



The Scottish Parliament  
Pàrlamaid na h-Alba

## Official Report

# RURAL AFFAIRS, CLIMATE CHANGE AND ENVIRONMENT COMMITTEE

Wednesday 27 February 2013



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**RURAL AFFAIRS, CLIMATE CHANGE AND ENVIRONMENT COMMITTEE**  
**7<sup>th</sup> Meeting 2013, Session 4**

**CONVENER**

\*Rob Gibson (Caithness, Sutherland and Ross) (SNP)

**DEPUTY CONVENER**

\*Graeme Dey (Angus South) (SNP)

**COMMITTEE MEMBERS**

\*Jayne Baxter (Mid Scotland and Fife) (Lab)

\*Claudia Beamish (South Scotland) (Lab)

\*Nigel Don (Angus North and Mearns) (SNP)

\*Alex Fergusson (Galloway and West Dumfries) (Con)

\*Jim Hume (South Scotland) (LD)

\*Richard Lyle (Central Scotland) (SNP)

\*Angus MacDonald (Falkirk East) (SNP)

\*attended

**THE FOLLOWING ALSO PARTICIPATED:**

Andrew Henderson (Scottish Government)

John Ireland (Scottish Government)

Dr Bob McIntosh (Scottish Government)

Paul Wheelhouse (Minister for Environment and Climate Change)

**CLERK TO THE COMMITTEE**

Lynn Tullis

**LOCATION**

Committee Room 2



## Scottish Parliament

### Rural Affairs, Climate Change and Environment Committee

*Wednesday 27 February 2013*

[The Convener *opened the meeting at 09:31*]

#### **“Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027”**

**The Convener (Rob Gibson):** Welcome to the seventh meeting in 2013 of the Rural Affairs, Climate Change and Environment Committee. Members and the public should turn off mobiles and BlackBerrys et cetera; if you leave them in flight mode or silent, that will affect the broadcasting system.

Agenda item 1 is to take evidence on “Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027—The Draft Second Report on Proposals and Policies” from Paul Wheelhouse, Minister for Environment and Climate Change, and his staff. Good morning and welcome, minister.

**The Minister for Environment and Climate Change (Paul Wheelhouse):** Good morning.

**The Convener:** Perhaps you can introduce your staff to us. I do not know whether you wish to make any initial remarks.

**Paul Wheelhouse:** I will make a short opening statement, if I may.

**The Convener:** That is fine.

**Paul Wheelhouse:** I do not want to steal your time for grilling me later.

Thank you for inviting me to the committee today, convener, to talk about the draft second report on proposals and policies for meeting Scotland's climate change targets. Climate change is one of the most important issues facing the world today. The Scottish National Party was elected in 2007 with a manifesto commitment to legislate for a target to cut Scotland's emissions by 80 per cent by 2050 and to set annual targets to fix the pathway towards that goal.

In 2009, the Scottish Parliament voted unanimously to pass the Climate Change (Scotland) Act 2009 and we have been working together since then to lay the foundations for what I think we all hope will be a genuine and sustainable transition towards Scotland becoming a low-carbon economy and society.

In October 2011, the Scottish Government extended the set of annual greenhouse gas emission targets, with a further batch covering the period 2023 to 2027. That triggered the requirement for a second climate change report on proposals and policies—or RPP2, as we have all come to call it—setting out how the new targets could be achieved. The RPP2 also considers the progress made towards implementing the proposals and policies set out in RPP1, which focused on the period 2010 to 2022.

In 2010, Scottish emissions were 24.3 per cent lower than in 1990 and more than halfway towards the 2020 target of 42 per cent. By way of comparison, Scotland has reduced its emissions faster than any member state of the European Union 15 and more than the average of the expanded EU27.

It is fair to say that, unfortunately, the issue of climate change has slipped down the global agenda in recent years, with international negotiations stalling in the face of concerns about the economic downturn. That has ramifications for Scotland, because we are part of the global system and decisions taken by the United Kingdom, the EU and more widely have implications for emissions here at home.

However, acting to cut greenhouse gas emissions and establishing the low-carbon transition is the right thing to do. The Scottish Government will continue to challenge the world to set tough targets for reducing emissions. Make no mistake: our world-leading targets, of which we are justifiably proud, are extremely challenging, and the level of accountability that our legislation requires of Scottish ministers, driven by annual targets and reporting as well as the rigorous RPP process, is greater than anything we know of anywhere else.

The draft RPP2 discusses how the challenge has increased due to revisions in the data that we use to calculate and project emissions, but we remain absolutely committed to meeting our climate change targets. RPP2 shows how that can be done, building on RPP1 with new or enhanced measures such as our new 2030 target to decarbonise electricity generation, reducing its emissions intensity by more than four fifths from 2010 levels; the evolution of our action to tackle the energy efficiency of Scotland's housing stock, with the launch of our national retrofit programme; and our commitment to explore ways to maximise the emissions sequestration potential of Scotland's peatland.

A low-carbon society makes sense for Scotland because, aside from the economic opportunities that come from Scotland's natural advantage in renewable energy sources, Scotland's consumers can save money on household bills through simple

energy-efficiency measures and society as a whole can experience health, welfare and environmental benefits.

The draft report sets out options and recognises the inherent uncertainties in looking more than a decade into the future. It shows that there is some flexibility in deciding which proposals should be adopted and which options can be held in reserve. We need that flexibility. Between 2010-11 and 2014-15, the Scottish Government's resource budget is being cut by 7.7 per cent in real terms and its capital budget is being cut by 26 per cent.

The challenge of finding ways of funding action on climate change is considerable, but taking action on climate change does not just involve Government ministers agreeing targets. Government, businesses and individuals all can and should make practical changes, whether those mean doing less of some things or more of others.

