. It is important, therefore, to ensure a planned and fair transition.

Dr Carmichael: On the just transition and jobs, any opportunity for co-development or to develop an inclusive plan for communities that are affected by the transition will be a good thing. It is important that people believe that green jobs will come to replace the ones that we will move away from. That matters nationally and at community level.

It would be interesting to collect evidence of the green jobs that are created as we progress. We could set up a tracker that monitors all kinds of co-benefits, including the jobs that are created. That could be a good set of data to share with people as a way of demonstrating that jobs have been created—rather than their just being lost—and that communities have transitioned in a planned way. I am not sure whether that will be completely captured in the monitoring framework.

10:00

The Convener: Claudia, have you finished your questions?

Claudia Beamish: Yes. That was very helpful.

The Convener: I apologise for the technical glitch; my connection dropped for a bit. I thank Finlay Carson for holding the fort. We come to questions from Angus MacDonald.

Angus MacDonald (Falkirk East) (SNP): Thank you, convener.

Professor Morgera has covered the human rights-based approach well throughout the evidence session. Witnesses will be aware that, in its report on the green recovery, the committee recommended that

“the Scottish Government further embed a human rights based approach to recovery, underpinned by the key principles of participation, accountability, non-discrimination, empowerment and law.”

In evidence to our inquiry, the Scottish Human Rights Commission considered that exclusively recognising human rights and Scotland’s human rights obligations, especially the right to a healthy environment, are relevant to a green recovery. The right to a healthy environment is clearly linked to other rights, including the rights to adequate standards of living, housing and health, and to democratic participation.

As I said, Professor Morgera covered the issue well in her opening remarks, but I am keen to hear from the witnesses on that, because although the draft climate change plan update recognises that climate change is a human rights issue, it does not explicitly explain what that looks like in practice. How can an approach that is based on human rights be practically implemented? Does the draft

CCP update set out the key elements for its implementation?

Professor Morgera: The draft plan refers to climate change as a human rights issue, but it misses a big opportunity to make human rights, in the context of the plan, a key driver of transformation, by recognising that human rights, and engaging with human rights holders, can be a key practical way to engage, to leverage willingness and to co-build practical solutions and create alliances of willing contributors in society beyond Government.

I also agree that it will be helpful to pinpoint in the plan where human rights come into play. For example, where we are looking at a human rights issue, such as human health—human health is mentioned several times, but there is no mention of the human right to health and its benefits—the human right to food, the rights of children, persons with disabilities and rural and island communities. Being explicit about where the plan supports human rights will bring more alliances and give the clear sense that human rights can and will be used by the Scottish Government as a transformative and practical tool.

The second aspect, which is very practical, is what a human rights approach would mean, with regard both to the process and to thinking about genuine participation of all human rights holders. That means providing relevant information to them and listening to the information and the knowledge that they bring, and thinking about, for example, child-friendly and formalised opportunities for children, persons with disabilities and others to exercise their political rights in the process. That is one way in which non-discrimination can be achieved. We need to be practical about what will be put in place in order for the engagement plan to be a real dialogue for change and for building partnerships. Human rights provide very practical tools and examples for that.

The other aspect is the substance—how the plan will deliver on that. As a minimum, it must be about what we will do to avoid foreseeable negative impacts on human rights that might arise from the transition. Ideally, however, it should also be proactive by identifying all the co-benefits for all the human rights that depend on a healthy environment. The more explicit we are, the more joined-up thinking can happen and the more everyday accountability across sectors will be in the spotlight.

There is also work to do on engaging the private sector on its responsibility to respect human rights and to see its role as having very specific impacts on everyone's human rights.

The Convener: Does Doctor Howell have anything to add?

Dr Howell: No, thank you. I am happy with that.

The Convener: I will give Dr Carmichael a chance to add anything, if he wishes to, although this is really Professor Morgera's patch. If you have comments, it would be best to make them now.

Dr Carmichael: I will add a quick comment, although this is not my area. Professor Morgera mentioned co-benefits. It would be interesting to think a bit more about the data that could demonstrate, for example, the health benefits or the costs of air quality and how those will impact on people in the future. If we had a stronger data set, and the data were better disseminated, we could use it not only to talk about co-benefits in general but to illustrate the narratives on intergenerational justice issues. It is always best if there is data to demonstrate consequences—especially for younger generations.

Angus MacDonald: I am conscious of the time, so I will ask only a brief supplementary question.

What more does Professor Morgera think could be done to realise economic, social and cultural rights? For example, should there be resourced and time-bound specific policies with measurable outcomes?

Professor Morgera: Those are always tricky balancing exercises. A commitment to considering and clearly identifying the considerations that should be in different parts of the plan would be a strong signal, but I hesitate to say whether we should have more quantified or clearer targets.

For example, we should make a clear commitment to respect the human right to housing, including accessible housing, as a consideration that should be clearly discussed in participatory processes and in co-development of systemic changes in that sector.

Consideration of all the human rights that depend on, say, ocean use change, as opposed to looking at isolated examples of offshore renewables development, would be another clear signal that we support such joined-up thinking, and would open up the subject to debate and co-developmental solutions. It is crucial that, at every step of the way, we point out the considerations that relate to human rights. Other examples are planning considerations on use of plastics and on travel restrictions, which should take into account the impacts on persons with disabilities.

We need to highlight such notions so that public debate and co-developmental solutions can happen. However, it is hard to set those as priorities without engaging with rights holders and learning from them what really matters to them and what solutions they can bring to the table.

Angus MacDonald: Does Dr Howell have a view on that?

Dr Howell: I have nothing to add.

The Convener: We have come to the end of our first evidence session. I thank our witnesses for their helpful evidence, which has given the committee an awful lot to think about and to dig into, as we speak to other witnesses over the next few weeks.

I suspend the meeting for a minute or so to allow for a change of witnesses, after which we will be back to hear from our second panel.

10:08

Meeting suspended.

10:10

On resuming—

The Convener: On our second panel, we have Eilidh Mactaggart, chief executive officer of the Scottish National Investment Bank; Andy Kerr, director for UK and Ireland of Climate-KIC; Clare Reid, policy and public affairs director with the Scottish Council for Development and Industry; and Tom Shields, member of the just transition commission.

I am not sure whether you heard the evidence that we had from the first panel, but I started that session off by asking the same questions that I will ask you. Is the climate change plan update as bold as it should be? Are there clearly indicated pathways to get to our net zero goals and, within those, our interim targets? I am asking not just about things that might happen in future, but things that can happen from this point in time using available technologies and the pathways and policy decisions that have been outlined. I will go round everyone to get their views. I will then come on to my colleagues to dig into the detail of that.

Tom Shields (Just Transition Commission): Good morning. Can everyone hear me?

The Convener: Yes, we can hear you perfectly.

Tom Shields: I think that it is a bold plan. There are challenging targets in it, and it recognises a number of very significant challenges in areas such as transport. The need for cultural change is brought through strongly, as is the need for investment. I am particularly interested that the need for private investment as well as money from the public purse has been well recognised. It is a challenging plan.

On just transition, the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 requires three elements of future climate

change plans. The first is that the principles of just transition should be embedded throughout the plans. I think that the current update to the plan takes that a step forward, and I am pleased that many of the recommendations of the just transition commission have been embedded in the plan—that is good.

The second requirement in the act is to

“explain how the proposals and policies set out in the plan are expected to affect different sectors of the Scottish economy and different regions in Scotland, including how they are expected to affect employment in those sectors and regions”.

The third requirement is that plans should

“set out ... proposals and policies for supporting the workforce, employers and communities”.

I do not think that the plan really meets the last two of those three requirements, which are the requirement to analyse and provide a clear assessment of the impacts on people and employment, and the requirement to give an explanation of the policies that the Government will enact to manage those impacts so that there is a just transition.

Therefore, there is more work to be done, but the update is a good step forward.

The Deputy Convener: Thank you. You might have noticed that, unfortunately, we have again lost our convener. I ask Andy Kerr to answer the same question.

10:15

Andy Kerr (Climate-KIC): I agree with Tom Shields. I welcome the strong ambition and some of the high-level statements in the plan. I think that it is adequately bold.

In terms of whether the plan facilitates system change and sets a pathway, I think that there has been a material change in the language and the approach in the plan in comparison with previous plans. It explicitly talks about being iterative—it is about learning by doing. It is about being collaborative—about working with local authorities and business groups. It also talks about the need to lever in private investment, which is incredibly important, because we need to get away from the notion that, if the Government throws a few pots of money at the problem and pulls a few policy levers, we will magically get a transformation. The update contains a strong recognition of the scale of the transformation that we need and how we might go about achieving it.

When we dig into the detail, we see that there are bits missing, as Tom Shields said. It is a work in progress, and a number of policy documents are coming out now that start to fill in those details.

However, as a headline statement on green recovery topics, on multiyear funding commitments, on investment frameworks and on some of the high-level policy asks or aims, particularly around homes and transport, the plan is very good. There are challenges, but we will pick those up in later—[*Inaudible*].

The Deputy Convener: Thank you. We move on to Claire Reid.

Clare Reid (Scottish Council for Development and Industry): Good morning, and thank you for inviting us to the meeting. I echo comments that have been made by other participants. We very much welcome the plan. It reflects many of the asks that SCDI made last year in our report on a green recovery.

As others have highlighted, there might be areas where the plan could be strengthened. It could have a greater emphasis on reversing biodiversity loss. Our natural capital is one of our greatest assets, and our “Manifesto for Clean Growth” called on the Scottish Government to set nature targets that would align with our climate targets. That is one area where we would like to see more commitment.

As others have highlighted, the ambition is there and the update sets clear targets, but delivery and implementation will be key. There are some areas that we would highlight. In terms of planning, national planning framework 4 will need to be fully aligned with climate and biodiversity targets. Ways to accelerate delivery of some of the ambitions—around net zero developments, for example—will also need to be set out.

Zoning and transport have been touched on. We welcome the proposals to bring forward a ban on new petrol and diesel cars and to reduce the number of car journeys, for example, but we would like to see more about how those are to be achieved. With regard to the work that was done in the spaces for people programme, we would like to see efforts to make those changes more permanent. Also, as touched on by the earlier panel, we should ensure that we invest in the alternative modes of transport that will allow households to more easily choose not to use cars for journeys.