The draft report is one of a set of documents that set out our comprehensive approach to building a low-carbon Scotland. We have also published our energy efficiency action plan, a low-carbon economic strategy and an electricity generation policy statement. I will publish our low-carbon behaviours framework next week, as part of United Kingdom climate week.

I am proud of the Climate Change (Scotland) Act 2009. I am proud of how members of the committee and the wider Parliament worked together to make that strong legislation. Some have said that the political consensus on climate change is over; I hope that that is not true and that, in these financially difficult times, we can work together again to ensure that Scotland's action on climate change continues to be world leading.

With me today are John Ireland and Andrew Henderson, who are officials in the Scottish Government's directorate for energy and climate change. Both of them worked on the draft report. Also on my right is Bob McIntosh, director for environment and forestry.

**The Convener:** I will kick off with governance and delivery issues. The consensus in the written and oral evidence that the committee has received is that the draft RPP2 does not provide for the step change that is required to meet our targets and that it relies too heavily on proposals rather than policies. How do you respond to that?

**Paul Wheelhouse:** It is important to bear in mind the fact that the legislation said that, in preparing for documents such as the draft report, the Government could—fairly—include proposals and policies. Many proposals will involve consultation with Parliament and society on the impact that they might have on businesses,

communities and individuals. It would be arrogant and incorrect of the Government to assume that we could implement all proposals as policies without consulting appropriately, as Parliament requires of all legislation and measures that have impacts on business and the community.

As I said in my introduction, we are looking at the period to 2027, in which many things are unknown, such as technical capability, the legislative framework and the regulatory frameworks in different sectors. We need to take those factors into account. In future, it might be necessary to shift from a proposal and to find a replacement, if a proposal would not be practical to deliver.

**The Convener:** You say that the proposals will be consulted on. Perhaps you can bear that in mind when members ask questions about particular areas.

**Paul Wheelhouse:** Sure.

**The Convener:** The Scottish Environment Protection Agency's chief executive, James Curran, and the policy director of ClimateXChange, Andy Kerr, concurred that the draft RPP2

"says very little about how we go about putting in a governance package that ensures delivery."—[*Official Report, Rural Affairs, Climate Change and Environment Committee*, 6 February 2013; c 1700.]

What should the governance package contain?

**Paul Wheelhouse:** On governance measures, it is important that the delivery of our climate action is overseen by the Scottish Government's emissions reduction programme board, which meets quarterly and is chaired by the director general enterprise, environment and digital, Graeme Dickson. Its membership covers directors who lead policy in RPP2 sectors.

The board recently added two non-executive members—Professor James Curran, who is SEPA's chief executive, and Alan Thompson, whose background is in the electricity industry—to provide an independent perspective and challenge to the Government. Each board member is responsible for maintaining a carbon-reduction activity report on actions in their sector, and those reports are available on the Scottish Government's website.

An architecture is in place. We are introducing a challenge function; James Curran and others will be able to challenge the Government to go further when they feel that that is necessary. It is important that we have that capability.

As well as that on-going oversight, the Government is required to make a multitude of reports under the Climate Change (Scotland) Act 2009, including an annual report on emissions

targets—I had to give a statement on having missed the target last year—and reports on Scotland's consumption-based emissions, the first of which is due in 2013. That will be not an annual report but a periodic one. The Government must produce reports on the emissions impact of electricity generation functions as part of the annual targets report, a progress report on the energy efficiency action plan, a progress report on the renewable heat action plan and a review of energy efficiency.

**The Convener:** In-between those reports, is it possible for the committee to quiz the emissions reduction programme board?

**Paul Wheelhouse:** I am happy to come back to the committee about that if there is any opportunity to put forward members of the board for scrutiny. I am not sure what the arrangements are at present but we can review that.

**Claudia Beamish (South Scotland) (Lab):** At the start of the meeting you gave a helpful analysis of the range of ways in which the commitments under the 2009 act are checked. As the minister responsible for governance and delivery, can you shed light on how you are able to work with other departments? I refer in particular to housing and transport, which have been highlighted a great deal, but that is not to the exclusion of other issues.

**Paul Wheelhouse:** Claudia Beamish raises a fair point. Since I took the position I now hold, I have engaged in ministerial bilaterals with colleagues in housing and transport, initially to make them aware of the scale of the challenge that we face and to anticipate some of the issues from Parliament and stakeholders in their respective sectors. I have sought colleagues' ideas about the policy changes that they think would be useful and I hope that we have taken on board many of the points that they have raised.

We also have an on-going dialogue between officials in the energy and climate change team and their counterparts in transport and housing, who have assisted with the modelling that goes into RPP2. The figures that are generated for housing and transport are not generated by my officials in climate change; they are working with colleagues in the respective sectors, running through ideas and seeing how those ideas impact on the figures. That is particularly the case in relation to transport emissions. There is specialist modelling expertise in the transport department and in housing, which gives us modelling of energy efficiency measures and their impact on energy consumption. If it would be helpful, John Ireland could comment on the improved interaction that there has been with colleagues in building the report.

**The Convener:** It would be helpful if we could gently try to keep to the areas for which we have a particular responsibility. There are all these other aspects that are the responsibility of other committees. Although those are areas in which there has to be measurement, in our questioning we must try to look at governance, so that in our report we can make recommendations to the minister on the subjects for which we have responsibility.

**Claudia Beamish:** With respect, convener, I would see it as our responsibility to ensure that there is a step change in governance and delivery all the way across. It is in that context that I am pushing on these questions.

**The Convener:** I am happy to see it so in theory, but four reports will be put together on RPP2, and other committees with responsibility for those issues will be commenting on them.

It would be only courteous to allow Bob McIntosh to finish.

**Paul Wheelhouse:** It was John Ireland.

**John Ireland (Scottish Government):** I will not add an awful lot to what the minister has said, other than to stress the close collaboration at official level between different portfolios.

**Claudia Beamish:** That is helpful. I am beginning to understand the structure for the reporting.

**The Convener:** Indeed. That is valuable at the theoretical level.

Some witnesses, including James Curran of the Scottish Environment Protection Agency and Dr Andy Kerr, told the committee that there was "no headroom" built into the document and that no plan Bs were in place. What is the minister's view on that?

**Paul Wheelhouse:** As I have said, Parliament has set extremely challenging targets. We will try to make an impact—if we can generate excess emissions abatement, we will do so. We could perhaps return to the point about how reliant we are on the Europe-wide 30 per cent target but, overall, even with a 20 per cent figure over the entire period that the report covers, up to 2027, there would be, in aggregate, a 4 megatonne excess abatement—so we overachieve over the period. That is very challenging on an annual basis. We have tried to tackle the cumulative emissions and, where possible, we have also tried to achieve additional abatement over and above what we need in individual years.

The extremely challenging targets were initially set on the assumption of the Committee on Climate Change that there would be a European Union-wide 30 per cent target, and we are

disappointed that that has not yet been achieved, although we continue to be optimistic that it can be achieved when the European Council considers the matter in 2014-15, so it is not over yet—we are very much pushing for that. We believe that we can create some degree of comfort, particularly on the EU-wide 30 per cent target scenario, where we have considerable wriggle room in each individual year through to 2027.

09:45

**The Convener:** Before we finish this section of questions, I want to mention the emissions reduction programme board. I understand that it last met in June last year. Has it met since then? Do we have knowledge of that?

**John Ireland:** The emissions reduction programme board met in December to discuss the status of the RPP draft at that point. Its next meeting is tomorrow. We took a decision over the summer to work more informally. Therefore, although the board did not meet formally between June and December 2012, there was very close conversation between the members of the board—at directorial level—and the RPP team. There was also close conversation with the respective portfolio ministers. Much of the work during that period was done behind the scenes.

**The Convener:** That has made it clear. We will be investigating the board's work in more detail.

Claudia Beamish has questions on progress since RPP1.

**Claudia Beamish:** If we are to meet our emissions reduction targets, it is essential to link RPP1 and RPP2, and our obligations under the Climate Change (Scotland) Act 2009 require RPP2 to report on progress since RPP1, as you of course know, minister. Comments have been made about the documents not being directly comparable, which is a cause for concern. The committee seeks reassurance on that. Is there scope for the final document to be more explicit in illustrating how the statutory requirement for RPP2 to report on progress since RPP1 has been met? Would a tabular form, as was used in RPP1, be helpful in enabling people to identify the differences, where the slack is and how it is being caught up?

**Paul Wheelhouse:** That point has been made by a number of stakeholders and by colleagues in Parliament. RPP2 replaces RPP1, and our intention is to present a coherent set of proposals. As you will appreciate, the document is 168 pages long, with 77 pages of technical annex. It is already quite complex. We are trying to learn from this exercise, and we know that there are some presentational issues, which we can work on for the final version.

We are trying to present a coherent set of proposals and policies without constant reference to the previous report, which would end up confusing the reader. RPP2 stands on its own in that regard, and that is the intention. In many cases, comparing projected abatement between the two documents will be unhelpful, because of the revisions to the underlying methodology for producing the two sets of figures. As I have tried to set out in the document, and as I have made clear in the chamber, there have been significant revisions to the baseline emissions data that now underpin the RPP2 document.

I am happy to consider whether there is scope to make it clearer in the final version of RPP2 where policies and proposals have evolved since 2011. Looking at individual lines, we have tried to reflect on and show where there has been progress in the implementation of the ideas that were set out in RPP1. We welcome any specific guidance from the committee on how we can improve on that.

RPP1 was published less than two years ago, so many of the proposals and policies remain in RPP2, as would be expected, and the draft report describes how those have evolved. Each sectoral chapter also includes a summary of progress highlights to try to help the reader.

However, I certainly welcome any suggestions that the committee may have on how to improve the document. If the recommendation is that a tabular form would be of assistance, we shall look at that. However, that may be counterproductive where two sets of figures are calculated on different bases, as that could end up confusing the reader. I hope that that makes some sense to Claudia Beamish.

**Claudia Beamish:** The complexities of the changes to the baseline and to methodologies may be beyond some of us, but I think that, even taking account of that, some of us—including me, I hope—might be able to understand the explanation.

It would be useful to have a comparison so that there can be reassurance for the public and also, because, frankly, the report should be inspiring for people beyond Government, who should be able to see what things are working and why and where we need to push on in certain areas.

**The Convener:** That is a fair point. Does Claudia Beamish have any more questions?

**Claudia Beamish:** That is all from me.

**The Convener:** Angus MacDonald will move us on to the missed 2010 target.

**Angus MacDonald (Falkirk East) (SNP):** Obviously, the fact that we missed the 2010 target, albeit slightly, was disappointing, although annual



fluctuations are to be expected. Of course, Scotland faces more challenging annual targets, whereas the UK sets five-yearly targets, which allow for more flexibility. However, the draft RPP2 leaves it to the reader to extrapolate what the Scottish Government is doing to make up for the missed 2010 target. Could the final document be more explicit on that point?