Those are two areas that I would mention initially, but we very much welcome the overall ambition of the plan.

The Deputy Convener: Thank you. Finally on question 1, we move to Eilidh Mactaggart. [*Interruption*.]

We cannot hear Eilidh. While her sound gets sorted out, we will move to Liz Smith for questions on sectoral envelopes.

Liz Smith: My questions are related to some of the evidence that the committee heard last week and build on responses that we received from the first panel this morning. Is it the witnesses’ impression that the different sectors that are involved in the climate change plan recognise exactly what they have to do in order to meet the ambitious targets that have been set?

I am not sure who would like to answer that.

The Deputy Convener: We will start with Andy Kerr.

Andy Kerr: Thank you. When we dig into the plan, there is a sense that the extent to which different sectors have taken on board whole-system thinking is pretty variable. In the buildings space, people have really had a go at making those links, but the picture is much less strong in agriculture. It is always difficult. Many of us having been pushing the Scottish Government to look at the issue in a whole-system way, but it is difficult then to turn around and port in individual sectors.

For example, if we think about what agriculture needs to do over the next few years, we cannot get away from issues around market access, post-Brexit issues and where the opportunities are in the bio-economy. However, that also plays into the circular economy, which is barely noted. The plan barely makes reference to the opportunities around things such as wood for construction.

There are real challenges within individual sectors but, to be fair, it is difficult to make something that is whole system and then look at the individual sectors and ask why they are not making links across the piece—and they all have those links.

Much can be done to improve the plan over the next wee while by pushing those questions about the linkages between land use and negative emissions technologies, or between the circular economy, land use and the bio-economy and so on. In place making, which is the work that I am heavily involved in, we are asking how we can create and shape spaces in cities, towns and villages so that they end up supporting thriving businesses and great local communities. Those connections are touched on, in better or worse forms, in different parts of the document, but the approach is not consistent across the piece.

Tom Shields: I agree with much of what Andy Kerr said. When we get into the detail of the plan we see quite a difference between the sectors, and agriculture is perhaps the sector where the plan is lightest in terms of giving a clear picture of the pathway to follow to meet the ambition. There is also quite a difference in the challenge for different sectors. In transport, for example, the challenge is very high because of the need for cultural change.

The Deputy Convener: Thank you. I hope that we now have Eilidh Mactaggart.

Eilidh Mactaggart (Scottish National Investment Bank): Hi there. Can you hear me?

The Deputy Convener: That is better.

Eilidh Mactaggart: Excellent. I had to drop the connection and come back in, so could the question be repeated?

Liz Smith: In last week's evidence session with Scottish Government officials and in the session with our first panel this morning, we heard some concern that sectors are moving at very different pace. I asked whether those who are implementing the climate change plan in different sectors feel that they have enough detail and information on exactly how they will achieve its ambition.

Eilidh Mactaggart: We have sufficient detail to get started. We know the direction of travel—that is very clear—and the plan's ambition on where we want to get to and when. The plan aligns very closely with missions that have been set up for the bank. The climate initiative is our primary mission; it is somewhat omnipresent across our other missions as well. I cannot see that we would get involved in investing in place making without taking the climate change elements into consideration. For example, when my team hears of a development opportunity with a 20-minute or active travel commute, as opposed to longer commutes by car, our ears prick up with interest at the multi-aligned opportunities to invest.

I believe that we have enough to get started. Such things will always unfold and cannot be predicted, but we will seek to invest to support the delivery of the plan and crowd in private capital. Earlier, when the committee could not hear me, I was trying to say that the private capital that the plan needs is keen to invest. I hope that the bank can help to cornerstone and bring in that investment to help deliver the plan.

Liz Smith: Thank you.

The Deputy Convener: Does Clare Reid want to comment?

Clare Reid: We would agree that the plan is definitely the highest item on the agenda for all our members, and certainly for those who engaged in our research. What is needed probably varies from sector to sector. Some of that is in industry's sights and people are getting on with it, but there are sectors that perhaps require further support and signals from the Government through the plan. For example, the electricity sector probably has quite a credible pathway to get to net zero carbon, but perhaps more clarity is required about how it can also achieve the jobs and local content that are the plan's ambition.

We strongly support carbon capture and storage as one of the actions that will be required to achieve net zero carbon emissions from industry. We have also highlighted that there is support in relation to travel, but that more investment is possibly required, particularly to support active travel.

I concur with the earlier point about agriculture and land use. There is a willingness to change, but agriculture may not have been as engaged as other sectors. We called for two things in our "Manifesto for Clean Growth". The first is a new system of farm payments that protects biodiversity and supports innovative food production. The second is a national scrappage scheme to help farmers and crofters fund purchases of new low-carbon equipment and machinery.

We certainly think that there are lot of credible paths but that different sectors have different needs when it comes to helping them get to where they need to be.

The Deputy Convener: We move to questions from Claudia Beamish.

Claudia Beamish: Some of this has been covered already, but I have a question for you all on the sectoral envelopes and the balance of ambition and effort. The nature of the outcomes that are described in the draft plan vary significantly, as we have already discussed. Some are specific, but others are not. Does the draft plan provide a sufficient indication of the relative significance of the policy outcomes in achieving the emissions reduction targets, particularly in the early stages, which are obviously so important?

Andy Kerr: I will separate out two things. First, I am quite comfortable with the process of using the TIMES model and then applying expert budget factors, rather than simply trying to take data direct from the TIMES model. I have an issue, though, with the attempt to protect industry and agriculture. I do not have an issue with trying to protect industry, given that it is competing directly across Europe-wide markets and, in practice, we always had that slight oddity with things such as the European emissions trading scheme before we left the European Union. That approach to industry is fair enough, but I do not understand the attempt to protect agriculture in the same way. Some of the sectoral envelopes look a little skewed because of that. I also echo what Rachel Howell and a couple of others flagged up in the earlier evidence session about the curious aspect of transport somehow reducing rapidly and then just stopping in 2025 or 2026 and not doing anything else.

There are some issues around that, but the key one is whether we are getting things going rapidly now. That leads to the question whether we are front-loading public investment and leveraging in

private investment to make changes now that will play out through the 2020s. Asking that question is key, rather than worrying about whether the modelling and expert judgment regarding the end of the 2020s and the beginning of the 2030s is right.

10:30

Claudia Beamish: I would like to explore those aspects of industry a bit further. You talked about how protecting industry is key to the plan, but does putting in that level of protection hamper new and innovative ways forward, such as green manufacturing and the circular economy?

Andy Kerr: That is a very good question. It will depend on the specific industry and the particular processes. One thing that we are seeing with work across Europe on things such as the circular economy and the bioeconomy is an attempt to shorten value chains, so that we retain investment and jobs locally, rather than operate on global supply chains. There is an opportunity to push very hard.

I come back to agriculture and the bioeconomy in that regard, but the opportunity exists equally in other parts of our industrial base, where a lot of up-front innovation, new business development and process development will support and help to deliver local investment and jobs, as well as movement towards net zero.

It depends, very specifically, on which industry and which bit of the industrial sector we are talking about. Where industries are open to wider European and global competition, moving in lockstep with the wider European piece makes sense, but the plan does not always capture the real opportunities for innovation, up-front investment and completely rethinking how we develop products and services.

Claudia Beamish: That is helpful.

Tom Shields: I would agree that there is a justification for some protection for the industrial sector because of the serious risk of carbon leakage. Most of the large manufacturing industry in Scotland is in the hands of large multinational companies that have multinational locations. If we move very fast, the likelihood is that we will lose gross domestic product and jobs will go elsewhere. We will still import products and manufacturing will take place in places where the ambition on climate change is much less, and there will be greenhouse gas emissions. Carbon leakage is a big issue for industry.

That said, the target for industry—a reduction in million tonnes of carbon dioxide equivalent from 11.5 to 5.5—is quite challenging. I do not think that the protection stops the development of

technology that would help industry to reach that target.

We need to place industry in Scotland at the forefront of low-carbon manufacturing. There is quite a bit in the plan to try to stimulate that happening, but we definitely need private finance. We need the Government money to be seedcorn finance to bring in private finance, which can accelerate us into the position of being a first mover and a market leader in the areas of low-carbon manufacturing and low-carbon products.

Claudia Beamish: I am looking at the time, but do Eilidh Mactaggart or Clare Reid want to add to anything before we move to the next question? I see that they do not.

The Deputy Convener: Stewart Stevenson has questions on funding net zero.

Stewart Stevenson: I have sat around many bank boardroom tables, so I want to address my initial questions to Eilidh Mactaggart, in particular about funding schemes, mechanisms and streams.

Clearly, the climate change plan update is relatively light on the detail of how we are going to leverage in private sector money. Is that likely to be through co-funding consortia—in which the bank takes a lead or is a junior partner—or will the bank solicit deposits from interested parties that will be contributed to the funding of projects by the bank itself? Forgive me, as I have read very little about the bank. What sort of approach does it intend to take?

Eilidh Mactaggart: Thank you for the question, which was a good one. We are new, and everyone is learning what we will and will not do and how we will contribute.

The bank has been set up as an investment bank, not as a deposit-taking retail bank, so it would not be appropriate for us to look for deposits from people. However, as a development bank, we are very keen to ensure that we crowd in investment, as we are required to do for example by our state aid permission. At the beginning, we will do that investment by investment. We will rarely do 100 per cent of an investment, because that would defeat the purpose of our crowd-in ambition.

As we progress, we will look to raise third-party capital to invest alongside our public capital. That could be via managing funds or segregated accounts for institutional investors that are interested in investing in our missions alongside the bank's public capital. We see a massive opportunity, which will be critical in the long term, to aggregate that capital with the bank's own and to accelerate the delivery of our missions.

A huge amount of private capital is interested in investing in the green recovery. People can hardly pick up the *Financial Times* these days without seeing a mention of it. For Scotland, the trick is to get together investable propositions and projects and businesses that need investment. We have been working closely with the Scottish Government to make sure of that. To develop those propositions, the bank will work closely with other areas of the public sector, such as Scottish Enterprise, central Government, NatureScot and other agencies that are hugely involved in such work. The bank will be a key player in that, and I believe that the opportunity is there.