**Paul Wheelhouse:** That is a fair point. On the 2010 target, although I know that this point has been dismissed by some stakeholders as the Government making excuses, it is important to recognise that, in 2010, Scotland, Wales and the rest of the UK suffered the impact of the coldest period over two quarters since 1919. As a consequence, there were significant increases in domestic consumption of gas for heating, which was only right to protect the health of individuals in very cold parts of the country and in very severe weather. As I said, all three areas that I am familiar with—Scotland, Wales and the rest of the UK—suffered to a great degree as a result.

One proof of that is the recently published UK emissions figures for 2011, which show that in 2011 the overall UK emissions total went down by 7 per cent. The largest decrease between 2010 and 2011 was experienced in the residential sector, where emissions dropped by 22 per cent. It is too early for us to say what the impact will be on Scotland's 2011 figures, but we expect some compensatory reduction because 2011 was a warmer year. There is still the possibility of data revisions, so at this stage it is impossible to say whether Scotland's figures will come down to lower than our target for 2011. However, the UK figures are indicative of the direction of change that took place at a UK level between those two years.

Mr MacDonald makes a good point about the clarity of the report. If we can improve the clarity on how we hope to claw back the abatement needed to make up for the missed 2010 target, we will do so. However, as I said earlier to the convener, we are confident that, if the proposals and policies in the report are implemented—I appreciate that that is an if and that, as a Parliament, we will need to work together to secure that—we will achieve the abatement required to compensate for 2010. In the EU 30 per cent target scenario, if we meet our target every year over the period up to 2027, we will overachieve by a net total of 18 megatonnes by 2027, which would be a very substantial overachievement. In the 20 per cent scenario, we will overachieve by 4 megatonnes over the period up to 2027.

We can demonstrate how Scotland can meet its targets and more than make up the shortfall that

we experienced in 2010 if the proposals and policies are implemented.

**Angus MacDonald:** Thank you, minister. I am sure that further clarity in the final document would be appreciated by all.

I have a related question. The 2020 target is now higher than was originally envisaged. How does the draft RPP2 reflect that?

**Paul Wheelhouse:** You are correct in the sense that, because of the revisions to the baseline, the Scottish Government now has to demonstrate how we can deliver a 43.66 per cent reduction in our emissions just to achieve the absolute target that the Committee on Climate Change set, because the starting point has moved. In practice, in the 20 per cent scenario, we will achieve 42.8 per cent—that is in the absence of an EU-wide 30 per cent target—if the proposals and policies are implemented. In the 30 per cent scenario, we will go well beyond that, more than achieving our 42 per cent target and exceeding the 43.66 per cent as well.

We are confident that the document sets out how we can achieve the target. Because it is the absolute target that we have to meet rather than a percentage target, we will fall slightly short in the 20 per cent scenario, but we will more than make up for that in the subsequent two years—in 2021 and 2022. I hope that that helps to answer your question.

**The Convener:** We are about to move on to future targets, but members might want to ask further questions about the missed target first.

**Jim Hume (South Scotland) (LD):** I am a little bit confused. On 2 June 2009, the then Minister for Transport, Infrastructure and Climate Change, Stewart Stevenson, said to the Transport, Infrastructure and Climate Change Committee:

“failure to meet a target will be precisely the point at which the urgent action that is asked of the Government will be most needed.”—[*Official Report, Transport, Infrastructure and Climate Change Committee*, 2 June 2009; c 1856-7.]

However, if we look at the abatement targets, we see that most of the urgent action will happen after 2020. For example, the figures on rural land use are only just over 3 megatonnes of CO<sub>2</sub> pre 2020 and more than 13 megatonnes post 2020. Similarly, the figures for homes and communities are 4 megatonnes pre 2020 and 12 megatonnes post 2020, and the figures for transport are 7 megatonnes pre 2020 and a higher figure post 2020.

Does the minister believe that the urgent action that his predecessor mentioned in relation to a missed target is happening?

**Paul Wheelhouse:** I would certainly contest the accusation that we are not taking urgent action. The Scottish Government has committed more than £1.1 billion over the spending review period for additional climate change action, and investment will support a range of climate change measures. Following the recent spring budget revisions, that includes more than £340 million to drive the growth of low-carbon energy over the next three years, involving renewables and grid enhancement, and more than £350 million for homes and communities, including energy efficiency and the climate challenge fund. That includes the additional £24 million that Mr Swinney announced in the 2013-14 budget in recent weeks, and the budget for sustainability measures in the housing sector. There is more than £200 million to reduce the impact of transport emissions through active travel, low-carbon vehicles and congestion reduction. We are taking decisive action.

On rural land use, which I appreciate that Mr Hume has some expertise in, we are making urgent investment now in relation to forestry, with the Government's commitment to 10,000 hectares per annum of additional woodland planting. We are on track to achieve that target, but we are at an early stage and, because of the nature of planting, there will not be an impact on emissions abatement until eight to 10 years after the trees are planted. Nevertheless, we are taking urgent action now, and the abatement potential of that investment will kick in in eight to 10 years' time, given the peak potential growth rate of trees. If investment in peatlands is adopted and rolled out on a larger scale, as we hope it will be in setting out the proposals in the document, the emissions abatement will not happen overnight, but as peatlands are progressively restored to their optimal condition, their ability to sequester carbon dioxide will be improved.

So, a mixture of initiatives needs to be taken, including those that have almost immediate effect, such as putting insulation in homes, and longer-term initiatives, such as planting trees and restoring habitats such as peatlands.

10:00

**Claudia Beamish:** I listened with care to what you said about the cold winter being a reason for the failed emission targets. Can you give any reassurance about how that possibility has been factored in for the future, in view of the fact that Scottish winters can be cold and somewhat unpredictable, so that we do not find ourselves in similar circumstances in the future, with the same reason being given again?

**Paul Wheelhouse:** That is a fair point. To achieve the targets, it is important that we invest in energy efficiency measures to try to reduce the

need for households to up their consumption of gas in particular and other forms of domestic heating. We recognise that our weather can be volatile. I merely made the point to the committee and the Parliament that if other Governments are also claiming that the weather was a problem, it is unreasonable to accuse the Scottish Government of trying to hide the truth or using excuses for missing the target, given that it was the coldest winter since 1919 and the level of cold weather was well above what we would expect in a normal year.

As you rightly said, we must try to protect ourselves from such spikes in future. Investment in energy efficiency is obviously the way to go in that regard. There was a welcome announcement by the Cabinet Secretary for Finance, Employment and Sustainable Growth in the most recent budget statement of investment in improved energy efficiency, which was very much welcomed by me personally on behalf of us all.

**Claudia Beamish:** Would you say that, in view of comments from some quarters, that investment is enough to give the reassurance that I seek?

**Paul Wheelhouse:** I fully recognise that £24 million will not address the entire problem but, through the national retrofit programme and other funding sources such as the green deal, the Government hopes to be able to increase the level of investment in domestic energy efficiency up to £200 million per annum, which will be a step change in the level of activity in that sector over the forthcoming year. There are reasons to be optimistic that we will achieve more. I have listened to stakeholders who are pushing for more investment in the area, but we must go at a pace with which we can cope. There are challenges in the short term in scaling up that activity. In addition, we cannot guarantee that green deal funding will come to Scotland, but we are projecting what level of funding might be attracted. We could overachieve on that and end up with more, but we are making what we think is a reasonable assumption about the level of funding from the green deal that will supplement Scottish Government funding.

**Graeme Dey (Angus South) (SNP):** At the risk of labouring the point, I wonder whether there is a contingency in planning for the years ahead in case we have another severe winter or two such winters. Is there some wriggle room that would allow us to cope with such possibilities?

**Paul Wheelhouse:** As I have outlined, the EU-wide scenario is for a 30 per cent target, so there clearly is substantial wriggle room in terms of our overachievement on annual targets. The figures show that, over the period up to 2027, we will have substantial room for excess cumulative emissions abatement. However, I recognise that if we do not

have that in place, we will be in a more vulnerable position in terms of annual targets, so we need to reflect on that. The weather in 2010 was an exceptional event and, for obvious reasons, I hope that it does not become the norm.

**Graeme Dey:** What did we actually learn from the reasons behind what happened in 2010? How is that informing what we do going forward? Yes, it was an unusual event, but presumably we have learned from it. What does that tell us about what may lie ahead and how we need to react to it?

**Paul Wheelhouse:** It is important for the committee to note that there were two major shifts in the data in 2010; the main one that has been highlighted was obviously the weather, which resulted in over 1 megatonne of additional abatement in Scotland.

There was also a significant data revision in the same year. That was unhelpful, obviously, and more than eclipsed the amount by which we missed our target. Both factors were important and there is no reason to assume that the same thing will happen in every year. However, we always face the possibility of data revisions, and the data revision contributed to our missing the target.

I take on board the point about the need for a coherent plan. In the document and in my statement, we noted that the decarbonisation of electricity generation is gathering pace. We are moving much faster than was anticipated; 36.3 per cent of electricity was generated by renewables in 2011, compared with the initial target of 31 per cent. We are doing a lot in other sectors of the economy to overachieve on targets.

We also have an ambitious programme to decarbonise our heat supply, by providing measures such as district heating and biomass heating schemes across Scotland, to try to reduce our reliance on gas, which is more damaging than renewables or biomass in terms of carbon emissions, although it is not as bad as coal.

**Alex Fergusson (Galloway and West Dumfries) (Con):** Minister, may I test you on something that you said in response, I think, to Jim Hume? If I picked you up rightly, you said that the Government's planting targets and new planting policy over the next few years are part of the action that has been taken in response to the missed target or shortfall—whatever we call it—in 2010. I am a little confused about how a new planting target of an average of 10,000 hectares per year, with 100,000 hectares by 2022, can be deemed as extra action, given that the intention in RPP1 was to plant up to 15,000 hectares a year.

**Paul Wheelhouse:** I am probably guilty of using loose language—that is my honest answer. I was trying to respond to what Mr Hume said about rural land use by making the point that we have

targets for planting forestry, which by its nature has a long-term impact. When we plant new saplings, there is no immediate impact; the peak period of carbon sequestration for a sitka spruce is maybe eight to 10 years into its life. Decisions that we take about planting now will have an impact in eight to 10 years' time. That was my point; I was not trying to say that the policy is necessarily our response to what happened in 2010.

However, the policy is an important part of addressing our shortfall on emissions, because forestry is a key way by which we offset Scotland's emissions, as I am sure that you know. The Cabinet Secretary for Rural Affairs and the Environment, Richard Lochhead, set up the woodland expansion advisory group to address concerns about the possible impact of tree planting on other land uses, such as farming. The group reported on 22 June 2012. There have been policy changes since RPP1 was produced. Frustrations about the perceived impact of the target of 15,000 hectares per annum on farming interests, particularly in the livestock sector, resulted in a change. We are working with farming and forestry concerns to come up with a plan that will enable us to deliver on the 10,000 hectares target.

**Alex Fergusson:** Thank you, minister. We will come back to forestry later, so perhaps we will expand on some of that.

**The Convener:** We shall indeed. Richard Lyle, you were going to ask about future targets. Can you find a question that has not already been asked?

**Richard Lyle (Central Scotland) (SNP):** I think that there are several questions. I know that 2010 was a bad year, but if my memory serves me rightly, there was another bad winter in the previous decade. We might know what the weather will do next week or next month, but we do not know what it will do next year or in five years' time.