Stewart Stevenson: To supplement my previous question, dividing the investment between the bank and co-investors does not necessarily mean that the risk will be shared in the same way. Will one approach be to take a share of the risk that is greater than the capital that the bank puts in, or is it intended that the risk will be equally shared according to investment in particular projects?

Eilidh Mactaggart: The bank has been set up to invest commercially. We are not a grant-making body or a sub-commercial funding body. Our state aid permission does not allow that.

In banking, investing commercially typically means investing on an equal platform of risk, so we would share risk equally with our private sector partners. However, there are different layers of investment in a business or project—in equity or in debt—and, within debt, there is senior and junior debt. The bank could look to invest in a mezzanine or junior-debt piece of a capital structure, in order to enable that crowd in. I am fairly agnostic on whether we should invest at the same level as other partners, but I need to make sure that the bank receives an appropriate commercial return for taking an increased risk profile; otherwise we would not be good stewards of the public capital that we have to invest.

Stewart Stevenson: I will move to Clare Reid from the SCDI, to ask for her view of how the bank will approach this. As well as the bank simply leveraging in international investment, which, as a subscriber to the *FT*, I also see quite a lot about, will it be clear enough to local investors in Scotland, the SCDI and others how the system will work and what the opportunities are?

Clare Reid: We look forward to working with Eilidh Mactaggart and colleagues and to hearing more about how the system will be implemented. As she touched on, we have highlighted the requirement for investable propositions at local level. The Scottish Government, local authorities and others could work together to bring forward portfolios of opportunities that would allow for schemes in local areas, such as city

neighbourhoods. It would be interesting to hear from the Scottish National Investment Bank about how that could happen.

On the question about finance, I will touch on a couple of issues. We think that finance will come from a variety of locations. The private sector will invest once it understands what is required and the cost of investment in renewables comes down. As one of the previous witnesses said, in order to encourage private sector firms to invest, we need to talk about the opportunities rather than just the risks and costs.

It might be time to think about other mechanisms for raising finance. For example, in our research, we asked whether we need new models of road user charging or road pricing to provide different ways of raising finance to support investment. We are very supportive of finance that would support research and development across a number of sectors to develop new approaches to meeting low-carbon requirements.

That might have answered more than Stewart Stevenson's question, but I hope that that was helpful.

Stewart Stevenson: Too much information is never too much, in my opinion.

Does Andy Kerr think that the frameworks are there? In particular, what areas of investment are likely to deliver the greatest bang for the public and private buck? How does that relate to the benefits that we will get in terms of the progress change agenda and the greenhouse gas emissions agenda?

Andy Kerr: I will build on what Eilidh Mactaggart and Clare Reid have said. I want to flag up the issue of scale. The numbers in the plan are welcome, and the creation of the SNIB, which has a great team, is hugely welcome, but there is still quite a mismatch in the scale of the funding that is required to genuinely transform our cities, regions, towns and industrial sectors.

We have been doing work in cities across Europe, including Edinburgh, which is one of our leading partner cities. Our back-of-an-envelope calculation shows that we will need something like £10 billion to retrofit all the homes in Edinburgh and get it to net zero in the next 10 years. It is the same for Glasgow, and so on. If we add up the figures, we get to tens of billions of pounds very quickly.

There is a danger of seeing the SNIB—which is an excellent organisation, and I am really interested in how its work plays out—as a silver bullet for everything. As well as thinking about how we use the bank to capitalise on a lot of inward investment, we should also think about how we get our local authorities to bring in far more

funding and so on. The work that we are doing with institutional investors, such as pension funds, is about how we create, in essence, cities as an asset class, and how we create multibillion-pound funds that will look at investable propositions, which Clare Reid talked about, in Scottish towns and cities. Such propositions will involve the sharing and blending of public money with private investment, because not all the funding will be commercial, with a return.

We must keep the scale of that in mind. The sheer scale of the transformation, across every building in the country and across industry and infrastructure, is far bigger than we can consider within annual Scottish Government budgets. We must think about investment over 10, 15 or 20 years and about the scale of change that is required. Notwithstanding what Eilidh Mactaggart and Clare Reid have said, which I agree with, we must keep that in mind.

10:45

Stewart Stevenson: I suspect that the SNIB has a unique opportunity: it is not locked into the annual budget cycle, so it can do things that would be difficult for Government to do.

I will close my questioning with a question for Tom Shields. You are interested, as I am, in a just transition. What opportunities are there to support a just transition? The long-term decline that we expect to see in the oil industry means that there are lots of skills that could be re-applied in other sectors to support a just transition. How can the Government play a role in sectors where there will be a decline but where the transfer of skills or resources is less obvious? How can we strike a balance between commercial opportunities and the need to provide direct support or retraining? I want a brief answer to a long question.

Tom Shields: You will be lucky—it is a big question.

One critical element of securing a just transition is to create and protect employment as we decarbonise our industry and economy. You rightly point to the big threat facing us. The oil and gas sector has been badly hit. It has been in decline for a long time, but it has also been severely affected by the pandemic, with the reduction in the price of oil and the cost of aviation fuel and with less use of transport.

It is critical that we create employment and find opportunities to redeploy and upskill workers. We must create whole new industries. That is what carbon capture and storage, hydrogen and some of the negative emissions technology developments offer. Scotland should be at the forefront of that. I should declare an interest. I am a director of the NECCUS Alliance, which is an

industry-led, not-for-profit organisation that is focused on developing carbon capture and storage and hydrogen in Scotland.

We can learn an enormous amount about finance from the development of offshore wind. That did not exist in the North Sea 15 years ago, but since then, the UK has become the world leader in developing offshore wind, much of which is off the Scottish coast. Nobody wanted to invest at the start of that process. There were no private investors who were willing to take the risks—financial and otherwise—in developing the huge network that was necessary and creating a whole industry.

The Government stepped up and took a lot of the investment and other risks associated with that development—it put a lot of money in. As offshore wind has developed, the Government has been able to step back as private industry has become involved. For example, Scottish Power has indicated that it wants to invest £10 billion in offshore wind over the next 10 years.

We can learn a great deal from that. The Scottish National Investment Bank will play an important role, but the Government must be up front and must be prepared to take early risks and do some pump-priming with funding.

I agree with Andy Kerr. The sums that are in the plan at the moment are just seed-corn funding. It is difficult to see how those sums will turn into the investment of the tens of billions that we need to invest to deliver the level of greenhouse gas reductions that we are looking for. We should look to the North Sea and learn as much as we can from offshore wind development, because it has been successful.

The Deputy Convener: We will stick with the subject of a just transition and a green recovery. Claudia Beamish has some further questions.

Claudia Beamish: First, I ask Tom Shields whether he has any more observations, from the commission's perspective, on how we can embed the green recovery and the just transition at the same time, for workers and communities.

Tom Shields: It is about encouragement, really. I am encouraged, as the commission is, by the investment and plans that have been put in with the update. For example, £100 million is going into a green jobs fund to help businesses create new green jobs; there is the low-carbon manufacturing challenge fund and the Scottish energy transition fund; and there is also money for energy technologies. There is quite a lot in the plan that will help us to move forward in creating new jobs, which will give us the opportunity to redeploy people and to employ young people who are coming into a very difficult jobs market, which has been made more difficult by the health emergency.

A lot has been done to lay the foundations in the climate change plan update. However, to repeat what I said earlier, not enough has been done to provide a clearer assessment of the impacts of the targets and climate policies on employment, people and regions, or to consider what policies the Government will put in place to manage those impacts in a way that will be just and fair and will not leave people behind.

The just transition commission is about to produce, at the end of March, its final set of recommendations, which will be a great help to the Government in addressing the business of a clear assessment of the impact and what policy measures can be put in place to manage that impact. However, that is an on-going process and will need to continue. I am conscious that the commission will come to the end of its current piece of work at the end of March, but that work needs to continue, albeit not necessarily in its current form.

Claudia Beamish: That point is noted, I am sure.

I ask Andy Kerr whether he has any observations, and then I will go briefly to Eilidh Mactaggart and Clare Reid.

Andy Kerr: I have nothing really to add on the industrial side. My only observation is that, in the plan, the focus with regard to a just transition is very much on industry and on the North Sea. That is understandable, but we need to look at the green recovery as a whole. We can see, for example, that our high streets, and face-to-face retail, are being decimated. How we approach the development and redevelopment of place is currently at the forefront of a lot of thinking.

What sort of places do we want to live in? We want local travel, amenities nearby, green spaces, resilience in the face of various impacts and so on, with vibrant businesses at the heart of that. That thinking is still very much an emerging area, but we have to be careful that the plan is not skewed towards thinking about a just transition only in terms of industrial redevelopment. It needs to look at place making: how we think about place and what we want from the places in which we live. That also plays into the question of how we build local supply chains for business; how we create warm, affordable homes; and how we make effective use of the natural capital and green spaces around us. A lot is tied in with that, and a lot of work is going on across the country in that regard.

Claudia Beamish: Thank you for highlighting those things; there is a great opportunity.

Eilidh Mactaggart: One of the things that we have the opportunity to do as part of the green recovery is to embrace the change of

homeworking. Although not everybody likes it and wants it all the time, where it has been available, there has been a substantial reduction in commuting-based emissions. We need to focus on that opportunity, which will assist in the delivery of the plan overall. Although I think that all of us would like to get back in touch in the office at some point, perhaps we will not do that five days a week, as we did before.

Clare Reid: [*Inaudible.*]*—*more work and more modelling, so it will be interesting to see whether the work of Tom Shields takes us forward. We certainly need to be a little bit careful about reducing the number of car journeys and the impact that will have on different communities—the impact on rural communities versus that on urban communities, for example. We need to develop policies that are nuanced—*[Inaudible.]*—reflect that. It may be that, as we work out how policies are best implemented in local areas, some of the solutions will come from the bottom up rather than from the top down.

Angus MacDonald: I will stay with the just transition. We are aware that, in order to avoid carbon leakage and to protect jobs and industry competitiveness, the Government has made a judgment to protect the industrial and agriculture sectors in relation to their share of emissions reductions—something that is allocated, pro rata, to other sectors. Do the witnesses agree with that approach, and is it compatible with just transition principles? We have given a lot of coverage to industry in this session, but I am particularly interested in the witnesses' views on the agriculture sector.

Andy Kerr: I am not sure that I can say much more about protecting industry than I said earlier. On agriculture, it comes back to Claudia Beamish's question around whether, in trying to protect, we are—in effect—ossifying and therefore not allowing the new to come in and take over.

Although elements on the agriculture and land use side are clearly working well, over the next three or four years, post-common agricultural policy financing needs to be resolved. There are massive market issues that we are all aware of, and there is a need to change some land use in a much more systemic way than we have seen in recent years.

Although there are huge cultural and social pressures around that in rural communities, there is an opportunity over the next two or three years to start to think about how we can reshape land use in Scotland in a way that delivers multiple social, financial and cultural benefits. However, we need to grab that opportunity over the next two or three years. The danger in trying to keep agriculture protected from the emissions reductions that we see in other sectors is that we

end up ossifying what is there rather than creating incentives and enabling the required changes, which, because of market changes, will happen anyway.

There is an opportunity to grab something in the next couple of years. The Scottish Land Commission has put forward proposals for new regional land use partnerships, and there is a lot of interesting work with businesses, such as Nestlé's landscape enterprise networks—LENS—approach to seeking business value from landscapes in southern Scotland. Some good partnerships are also starting to work in the Highlands.

We therefore have the elements, including from the bottom up; what is missing at the moment is clarity of direction from the top to support, encourage and empower those local regional partnerships to deliver. That is a real gap, and trying to hold back the tide causes far more damage in the medium term than embracing the change that is coming.

11:00

Angus MacDonald: Unless Tom Shields or Eilidh Mactaggart are desperate to come in, I am happy to move on.

The Deputy Convener: Nobody is waving their hands, so we will now move to questions on negative emissions technologies.

Patrick Harvie (Glasgow) (Green): Since it is my first meeting as a committee substitute, I put on record that I do not have any legally registrable interests to declare but that I am a member of Friends of the Earth Scotland, which is on the witness list for today's meeting, and of some other organisations that might submit evidence on the climate change plan.

Witnesses on this panel will perhaps have heard some of the first panel's criticism on the issue of negative emissions technologies and the idea that we are putting too many eggs into a basket that does not yet exist. The plan is apparently to get from zero to a substantial level of operation of negative emissions technologies in less than a decade, which would continue to grow dramatically, from then on, in the subsequent decades.

How realistic do the witnesses think that that plan is? Is there a danger that, rather than showing defeatism and assuming that the plan cannot happen, we are too optimistic in the assumption that it absolutely will?

In the past week, the Government did not seem to have any clear answers as to what plan B is, should NETs not materialise on the scale and at the pace that is assumed. Do the witnesses know what the Government's plan B is? To make things

easier, should plan A be based on the technologies that we have available rather than risk new technologies not coming along and our having to work from scratch?

Clare Reid: I confess that I do not have any insight into what the Government's plan B might be. The SCDI thinks that NETs are a necessary part of the solution but not necessarily the key thing that will get us to net zero carbon emissions. We need to do all the other things—invest in low carbon transport, incentivise people to change boilers and to update their estates, and so on. However, we definitely see NETs as part of the solution.

The question links to the point that was made earlier about the just transition. We have substantial expertise in the North Sea region, which looks to transition to lower carbon activities, and Scotland's geology allows it to potentially be a leader in negative emissions technologies.

We have talked about how we can start to capture, generate and build more of the technologies that are needed for the green transition in Scotland rather than import them from elsewhere around the world. NETs form part of that green transition as well as being a vital part of getting us to our net zero ambitions by the targeted deadline.

Tom Shields: I thank Patrick for the question. I understand the scepticism about negative emissions technologies and carbon capture and storage, because the issue has a long history. The Intergovernmental Panel on Climate Change, the International Energy Agency and the UK Climate Change Committee believe that carbon capture and storage is absolutely essential if we are to meet the climate change targets for reduction in greenhouse gas emissions.

We have to face the hard fact that there probably is no plan B. If we do not get some of those technologies in place and working to the level that we hope they will, we probably will not meet our demanding targets.

I emphasise that Scotland has a unique opportunity. It is uniquely connected to very large storages in the North Sea that could be used for carbon dioxide, it is connected with existing equipment and infrastructure and it has a lot of expertise in the oil and gas industry, which is where the just transition comes in, because it provides us with a new industry in which to redeploy and employ people in high-quality jobs.

We need to make that happen. An enormous amount of effort is going into that at UK and world levels. It is a credible plan, albeit a very ambitious one.

Patrick Harvie: You said that it will be physically impossible to meet the targets if an as-yet-unproven technology does not materialise very rapidly and on a large scale. That was a stark answer. To be honest, when I read the Government's answers last week I felt as though I was reading some spin from the very fossil fuel industry that made its profits by causing the crisis in the first place. Given the level of investment that is necessary, how do we ensure that the burden of cost is borne by that industry rather than by the public purse?

The Deputy Convener: Does anyone want to answer that question? Eilidh Mactaggart, do you want to come in?

Patrick Harvie: The question was for Tom Shields.

The Deputy Convener: I beg your pardon.

Tom Shields: Yes, I think that I should answer it. First, the stalling answer is that I did not say that it will be absolutely impossible. Secondly, let me push back a bit and say that the technology is proven: there are more than 20 places in the world where carbon capture and storage is happening. It is happening in the North Sea, through the Norwegian Sleipner programme. Every part of the technology has been proven; the challenge is in financing it, because it is incredibly expensive and there is risk associated with it. However, we created a new industry in offshore wind in the North Sea, and it is credible that we can create this industry, too.

You asked about the oil and gas sector. I think that we need a completely new approach to financial models. We cannot permit the costs simply to fall on the public purse and therefore on the population of Scotland; the industry needs to step up and play its part. If we address the issue in a radical and purposeful way, we can make this happen, as we did in the North Sea with the completely new industry of offshore wind.

Patrick Harvie: Perhaps Andy Kerr will respond to my question, too.

Andy Kerr: You asked whether it is realistic to think that the technology will operate for the first time in 2029 at significant scale—that is, with a quarter of the entire gross emissions being delivered by negative emissions technology by 2032. The answer is no—next question please. That is just not credible.

In saying that, I do not mean to imply that CCS is not important. However, as the Climate Change Committee said, engineered greenhouse gas removals will be driven by what is left in the economy after everything else has been delivered. In other words, it is not the first thing that we do

but the last thing that we do, because it is likely to be costly.

I remind members that the Climate Change Committee refers to three forms of negative emissions technology. One is wood for construction, which Scotland ought to be going all-out for but is not doing yet. One is air source capture, which is not seen to be credible commercially before the mid-2030s so has no bearing on this plan update. The third is biomass with carbon capture and storage. Do I think that we will get carbon capture and storage facilities up and running by the end of this decade? [*Inaudible.*]

The Deputy Convener: I do not know whether it is just me, but we appear to have lost Andy Kerr.

Patrick Harvie: Perhaps Eilidh Mactaggart wants to say something about SNIB and financing.

Eilidh Mactaggart: Sure. Everything is incremental. We do not have for the banks, to borrow Andy Kerr's term, a silver bullet for climate change and getting to where we need to get to. You do the easy stuff first. That said, offshore wind work was not thought to be easy when it started. I look at alternative technologies and incremental, additional pieces in the same way. They will be developed over time, and their emissions will all, I hope, sum up to the total of net zero. However, there is no panacea, and it would be remiss to leave an avenue unexplored.

The financing community has delivered in other areas, and it will deliver. That requires things such as contracts for difference and support to normalise and prove the technology as it develops. We will then see the offshore wind sector, for example, really racing ahead. On what I have seen developing in the 10 years in which I have handled investment in the sector, even the size of each turbine has blown my mind. We will see such progress. Everything is needed, but everything is incremental and none of it is easy.

The Deputy Convener: We are reaching the end of the evidence session. I am pleased to see that the convener's connection has settled down. I will hand over to her for the final question.

Gillian Martin (Aberdeenshire East) (SNP): I have a question for Tom Shields initially; others can then come in with their views if they want to.

In the past, we have been critical of the Government's not dealing with the issue across portfolios. There has to be a shared endeavour across sectors and, indeed, in the Parliament, but I want to consider the Government's approach and the governance around the issue. On the climate change plan update, are you noticing more coherence across the Government portfolios than there was before in tackling climate change?

Tom Shields: I have been involved in the just transition commission and a few other Government committees over the past two years, and my impression is that things are improving and developing and that there is a much more collaborative approach. In some of the advisory committees, there is a real attempt to bring together very different shades of opinion to form a way forward and give advice that would help the Government to develop better policies. I think that things have improved significantly over the past few years, but they need to improve still more. It is work in progress.

Clare Reid: I definitely welcome the increasing alignment and the commitment in lots of different portfolios. One thing that we called for in our manifesto was robust national governance and oversight of co-ordination. There are probably areas in which that could be improved, whether that is in the interdependencies within sectors or between sectors or perhaps between the Scottish Government and the UK Government. That is not an easy issue to address. In this year of COP26 you will probably identify many more things that are happening that perhaps you were not aware of.

There is a role for the Scottish Government to play in providing co-ordination as the plan progresses. We have stopped short of calling for an additional body, but we certainly think that more oversight of co-ordination is required.

Gillian Martin: What are Andy Kerr's views on that? One of our concerns is the scrutiny of what the Government is doing across portfolios. That can be built into the mix, as well. Four committees are scrutinising the climate change plan update. Does that scrutiny need to be rolled out further, or is there a need for a different structure in Parliament for the scrutiny of how the Government will get to net zero?

11:15

Andy Kerr: I echo what Tom Shields and Clare Reid have said. My experience of the past year or so is that there has been a genuine attempt to bring together disparate views and expertise around the room to support what is going on. There is a real sense of trying to get partnerships going and little things such as seeing the Cabinet signing the plan. There are some very good signals.