Minister, you have been asked about the missed target in 2010; I want to ask about future targets. The draft RPP2 shows that Scotland will be able to meet all its annual targets between now and 2027 only if all the policies and proposals in the document are implemented and the EU moves its target from 20 to 30 per cent. What more can be done to ensure that annual targets are met, if that combination of circumstances is not achieved?

Has the Scottish Government got the balance right between proposals and policies? I know that you talked a little about that, but perhaps you will expand on what you said.

**Paul Wheelhouse:** There were a couple of questions there. I will deal very briefly with the point about extreme weather and its predictability

first. The cabinet secretary and I recognise that point, and the cabinet secretary will chair a meeting soon to start the ball rolling for a summit on extreme weather and how we respond to it. The issue is more to do with adaptation than mitigation. We will look at the impacts of extreme weather and how they will feed into the adaptation planning and programming that the 2009 act requires us to develop. We are alive to that issue and we are trying to plan for how we will cope with extreme weather, with particular regard to farming and other areas in which it has a severe impact.

I will expand on my earlier point about targets, to explain where we are coming from. The Committee on Climate Change sets targets for the Scottish Government in terms of absolute figures. It does not specify that the Government has to achieve a 42 per cent target in 2020; it tells us that we have to achieve a target in 2020 of 40.7 megatonnes. In-between the Committee on Climate Change doing that and us writing this report, the assumptions about the emissions baseline that we are starting from have moved. We are starting from a higher position so, to get to that figure, we have a bigger journey to go on or a bigger mountain to climb, if you like, with regard to action that needs to be taken.

To achieve the absolute figure that the Committee on Climate Change has set us, we are required to achieve 43.66 per cent emissions abatement by 2020, rather than the Government's own target of 42 per cent.

However, if you look even at the 20 per cent EU target and assume, to be fair, that proposals and policies are implemented, in each year we will achieve more abatement as a percentage reduction than we would achieve on the trajectory that we needed to follow to get to 42 per cent. We are trying now to achieve 43.66 per cent, so we are going down at a sharper rate.

For your benefit, convener, we will supply members with a table that I hope will set that out in clear terms, in case the clerks are struggling with it.

I will give an example. In 2013, the Committee on Climate Change recommended the target of 47.98 megatonnes, which the Parliament has adopted. To be on the right trajectory to achieve the Government's target of a 42 per cent reduction by 2020, we need a 31.7 per cent reduction in 2013, based on our 1990 baseline. We will actually deliver a 33.9 per cent reduction. In each year, we will achieve more than that trajectory requires of us, because we are now aiming for a deeper drop than we were required to. In absolute terms we have missed the target, but in percentage terms we will achieve the target that the Government has set itself.

With regard to the balance between proposals and policies, all I can say is that although there are not sectoral targets, we are looking at what impacts different sectors can make to contribute to an overall abatement target. In some cases that requires a different balance between proposals and policies between one part of the economy and others. That reflects the fact that, in many cases, these are new technologies and initiatives, which often will require regulatory change, legislation or extensive consultation before they are implemented. They are what they are, and I hope that, with Parliament's support, we can firm up proposals into policies.

**Richard Lyle:** I will come back in briefly. We missed the 2010 target and we are trying to make up the difference. Hypothetically, if we have a bad winter in the next couple of years, that could really put us back again. Although I know your position on this question, I will ask you it. It has been said often enough. Has the Scottish Government done any contingency planning for the possibility of purchasing credits on the international market over the next few years, in case we do not meet our targets or make up our 2010 shortfall?

**Paul Wheelhouse:** It is true to say that the Scottish Government has the power to draw down credits, if necessary. Under the Climate Change (Scotland) Act 2009, the ability of ministers to offset excess emissions is restricted to 20 per cent of the difference between target years. Therefore, if the target is to reduce emissions by 3 per cent year on year, it would be possible to offset the equivalent of 0.6 per cent of emissions each year. That would go part of the way towards securing an overall drop but not the whole way. That is a fair constraint that the Parliament has placed on the Government to ensure that, as a Government and as a Parliament, we continue to generate genuine emissions abatement rather than rely on carbon credits.

10:15

The steep drop in emissions between 2012 and 2013 would allow up to 1.05 megatonnes to be offset, at an estimated cost of anything between £6 million and £13 million. In subsequent years, the offsets would be limited to approximately 0.2 megatonnes to 0.3 megatonnes, which might cost between £1.2 million and £26 million in 2014 and between £9 million and £28 million in 2027. The cost depends on what assumptions are made about the carbon price, which is very low at the moment. However, if carbon trading units are taken out of the system—as we hope will happen—the carbon price might rise, which would make it more expensive to offset in that way. Those figures are based on the carbon price

trajectory provided by the Department of Energy and Climate Change.

I stress that it is not this Government's intention to use such offsets, but there is a power to do so. We cannot guarantee what a future Administration might choose to do, but there is a capability for ministers to do that if needed. However, it is very much our intention to avoid doing that, because we recognise the need to achieve our targets through domestic effort. I hope that that addresses your point.

**Richard Lyle:** Thank you very much.

**Graeme Dey:** The more people we have living in Scotland, presumably the greater our potential to generate emissions. That being the case, what assessment if any has been made of the potential impact of changes in population size for RPP2?