There is still a challenge in genuinely working in partnership with local authorities, which are under extreme pressure, and with some of the business groups. It is work in progress, but I have been impressed with what I have seen in the past year.

On parliamentary scrutiny, it comes back to the point that we always try to put things in boxes and

then look at them within those boxes, so it is difficult to scrutinise whole-system change. The approach that the Parliament has taken, with different committees leading but in a more joined-up way, is far better than what was there previously, so I think that has been a step forward.

Is there a perfect way of doing it or a better organisational way of doing it? I do not think so. However, I do think that the different committees need to be very clear about the element they are majoring on, and they must make sure that that is shared effectively with all the other committees. There will clearly be overlap between issues—land use will play into CCS and industrial facilities, and places will play into transport, and so on. That will always be challenging, and there is no perfect solution. The approach that the Parliament is taking has a lot to commend it.

Gillian Martin: Thank you. I now hand back to the Deputy Convener.

The Deputy Convener: That brings us to the end of this part of the meeting. I thank all of the witnesses for their comprehensive answers to our questions, and I thank them for joining us.

I suspend the meeting until 11.20, to allow us to change witnesses.

11:16

Meeting suspended.

11:21

On resuming—

The Deputy Convener: We will now hear from our third panel for today's evidence session. I understand that the convener's connection is now back to normal, so I pass the chair back to Gillian Martin.

The Convener: Thank you very much, Finlay.

I welcome our final panel for today's evidence session on the Scottish Government's updated climate change plan. Elizabeth Leighton is on the secretariat of the climate emergency response group, or CERG; Jess Cowell is a climate campaigner with Friends of the Earth Scotland, and is appearing on behalf of Stop Climate Chaos Scotland; Dave Reay is executive director of the Edinburgh Centre for Carbon Innovation; and Finlay Bain Kerr is from the 2050 Climate Group. Thank you all for joining us this morning.

I have a specific question for Elizabeth Leighton regarding what she said in her written evidence to us. You have been quite critical about the updated climate change plan, Ms Leighton: you said that there is a lack of evidence of "a credible policy framework" in the plan. What would you have liked

to have seen instead? What do you think “a credible policy framework” would look like, and how could the climate change plan update have shown that better, so as to give a pathway for people to know what changes need to be made?

Elizabeth Leighton (Climate Emergency Response Group): Thank you for the opportunity to speak with the committee today.

We note that the plan sets out a lot of bold commitments with some very strong targets, but our concern is that there are no strong, firm policies for achieving those targets. Indeed, we have concerns about delays or a lack of urgent timescales, which could undermine their achievement.

We gave some examples across the board to illustrate what a credible policy framework looks like, taking into account the fact that there is an urgent timescale, with firm deadlines. We are not doing a business-as-usual process, with slow, deliberative reviews that can be several years in the making. We need firm regulations to be set out, and there are examples of that in the building sector. There are indications that regulations are coming, but we think that there was a missed opportunity not to have signalled that more firmly now.

There are examples in transport. What are the policies that will lower demand for travel to support the target to reduce car kilometres by 20 per cent? In agriculture, we are concerned about whether there is a slowing down of the commitment to put in place regional land use frameworks, and we have suggested that there should be pilots in 2021, as opposed to the actual frameworks that were envisaged for this year.

It is a matter of combining the setting of regulations with firm policy signals to attract that very important private investment, with a timescale that matches the climate emergency. If we have learned anything in the past year, it is that we can act quickly and adapt the way that we work to a faster timescale but still make good decisions and have good outcomes. Let us apply that thinking and learning that we have had from the pandemic to addressing the climate emergency.

The Convener: The written evidence from Stop Climate Chaos points to some areas that it feels highlight “uncertainties” with the modelling of impacts of specific proposals. My colleagues will dig deeper into some of the areas that I think that Jess Cowell is about to mention, but I ask her to go over what that means and what could be done in the plan to reduce those uncertainties.

Jess Cowell (Stop Climate Chaos Scotland): I will break that down into three sections. I will look predominantly at the modelling of the plan, move

on to the lack of policy detail and coherence, and then give some final recommendations.

Stop Climate Chaos welcomes many of the proposals, including the 20 per cent reduction in car kilometres travelled but, as it stands, there is still a distinct lack of detailed policy in the draft update that shows clearly how the Government will get us to the 2030 target. For example, the data for each sector’s contribution to the total emissions reduction is incredibly obscure. There is no evidence to show how emissions reduction envelopes were calculated.

Last week, Mr Stark of the Climate Change Committee told the Rural Economy and Connectivity Committee:

“Using its model, the Scottish Government has failed to achieve the 2030 target that was set by Parliament.”

He described that as “suboptimal”, and noted that he is

“not at all clear about whether the policies and proposals in the document are there to deliver the emissions envelope”.—[*Official Report, Rural Economy and Connectivity Committee*, 20 January 2021; c 29.]

We strongly echo that point.

For example, in particular sectors, we see very unclear evidence for why the conclusions have been drawn in setting the envelopes. For example, with land use, land use change and forestry—LULUCF—the latest figure, in 2018, was -5.4 megatonnes of CO₂, but the table in the draft CCP update uses a figure of +0.6 megatonnes. That suggests to us that 6 megatonnes have been added to factor in the forthcoming inventory change relating to peatlands. If that is the case, a decision to be optimistic has clearly been taken, because the Climate Change Committee has suggested that the emissions from peatlands in Scotland would be between 6 megatonnes, which would be low, and 10 megatonnes, which would be high. We want the Government to clarify the basis for that decision, because 4 megatonnes would make all the difference to hitting the targets.

Similarly, with negative emissions technologies, there is very unclear evidence about where the targets have been drawn from. The 0.5 megatonnes of emission sequestration in 2029 jumps to 3.8 megatonnes in 2030. None of the assumptions has been mapped out, which is a particular issue, given that that is meant to get us over the line by the end of the decade. We want to see how those assumptions were calculated, the numbers, data and evidence that they were based on, and who the Government received those numbers from, particularly given that the sector has a long history of overpromising and underdelivering.

On abatement figures, we do not see how each policy would cut down emissions. That was much easier to see in RPP1 and RPP2.

On the policies, the plan at this point is a sort of skeleton document that refers to numerous road maps, policies and action plans over the course of many years. That makes it increasingly difficult to scrutinise whether the policies are on track to hit targets. Also, if the policies and proposals are moved to varying documents that are yet to be published, we cannot see whether those policies and proposals align with the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019.

We want the final plan to provide more details about how the policies will realistically be achieved, abatement figures attached to those policies, and evidence of the assumptions that have been made to calculate the envelopes, particularly in the areas of LULUCF and negative emissions technologies.

The Convener: That is helpful. You mentioned negative emissions technologies. Patrick Harvie has some questions about them, so I will bring him in now.

Patrick Harvie: That subject was going to come up later, but it would be as well to address it now, as it has been raised.

I am not sure whether our witnesses heard the evidence of those on the previous panel. Some of them more or less said that there is no point in talking about a plan B for reaching our climate targets without our having negative emissions technologies, because they are absolutely essential. In the evidence that we heard last week, the Government was deemed to be either unable or unwilling to talk about what a plan B would look like.

11:30

I will put my question first to Jess Cowell; anybody else who wishes to respond can do so after she has. Do you have a sense of what would be necessary—and, indeed, whether it would be possible—to reach our targets if negative emissions technologies were not to be developed in the rapid, large-scale way that is being suggested? Should our reliance on them be plan A at all, or should that plan be based on what we have available to us now, with the possible advantage that such technologies would make things easier for us should they mature?

Jess Cowell: It is important to set the plan in context by remembering that it is based on the target of achieving a 75 per cent reduction in emissions by 2030. Evidence increasingly shows that, in the energy sector in particular, CCS is not

on course to make significant impacts on that target. That was shown last week with the publication of the Tyndall Centre for Climate Change Research report, which considered historical evidence of progress on CCS, particularly in the energy sector, and how that aligned with 1.5° pathways.

CCS has had a long history of overpromising and underdelivering. Its technical feasibility was demonstrated in about 1996, but its deployment has been increasingly slow, and sites that have been under development have consistently failed to materialise. According to the Global CCS Institute, which is the leading body on the subject, less than a fifth of the CCS capacity that was under development in 2010 was operational by 2019. That was despite its having featured heavily in many future energy pathways. We have also seen the International Energy Agency estimate that, in the energy sector, there will be 310 megatonnes of CO₂ per year by 2030, which is an increase of 129 times from today's level.

It is important to remember that the UK has no CCS plants that are actually sequestering carbon. I believe that only 26 such plants in the world are operational. Those are often used as examples of how we could achieve such capacity, but it is important to remember that such plants are not predominantly sequestering carbon for emission reduction purposes; they are using it for a process of enhanced oil recovery. The Tyndall Centre for Climate Change Research report that was released earlier this year noted that 81 per cent of the carbon that has been captured in CCS plants to date has been used to extract more oil via the process of enhanced oil recovery. That means that CCS has been used predominantly for carbon and oil extraction that would not have been possible otherwise.

At this point, we are looking at the context of the 2030 target, the historical evidence and the precedent that has been set on negative emissions technologies. We believe that the plan is dangerous, particularly because there is no plan B. I highlight that, in its 2017 report on the previous draft plan, this committee was critical of such technologies being included. The committee noted that it was

“unclear in the draft Plan whether assumptions such as the development and implementation of carbon capture and storage are supported by alternatives should the assumptions which have been made prove to be unfounded.”

It also asked for an alternative plan B to be set out.

It is also important to remember that numerous existing pathways do not include negative emissions technologies. For example, according to the IPCC report, although the majority of

pathways—about 90 per cent—include such technologies, the remainder do not. There is increasing evidence of that, such as the report that was released last year by the Heinrich Böll Foundation, which included a 1.5° pathway that corresponded with the 2030 target but did not rely on negative emissions technologies. There is a commonality across the pathways that do not have NETs, which is that they ensure that there is a rapid reduction in phasing at source. Rather than relying on unproven technology to get us over the line, they see an upscaling of renewable technologies, ways of achieving electrification across the board, and the cutting of emissions in underperforming sectors, such as transport and agriculture.

Finally, even the IPCC, which is, arguably, the leading body on climate change science, notes up front in the mitigation pathways to 1.5° that

“CDR”—

carbon dioxide removal, which is another term for negative emissions technologies—

“deployed at scale is unproven, and reliance on such technology is a major risk in the ability to limit warming to 1.5°C.”

The evidence suggests that CDR is “unproven” and that reliance on it is “a major risk”. We are yet to see a credible pathway in the CCP that maps out why the assumptions are being taken that, at the end of the decade, we will be able to flip that switch and emissions will be cut.

Patrick Harvie: That could not be clearer. Thank you very much.

The Convener: Elizabeth Leighton wants to come in. I may bring in other witnesses before taking another question from members.

Elizabeth Leighton: Although the climate emergency response group sees that CCS and NETs will play a role in our pathway to net zero, we have concerns about the significant reliance on that uptake, particularly for reaching the 2030 target. I am glad that Jess Cowell has made us focus on the next 10 years being the critical time in which we must maximise our efforts to reduce emissions. That means that we must maximise our efforts on what we know works: energy efficiency, renewables and moving faster on agriculture.

The recommendations in our written evidence to the committee are measures that could be taken now. The switch could be flipped. You could double the amount of funding that is being put into energy efficiency, while adjusting fuel poverty. You could, straightaway, put in place standards, so that people know what they have to do with their homes and businesses know what to do with their buildings. You could have an agriculture transformation fund that is combined with training,

so that we get the emissions reductions straightaway with those capital investments and changes in kit.

There are several recommendations. I will not read them all out, but I must not forget to mention public procurement, because I feel particularly strongly about that. We could be leveraging in £12 billion of public spend. That should, in every way, be supporting the markets for zero-carbon or low-carbon services and products. We have done that with electric vehicle fleets, and we can do that with other products and services.

There are measures that we can take now, and we want the plan to show that it is maximising those opportunities.

The Convener: I will bring in Dave Reay, because I would like to hear his views on that. Are we leaving things to chance with negative emissions technologies? Can you give us the inside track on your hopes for them?

Dave Reay (Edinburgh Centre for Carbon Innovation): I think that we will need them for the really-hard-to-abate emissions. We need a way to balance the approaches to net zero and beyond.

The crucial issue that Jess Cowell and Elizabeth Leighton have mentioned is the time that it will take to get the technologies up to scale. The climate change plan update is really optimistic in seeing that scale of NETs operating in our economy, particularly in a way that does not have large negative consequences. For example, if we place a large emphasis on biomass energy with carbon capture and storage, that might be part of our pathway to net zero, but that has huge implications for, and clashes in, land use, because we have finite land space.

To return to Patrick Harvie’s question, there must be a plan B. We have a working group that is looking at biomass energy. It might report that the scale of ambition for bioenergy with CCS—BECCS—is not compatible with the other demands on our land for food and for carbon sequestration.

Jess Cowell made a point about the peatlands being included in the inventory. It might be that, as our data improve on that, we have a lot more work to do. It might be a precautionary approach to say, “We’ve got this really ambitious target by 2030 and we’ve had to balance the books based on the available information.”

At this point, I have a shout-out to the civil servants who have put the plan together. They have done an incredible job. The CCPU as a document has great elements in it, which you have been picking up in your evidence already. Crucially, there is a great deal of hope and optimism in the plan, which is good, but realism is

also needed. How will we meet our commitments if things do not all work perfectly? That is where a plan B is required.

The Convener: Would Finlay Bain Kerr like to come in on that?

Finlay Bain Kerr (2050 Climate Group): I would like to say something before I address that question. The 2050 Climate Group believes that it is crucial that young people are engaged in these issues, and we are delighted that the committee has invited us to the meeting. The group is made up of volunteers and young people who work to take action on climate change, and all our policy positions and input are developed in consultation with that network of young people. Everything that I will present today has been produced from our engagement with young people throughout Scotland.

We do not have an official position on negative emissions technologies, but I echo the sentiments of fellow guest speakers. Young people want to see action now that is ambitious and that uses available solutions, rather than waiting and kicking the can further down the road. There is a real appetite for nature-based solutions, such as peatland restoration and forestation. We encourage more action on those issues right now, rather than waiting for 10 years to see whether technologies work.

Stewart Stevenson: In earlier evidence sessions, there have been several references to doing and when the Scottish Government officials were before the committee last week, there was a reference to learning by doing. It seems to be positive in that it is a way of covering some of the uncertainties: in other words, if people go and do things we will thereby discover ways to do things that we cannot do at the moment. I accept that idea in principle, but it will only work if we gather from that experience the information about how particular—[*Inaudible.*]—doings and outcomes of varying benefits. I start by asking Dave Reay for a semi-academic response to that. How valuable, in the big scheme of things, is the learning-by-doing approach and how likely is it to throw up answers that will fill in some of the gaps in relation to the way forward?

Dave Reay: I completely agree with what Stewart Stevenson says about learning by doing. It is a good approach, but the danger is that we will learn by doing for a decade and in 2030 we will find that it did not work well enough and we have missed our targets for decarbonising the economy. Something that frustrates me in the draft climate change plan update is that, although learning by doing with pilots and that kind of thing is great, we need clear timeframes, feedback mechanisms that look at whether things work as they are being implemented and ideas on how we

might scale them up or, if they do not work, what the alternatives are—the things that we just talked about in terms of NETs.

Learning by doing is a nice phrase and we need to get on with implementing things such as carbon capture and storage. We need to learn by doing in terms of getting that going, but we also need to recognise that it may not work and say what will happen if it does not. Monitoring, reporting and verification are vital as part of that, and they are lacking in some sectors.

The sector that I mainly look at, which is agriculture and land use, has quite a lot of what might be called learning by doing through pilots. Elizabeth Leighton talked about the land use partnerships pilot, and that is all well and good, but to give reassurance from an academic perspective, that then has to feed back into emission reduction and the roll-out of strategy across Scotland. That needs a clear timetable and a process for how learning by doing feeds into wider action. It also sometimes means that we need to take an alternative approach.

11:45

Stewart Stevenson: Learning by doing has two parts to it: what we plan to do and learn from, plus the serendipitous discovery of an approach for which we had no plan. I suspect that the latter is not non-trivial, but how do we capture the benefits of serendipitously beneficial activity in the learning by doing space?

I do not ask easy questions.

Dave Reay: It is a bit like the research community. We have blue-skies research, which essentially relies on that serendipity. One in a hundred of our research programmes will come out with something amazing. We need to have some capacity for that, and, as an academic, I will always call for it. However, we are in a climate emergency and we have hard targets to meet in the next decade. We have a whole suite of strategies that we know that we can implement and that are proven across all sectors and they need to be emphasised, rather than us hoping for serendipity. We need to keep the window open for that, but I would say that it should not be what we emphasise. I would probably argue that it gets too much emphasis in the current climate change plan update.

Stewart Stevenson: Can I put the learning-by-doing issue to Jess Cowell? How will we get members of the public and the wider population engaged in learning by doing and being part of feeding back into future activities of other communities and indeed of business and beyond?

Jess Cowell: I echo a lot of what Dave Reay has said. Learning by doing is great, but we do have that 2030 target and we have less than a decade left to reach it. At this point, we cannot really afford to get 10 years down the road and say, “Oh well, it didn’t work. We missed our targets.”

On individual engagement, in my view and SCCS’s view, the Government should support systemic behaviour change, provide incentives, and take a bottom-up, democratic approach in which people can decide what is right for their communities. The Government should engage committees from the ground up by going to them and asking them what suits them rather than everything always coming from the top down. We need a mix there.

Stewart Stevenson: Would Finlay Bain Kerr or Elizabeth Leighton like to make a brief comment?

Finlay Bain Kerr: From the responses that we have received, we can see that young people feel that we are in an unprecedented time, with the pandemic-induced effects on our economy and our way of living. We have seen that change is possible at a level that has not been seen before in relation to Government interventions—certainly not during our lifetimes. People expect the same level of response in tackling climate change and the green recovery, which has been so heavily cited in the climate change plan update.

There is already a strong bottom-up approach to dealing with those issues, but especially in this time of uncertainty, people are looking for that little bit of support and drive right now from the Scottish Government to help us to get on the right path, whether it be setting up schemes to support young people who are looking for employment or to engage with the recovery. We are hoping for a little bit of more urgent action to help us to get on our way.

The Convener: I will bring in Claudia Beamish next. Claudia, you had a particular question on CCS. Who would you like to direct it to?

Claudia Beamish: Given the time, I would like a sentence from each witness in response to my question. We have heard concerns from everybody about the fact that CCS will not come on stream for a considerable time, and we have very stretching targets for 2030. Should there be a different plan A? If so, should the Scottish Government do more to model that, given the emphasis that has been placed on energy efficiency, place-based solutions and renewables? Please be brief.

Jess Cowell: I reiterate my previous point. Yes, there should be a plan A that does not rely on negative emissions technologies. In the update, we want to see a plan that models what we

have—net energy efficiency, renewable technologies, electrification, and investing in peatland and forestry. As it stands, there is no target for—[*Inaudible.*] We want a plan A that does not rely on that.

Elizabeth Leighton: I do not have much to add, other than to say that we need that policy certainty to which we keep referring, which will allow the private sector to jump in and to start to come up with some of the solutions—the learning by doing that was spoken about earlier, which will maximise the opportunities in energy efficiency, renewables and so on to accelerate the process, as has happened with onshore wind. CCS—and, as Dave Reay was saying, NETs—will be part of the solution, ultimately, so we cannot just put it to the side. Efforts must be made to progress that. However, with regard to the next 10 years, it is a case of nailing down the plans, addressing the timescale and bumping up the urgency and leadership to accelerate that change.

The Convener: We are up against the clock, so we will move on to the next set of questions, from Liz Smith.

Liz Smith: Thank you, convener. I will follow up on the question that I asked the previous two sets of witnesses about policy coherence. Do the key drivers in this and the leaders in each sector feel that they understand where that coherence must come from and exactly what it is that the Scottish Government is demanding of them?

The Convener: I will bring in Elizabeth Leighton first.

Elizabeth Leighton: I want to make sure that I understand the question. Is it about whether the leads at official level and ministers understand the integration—the cross-cutting nature of the solutions?