**Paul Wheelhouse:** The deputy convener makes an important point. The document's underlying baseline assumptions about emissions reflect our understanding of population growth and economic growth. Up-to-date assumptions about what economic growth will be like, both in the immediate future and in the longer term, are fed in. All of those are important factors in setting the baseline emissions and, therefore, in setting the parameters within which particular sectors are expected to achieve their abatements. For example, we need to make assumptions about livestock numbers in farming and about underlying transport demand, such as the use of private cars and the growth in traffic numbers. All those things are taken department by department or line by line and fed into the model. Therefore, the RPP2 assumptions already include our latest understanding of what population growth will be like.

Obviously, as we iterate the document and its underlying assumptions, we will update our baseline emission projections. As I said to Mr Lyle, things have been made more difficult for us because population has been growing faster than was assumed in the years leading up to the 2009 act.

**Graeme Dey:** All that being the case, is it your view that we can trust the accuracy of the monitoring of emissions reductions? Is that pretty switched on?

**Paul Wheelhouse:** As the document sets out, we could have used the Committee on Climate Change figures throughout, which would have made it very easy for ministers to demonstrate how we will achieve the targets. What we have tried to do is to anticipate the figures against which we will be judged, taking into account the various factors that you have outlined, such as population growth. The figures have been updated to reflect our improved understanding of the underlying data

as we move forward. We are trying to anticipate exactly the kind of figures that, as a Government and as a Parliament, we will be judged against and then project forward on that basis rather than use the perhaps slightly older methodology that the Committee on Climate Change has adopted. We have made things more difficult for ourselves, but I think that that is the right thing to do.

Therefore, we have taken fully into account our best understanding of matters at this time. I am not saying that our understanding is perfect—it is difficult to project population growth at the best of times—but we have taken into account our best understanding of population growth, economic growth, transport growth and various other factors, which have been fed into these figures. We will continue to evolve our understanding as we go forward.

It is worth stating that, unlike the UK Government, which has considerable modelling capacity, in preparing our work on the targets we are reliant on some figures coming forward from the UK and from the Committee on Climate Change.

**The Convener:** Nigel Don will lead the questions on technical abatement measures.

**Nigel Don (Angus North and Mearns) (SNP):** Good morning, minister. On page 163 of the draft report, the table on homes and communities refers towards the bottom to "Additional Technical Potential", which starts with the figure of 72 in 2018. The tables on transport and on waste and resource efficiency have no similar lines. The rural land use table refers to

"Developments in agricultural technology from 2020",

which start—unsurprisingly—from 2020, and

"Additional technical potential from low carbon land use",

which kicks in from 2025.

The tables might well reflect the fact that we know quite a lot about how energy is used in business, houses and transport, so we can put in sensible numbers and understand where they might come from. I recognise that the numbers are for some distance ahead—you have commented on the inherent uncertainty in looking so far ahead—but can you reassure me that the final document will provide a bit more detail on what you expect to happen in relation to rural land use?

**Paul Wheelhouse:** We are certainly conscious that a main criticism has been about a lack of detail. I will explain the reasons for that and the steps that we will take to address that.

I might have picked you up incorrectly, but I think that you suggested that the transport table did not have an equivalent line to that for homes and communities.

**Nigel Don:** To be fair, that is what I said.

**Paul Wheelhouse:** The line for

“Lower Emission Potential in Transport”

is the equivalent line for the transport portfolio. That potential starts to take effect from 2025 to 2027.

As for the principle of the lack of detail, I will explain why we have arrived at the current position. We are looking at a period that is some distance ahead. Technology is driving changes in emissions from vehicles and other forms of transport in particular.

I reassure you that the figures that are in the draft report have been modelled with genuine figures. We have looked at options that we as a Government would not necessarily adopt as policies, but we are confident that we can deliver the amount of abatement, if that is needed. We will seek to provide a little more detail in the final document to address the concern that has been expressed about a lack of detail. We are working with transport and housing colleagues on that, and we will be able to deal with the rural portfolio ourselves. We will seek to provide a bit more clarity on the figures in the final version of the report, to address the concerns that people have expressed.

I will explain where we are coming from on rural land use, in which you expressed an interest. The document contains a proposal for a target of 21,000 hectares of peatland restoration per annum, which is one of the main planks by which we hope to achieve rural land use emissions abatement in the period up to 2027. That action will involve challenges. We will have to identify the appropriate incentives for private landowners and others, such as non-governmental organisations, to work together to deliver projects.

That was illustrated when I met RSPB Scotland representatives at the RSPB's Loch Leven reserve. They talked about the Forsinard project in the flow country, which involves not only RSPB land but land that is owned by Lord Thurso. The RSPB has had to work with a private landowner to deliver a landscape-scale project that is of a sufficient scale to deliver the biodiversity impacts that are sought.

We know that partners will have to collaborate. It will be rare that a single block of land is available to be used for a project. That presents us with challenges. The Scotland rural development programme is having to be redrafted on the basis of decisions that have been made in Europe. We are still waiting for the final details of what the science tells us is the abatement potential of peatland.

A number of factors are uncertain. The target of 21,000 hectares is there. We have looked at the potential for increasing that target as part of our rural land use technical abatement option from 2025 to 2027. The position will be influenced by all the factors. Once we know the detail of what is involved in the abatement potential of peatland—that relates to the context of the SRDP and the degree to which we can discuss the peatland plan with private sector partners and others to identify the mechanisms for delivering it—we will have more clarity.

If all the ducks were to be in a row and we were to have in place a system through which we could work with partners on delivery, we could deliver more abatement and up our investment in peatlands further. That would help us to deliver the additional abatement. Alternatively, we might have to look at investing in programmes such as woodlands in and around towns and other land use investments that would deliver the abatement differently. That will depend on the answers to the questions that I have raised.