Liz Smith: Yes.

Elizabeth Leighton: The draft updated plan is much better at taking a cross-sectoral approach and addressing the coherence issues in, for example, buildings—from transport and planning to buildings and planning. It is definitely better, but there is still room for improvement. In working with the Scottish Government, I have noticed that more effort is being made to work with sector leads across the sectors. There are opportunities to do better in the infrastructure investment plan: we could do an immediate review of existing infrastructure investment commitments—rather than waiting until the next plan—to ensure that existing or near-term investments are aligned with net zero or, at the very least, that we mitigate any damage. That is a big opportunity that could be taken up in the learning estate and affordable housing. Again, in the public sector, we should be

using the public purse to put in place net zero buildings now.

Dave Reay: To echo what Elizabeth Leighton said, the co-ordinated approach of the first half of the climate change plan update was great; that gives us a framework and the way of working that the committee has been talking about for a long time. For Parliament and Government, the way to tackle climate change is to take that co-ordinated view and avoid some of the unintended consequences that come up when we make major changes. One of the things that the new Parliament should do—whatever colour it is—is embed that co-ordinated approach on climate change from the ministerial level down to the teams in relation to spotting those synergies and those unintended consequences. That is a governance issue on which there has been progress, which is great to see.

One of the issues with the climate change plan update is that, even though it has that first half that talks about co-ordination across issues such as the land use sector, we still have to report under certain sectors—for example, we still report a certain set of emissions for agriculture. The danger with that is that, as we have discussed before many times, where there is really positive action—tree planting or providing bio-energy crops for CCS, if you regard that as positive action—none of that is attributed in the agriculture sector emissions. That drives a siloing and potentially a bias in relation to how a minister perceives that, so I would like us to consider a shadow process in terms of how we report on action and emissions that is not constrained by the United Nations emissions reporting, so that we do not feel that we have to think about agriculture only in terms of direct emissions but about its wider integration in land use, for example.

The Convener: Jess Cowell, do you have anything to add to that? You mentioned that you felt that some sectors are not being pressed enough on their ambition compared to others.

Jess Cowell: I also echo what Elizabeth Leighton said; some sectors are being let off or are not doing as much as they could. In agriculture, we see that in the LULUCF sector; obviously, negative emission technologies have been allocated a huge amount of reductions and we are unsure whether that will be the case. There is a lack of policy coherence on how that affects the emission reduction pathway—for example, for the emission reduction pathway for transport, the graph in the plan shows annual greenhouse gas emissions reductions from around 11 megatonnes in 2020 to around seven in 2026, then it levels off in the remainder of the decade. Why are there no further predictions of reductions between 2027 and 2030? As we get closer to 2030, the phase-

out of fossil fuel vehicles will come on and we will hopefully see the sale of electric vehicles increase in the later 2020s, but that is not translated into lower emissions after 2026.

Again, the policies that are mapped out for the transport sector in relation to low-emission zones, the bus partnership fund and the fossil-fuel car phase-out would, we hope, result in emissions reductions at the end of the decade, but that is not reflected in the pathways. The detailed policies in the plan that apply to emissions reductions have to carry over, but that is not happening right now.

Finlay Bain Kerr: I will come in quickly on the cross-sectoral approach. That is an issue that has come up a lot in our work in the 2050 Climate Group and it is a real concern for young people. We feel that the plan misses out on a systemic and multimodal approach. I will use the example of transport, because it is such an important part of young people's lives, as it is how they get to work and how they travel the country. We would like to see more emphasis and detail on that, for example on nationwide smart ticketing systems or expanded free travel for young people.

I will also link that to how we would integrate transport and housing. We should require new-build homes to have zero-emission transport systems as well. We need young people to live in communities that are walkable and accessible by transport, rather than ones that trap people into further car ownership. We would therefore like to see more concrete examples and illustrations in the plan of the kind of thinking that makes those specific links that significantly impact the whole population but particularly young people.

12:00

The Convener: That has a rural dimension as well. Young people in rural areas in particular do not want to have to aspire to have a car in order to live their lives. Finlay Carson has some more questions on this theme.

Finlay Carson: I am a bit concerned by Jess Cowell's suggestion that some sectors, agriculture in particular, are being let off and are getting away with things. The Government has made a judgment on protecting the agriculture sector, and one of the reasons for that is to avoid carbon leakage and to protect jobs and competitiveness. I imagine that it would stop the displacement of beef production, for example, given that red meat is produced in Scotland at half the emissions level that we see in the United States, Brazil or wherever. The Government has made that decision, which is not about letting the agriculture sector off; it is a balanced decision on carbon leakage, protecting jobs and competitiveness.

I will come to Jess Cowell first, but I would like to hear from all the panel on this. Do you disagree with the Government's approach? Do you think that it is compatible with just transition?

Jess Cowell: It is understandable that the approach to sectors needs to be reflective of that context but, ultimately, it cannot be used as a means to avoid shaping what we want to see for the future. We want to see what the plans are for a just transition in the industrial and agriculture sectors and how the update plan will create new and sustainable opportunities and economic competitiveness in those sectors. It is not sufficient to say, "We have fewer targets this year because we are worried about leakage and jobs." We need the climate change plan to be proactive so that, when the next climate change plan comes, we can have decisions to curb emissions in those sectors, knowing that we have already acted on leakage and jobs. We therefore cannot afford just to sit back and watch.

The absence of a strategy in this context starts to look a bit like a deferred collapse situation. If there is a sudden realisation in 2025 that emissions must decline rapidly to meet the 2030 targets, we will have missed several years to plan actively and prepare the sectors for that change. The economic damage from that could be even more severe. Ultimately, prorating sectoral emissions is not inherently contradictory to the just transition principles, but that is only on the basis that we understand that those emissions need to be tackled and that we use the time between now and that future point to prepare alternative opportunities.

The Convener: Finlay, do you want to hear from any other panellists on that?

Finlay Carson: Yes. I would like to hear from Dave Reay, but I want first to go back to Jess Cowell again. Should calculations on carbon leakage form any part of the discussions? Are we happy to see food production in the United Kingdom displaced elsewhere, which could lead to higher emissions elsewhere on the planet? Should that factor just be dismissed? I would like Dave Reay to answer that too after Jess Cowell.

Jess Cowell: It is not my area of expertise and not something that SCCS works on significantly, but I can speak to one of my expert colleagues in the coalition and provide further information in writing to the committee.

Dave Reay: It comes back to my worry about biomass energy and CCS. If food production is driven offshore and that has a higher emissions intensity, that does not help the climate. I agree with Finlay Carson on that.

I guess that Finlay Carson's wider question was about the target for the agriculture sector in the

climate change plan update, which is for roughly a 24 per cent reduction on a 2020 baseline. At first, I thought that that looked pretty weak compared with the other sectors. One of the key things with that, though, is what is and is not included. Given the way in which we report it, we would not include planting trees on farms or contributions through biomass energy. The issue has to be thought about in a more nuanced way.

We have a kind of hard target of 2024, when the CAP transition period ends, and what worries me is that the climate change plan update does not include a clear signal for farmers, crofters and land users across Scotland about what conditions will be attached to future direct payments. There is an opportunity now and in the next few years to give that clarity in the climate change plan and to start imposing conditionality on things such as data provision and baselining, so that, when we hit 2024 and beyond, all our farmers have a better knowledge of what they need to do, and we have a better evidence base to take action on.

At the moment, it comes back to pilots and learning by doing—it is a case of hope and see what happens. One of the key issues with our sector is that a lot of change is going on in all agricultural markets around the world, and there is more and more focus on lower-carbon production. If we are behind the curve compared to down south or other markets, there is a risk for us of carbon tariffs. As we have talked about lots of times, it is a sector in which we need clarity. It could be argued that a 24 per cent reduction is a good target, depending on what is included, but it is not clear how we will achieve it. That needs to be clarified—we certainly need an improvement on what we have at the moment.

As a quick addendum, schemes such as the Scottish suckler beef support scheme are talked about, and they are great as a best-practice set of actions, but we need clear conditionality across the agriculture sector in Scotland. We need information on what the conditions will be for every farm in Scotland to help to address the climate emergency and nature crisis simultaneously.

The Convener: Finlay Bain Kerr wants to comment on agriculture.

Finlay Bain Kerr: We think that there are two aspects to the issue. There is the just transition and ensuring that it is not the workforce that is punished or picks up the bill. Young people are really respectful of that, but we need to see joined-up thinking across the piece. If we are going to focus on sectors such as agriculture, we need a green jobs programme that acknowledges that. Young people believe that there is a lack of encouragement to pursue green jobs, especially in the agriculture and industrial sectors. There are not enough opportunities to achieve the skills that

are required for employment in those sectors. We are aware that the climate emergency skills plan has gone some way to addressing those concerns, and there are some promising initiatives, such as the green jobs skills hub, the green workforce academy and the green jobs fund. However, there is a lack of clarity in the climate change plan update about how many jobs will be created. Are they in the sectors that are being protected? When will we see the results? Young people are facing mass unemployment right now, so we would like to see more urgency in those policy areas.

The Convener: Claudia Beamish will pick up on that very theme.

Elizabeth Leighton: I wanted to make a quick additional point on the agriculture sector. An opportunity that has been not so much missed as put on a go-slow track is the production of climate-friendly diet guidance, which would have a lot of co-benefits for health, and for agricultural products from Scotland. The commitment seems to have been rolled over from programme for government 2019, but there is no clear timescale for how that will be developed or how it ties in with the local food strategy. That is such a great opportunity—it is a win-win-win—and it helps to address climate emissions more broadly while supporting our agriculture industry.

Finlay Carson: This question is still on ambition and effort. The nature of the outcomes that are described in the updated plan varies significantly. Some of the outcomes are very specific, and some of them are quantified and time bound. Peatland restoration demonstrates great ambition, for example, but we are achieving only 6,000 hectares out of the 20,000 that it was originally suggested we needed. We need to do far more.

On what you said about agricultural ambitions, Dave Reay, can you point to any specific policies within the agricultural sector that should be quantified and time bound?

Dave Reay: I will give my personal view, while also representing those on the farming for 1.5° inquiry committee, if they do not mind me speaking on their behalf. We considered what that conditionality might look like in getting us on the pathway to the 2030 targets and beyond.

A key part of that in the short term comes back to being ready for 2024. This is probably the geek in me speaking, but we know that a lot of the actions that we need to take on our farms rely on good data to ascertain what we should change and what the baseline is. For soil carbon and biodiversity value, for instance, the data do not really exist at farm level, certainly not across Scotland. There is now an opportunity for those data to be gathered in the context of conditionality,

allowing us to have the transition to 2024, rather than just having a cliff edge. As part of the process post-2024, we might see conditions coming in that involve not just data gathering and planning but more action, linked to the things that we do.

One of the things that worry me at the moment concerns the many good industry-led groups that are being set up or have already been set up. The suckler beef climate group has already reported, and there are groups across the whole sector concerned with different types of farming. The issue is whether we end up with a huge list of good-practice or best-practice strategies without any clear way for the Government to bring about Scotland-wide collated action. There is a risk of producing a guddle of options. You might end up with arable farmers not having to take action on biodiversity, which would be a huge loss. They might not be required to consider soil carbon because they have a different set of actions to do.

There needs to be some kind of thread through all of that when it comes to conditionality. Every farm should be contributing to addressing the nature crisis as well as the climate emergency, rather than some farms being all about carbon and nature, whereas some are just about food. There should be an integrated approach.

I am sorry if I sound like a broken record.

The Convener: But it is good to get that on the record.

We will hear from Claudia Beamish and then have our final round of questioning from Angus MacDonald.

Claudia Beamish: Much of what has been touched on by this panel and by the others relates to the absolute significance and value of a just transition. Indeed, we heard from Tom Shields of the just transition commission on the previous panel.

I put this question to each of the panellists, taking the perspective of a wide range of organisations, or indeed that of the 2050 Climate Group, speaking on behalf of young people, as far as it is possible to do that.

Elizabeth Leighton has highlighted energy efficiency, and we have been looking at fuel poverty, together with agricultural issues, with a coherent—[Inaudible.]—what I would call a just transition for agriculture. How do all the panellists view a just transition as being at the core of the climate change plan update? That is what the Government says it wants to achieve.

Jess Cowell: SCCS welcomes the fact that the updated plan, in its introduction, fully acknowledges the language and concept of a just transition. However, we want to see clear

evidence that it is being taken more seriously and embedded throughout the plan.

12:15

We want commitments to a just transition to be underpinned by, for instance, a clear commitment to a specific just transition action plan. We also want a commitment to continue the just transition commission and to seek advice on further steps. Lastly, we want a commitment to a full revision of the current economic strategy in order to recognise the need for a green recovery that includes major green investment to support green jobs in areas such as renewables and electrification, with a strong skills action plan embedded throughout.

Elizabeth Leighton: I agree that the theme of a just transition is strongly embedded in the plan, which is a positive development, but we would like to see more examples of firm policies to show how that is going to be achieved. In some areas, such as buildings, the skills plan and the engagement plan have been brought together with the Government's programmes. I am not saying that it is all there yet, but there is at least an intention to develop tailored plans in that sector to support a just transition through skills and to engage people in that process. That is really positive. The same approach has been taken to food and food waste, but it has not been applied across the board in other sectors, so we would want that aspect to be developed in the final update.

I mentioned the need to show how a just transition will be achieved. With regard to buildings, one immediate action could be to double the investment in a fuel poverty programme that we know works, but we also need to know what the programmes for the future are. I believe that the Government is talking about a working group to look at how programmes can change, but such changes will be brought into play only in 2025. Is that really soon enough, or could something be done sooner? We would hope to see more detail on that in the heat in buildings strategy, but we should be able to pull out from the updated climate plan examples from every sector of how the just transition principles are being met in practice.

Dave Reay: In my view, the most important aspect is the short-term—I hope—context of a green and just recovery. Finlay Bain Kerr mentioned the skills action plan. My dream for that plan, when it was being talked about and developed, was that it would give us a great narrative for addressing some of the inequalities that have been deepened by Covid. It would include investment in skills and jobs for young people and those who have been disproportionately affected by Covid. I still think that that is vital. The criticism of the action plan is

completely valid—it has a lot of good stuff in it, but there is currently no clarity as to where the funding will come from, the level of that funding, the timescales for its delivery, the number of jobs and so on.

The just transition commission has been able to flex with the requirements of Covid to shine a light on how dangerous Covid is in threatening any kind of just transition in Scotland. I hate the phrase “build back better”, but it is about doing that, not so much physically but socially. In the next couple of years, the big job for us all is not only to get on track with the 2030 target if possible. If we meet that target at the expense of equality, we will have failed—that will be an utter failure. Achieving the target needs to go hand in hand with supporting people across Scotland and addressing inequality as we decarbonise.

Finlay Bain Kerr: My fellow panel members have nailed it down quite well. In the light of the pandemic and the impact that it has had on all our lives, young people feel that there has not been a greater opportunity to highlight the role of justice and embed it in all the plans. We would like to see more concrete examples of that.

When we asked our network and respondents to describe a green recovery, they used terminology such as “maximum ambition” and said that it has to be “purposeful” and “just”. The green recovery and just transition are interlinked, and with those terms being in the title of the updated plan, we would have liked to see more tangible policy outputs that would secure the principles of a just transition throughout the different sectors. We have worked with the just transition commission in the past and we appreciate that the language and its acceptance as a crucial part of the transition are already embedded. We are just waiting to see those actions and we feel that, if a green recovery is to happen, those ideas need to be embedded within it.

The Convener: Claudia, are you happy for me to move on to Angus MacDonald's questions?

Claudia Beamish: Yes.

Angus MacDonald: In the interests of time, I will keep this brief. With regard to scrutiny, I am interested to hear the witnesses' views on whether the Scottish Parliament's structures and processes are sufficient to ensure adequate scrutiny of climate change evidence, policy and progress. For example, could such scrutiny be approached and structured differently in the next parliamentary session to ensure that the climate emergency is embedded and mainstreamed, and to demonstrate coherence for COP26? I would like to hear first from Elizabeth Leighton.

Elizabeth Leighton: On timescales, aside from what happened over Christmas, many of us can

agree that parliamentary process and scrutiny are much improved. A much more co-ordinated effort is being made across several committees, with a more focused approach being taken on different aspects of the plan. That has been a really positive development.

I hope that the work that is being done on a joint budget review will help in the future to stitch together the commitments in the plan and the investment commitments, so that we have a good understanding of the likely carbon impacts of our spending decisions in advance, rather than with hindsight. That also applies to the infrastructure investment plan.

The monitoring framework in the climate change plan is a positive development, but we have yet to see how it looks in practice, as we will when the report comes out later in the spring. It would, however, benefit from having interim milestones, which would allow us to know sooner rather than later whether we are on track and whether we are measuring the co-benefits so that we know whether we are achieving a just transition. Are we getting the health benefits, the jobs benefits, and dealing with inequalities? Scrutiny is much improved; I look forward to seeing how the monitoring framework can be strengthened so that we get the kind of evaluation that we need in order to make necessary corrective decisions to keep us on track.

Angus MacDonald: Jess, do you have a view, particularly on alignment with COP26?

Jess Cowell: The issue was discussed at length during the passage of the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. That discussion resulted in the scrutiny period for climate change plans being extended in legislation. The act states that the Scottish ministers must

“lay a draft of the plan before the Parliament for a period of 120 days”,

which is double what was in the 2009 act, which give 60 days for parliamentary consideration.

The timescale is not, however, being adhered to with scrutiny of the climate change plan update. Although it is completely understandable that publication of the plan was delayed from April because of Covid-19, it has been very difficult for stakeholders to give input during the scrutiny period and to provide written evidence. It is such an important document and that is a very short period of time, which means that stakeholders cannot engage properly, or as well, with the scrutiny as they might like. We want the scrutiny period for the next climate change plan to be longer. At COP26 we will be on a global stage, so although it is important to have something to take

there to show that Scotland is leading, it should be a good plan and not a rushed plan.

To come back to something that Finlay Bain Kerr said, I note that we want just-transition principles to be central, so that our policies are applicable in the domestic and international contexts.

Angus MacDonald: I am sure that that will be taken on board.

Dave Reay: My perspective on the committee is that I do not know when you sleep, given the amount that you have had to read over the past three months. As Jess Cowell said, we have to read it as well, and there is definitely so much coming through that managing the time for good scrutiny—particularly with holidays and all the issues of home working and childcare during Covid—is really difficult. On scrutiny by the committee, I always find that you are well briefed that the questions are excellent.

On tackling climate change, it is great that four committees are looking at the climate change plan update, as was discussed earlier. When it comes to structures that can spot antagonisms or inconsistencies, it helps to have multiple committees looking at the same plan. I am guessing that it is a role for the convener and deputy convener to ensure a close relationship with the other conveners and deputy conveners on the questions that are asked. For some issues, the same question might be asked by several committees, but in different contexts, which should draw out inconsistencies and, potentially, show where there are synergies.

From a user perspective, my answer is that giving evidence to the committee has worked really well—but, boy, do you have a busy agenda, and it is not going to get any quieter. That capacity within Parliament and integration across committees will remain vital components.

The Convener: Amen to that. I go to Finlay Bain Kerr for the last contribution.

Finlay Bain Kerr: I echo what has been said about the impacts of this and other committees. The work that you are doing is crucial, and the 2050 Climate Group is appreciative of that.

I would hammer home the point that it is crucial that young people be involved in development of climate policy and action, and that should include our actions at COP26 this year. We have the unique experience of having grown up in a world with climate uncertainty and, now, pending disaster, so climate change is our past, our present and our future. If I can leave a message with you today, it is this: thank you, and we really appreciate young people being involved in the processes.

Angus MacDonald: Thank you.

12:28

The Convener: I thank everyone for your time this morning. It has been very helpful to hear the views of all three sets of witnesses on the climate change plan update.

Meeting continued in private until 12:38.

This is the final edition of the *Official Report* of this meeting. It is part of the Scottish Parliament *Official Report* archive and has been sent for legal deposit.

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