**Dr Bob McIntosh (Scottish Government):** We see potential in some of these things, but it is a little difficult at the moment to be absolutely clear about the figures. The science behind some of these things is still a bit unclear, particularly on peatlands—we hope that the next International Union for Conservation of Nature report will produce some more definitive figures, which will allow us to be more certain about some of the predictions.

**Nigel Don:** Is there any potential within farming methodologies for lower-carbon farming? Are people working on that?

**Paul Wheelhouse:** That is a good example of an area where we are already making significant assumptions about improvements in farming practice through the farming for a better climate programme, improvements in the use of nitrate-based fertilisers and other improvements involving the sequestration of carbon into soils. Our understanding of those areas is improving all the time, as it is in relation to peatlands.

There may well be possibilities during the period to 2027—we are a long way out—whereby we could yet identify additional possible measures, but we are conscious that we can push any sector only so far, so fast. We are already assuming that there will be substantial improvements in agricultural practices that will have an impact on emissions abatement. That is not to say that it is impossible to do something more as our knowledge improves during the period. That could be considered.

To give confidence to the committee, I can say that the figures in the report for rural land use have

been modelled based on different scenarios, with mixtures of peatland, forestry and so on. We have come up with a set of figures that we believe are deliverable with certain assumptions in place. We reserve the option to change our tack, so things have been presented in a slightly vague way, which I appreciate might have caused some concern among committee members.

**Jim Hume:** I want to concentrate on two tables in the report, "Rural Land Use" and "Transport", and their figures for 2025, 2026 and 2027. The rows present clearly labelled criteria: "Decarbonising Vehicles", "Sustainable Communities", "Business Efficiencies", "Network Efficiencies", "Farming for a better climate", "afforestation", "Fertiliser Efficiency Measures", "Developments in agricultural technology", "restoration of degraded peatland" and "Wood First". However, to borrow an agricultural term, there are two woollier rows: "Lower Emission Potential in Transport" and "Additional technical potential from low carbon land use". They come to 750 kilotonnes of carbon dioxide equivalent each. In fact, those last two items each have estimates of 250, 500 and 750 kilotonnes for those three years respectively. The two figures of 750 kilotonnes add up to just over 11 per cent of all abatements under the proposals and policies, if I have done my sums correctly. I would like to know about some examples that are not included in the other rows that I mentioned that you would consider to come under "Lower Emission Potential in Transport" or "Additional technical potential from low carbon land use".

**Paul Wheelhouse:** I presume that the other committees are grilling their respective ministers on those points at the moment.

**The Convener:** I understand that the Minister for Transport and Veterans is at the Infrastructure and Capital Investment Committee at this very moment.

**Paul Wheelhouse:** That is correct. As far as transport is concerned, there are other things that are not firm proposals at this stage, which could be used as options. For example, there are the workplace parking initiatives and the greater use of average speed cameras. We have also considered the transport model itself and the emissions that arise from transport growth. We have made some assumptions about how we can influence that, as well as about the underlying model.

On rural land use, I have been setting out as clearly as I can that there are challenges in each of the three areas concerned, given the length of time over which we are looking—to 2027—and what it is reasonable to say at this point about technology and, in the case of rural land use, about our understanding of peatland abatement

potential and the mechanisms for delivering that. There are some uncertainties there, which we have tried to address. We are confident that we can achieve the abatement through different options, but we do not yet know which is likely to be the best option, given the amount of time between now and 2027.

As I said in response to Mr Don, we will take on board the criticism that there is not enough detail about what the options are in the period for transport, housing and rural land use, and we will present that in the final report to clarify those matters.

10:30

**Jim Hume:** That is fine.

**Claudia Beamish:** On abatement, I was encouraged to see in the Scottish Environment Protection Agency's written submission, in the section on resource use, the following:

"SEPA is working with the Enterprise Agencies and Scottish Government to help realise opportunities for low carbon goods and services in Scotland ... Analysis by Scottish Enterprise suggests that Scotland has particularly strong comparative advantages in a number of ... areas".

One of the issues that is highlighted in our portfolio on resource use is technologies for waste water treatment; our range of waste technology needs to be developed if we are to meet our targets. Can you highlight anything that is happening in relation to our competitive advantage that would create employment in new and important low-carbon areas?

**Paul Wheelhouse:** Indeed I can. I do not want to appear boastful, but because of our achievements in things such as the water framework directive, we are very much seen as a leading performer, if not the best performer, in a European context. We are advising other countries on how to deal with issues such as waste water and diffuse pollution in order that they can address water quality. We are making great strides forward in aspects such as zero waste, and in discussions to improve the degree of circularity of the economy in terms of making use of resources more efficiently, including reducing wastage and industry using—where possible—recycled products. Many businesses have made great strides in that regard; for example, businesses in the soft-drinks sector use recyclable bottles and cans. We do not claim that Scotland is the best country in the world at this point on those issues, but we are making great strides forward in areas such as renewable energy, where we do regard ourselves as being at the forefront in many respects.

**The Convener:** We will deal with waste in considerable detail with the Cabinet Secretary for

Rural Affairs and the Environment at tomorrow's meeting.

**Paul Wheelhouse:** I will leave that issue aside and cover some other areas.

On what we are trying to do to exploit opportunities, 500 of the 25,000 places in the modern apprenticeships programme are ring fenced for the energy sector, and the low-carbon skills fund has since 2010 provided 1,600 training places for small and medium-sized businesses across Scotland. Those are practical measures to help particular sectors.

In addition, the number of students in higher education institutions who are studying engineering has been increasing, which is a positive development and a substantial recovery from the previous downward trend; the number has grown by 18 per cent since 2007-08. The Scottish Government is committed to further research and is working with agencies such as Skills Development Scotland to deliver additional flexible training to support growth in different sectors. Whether they are for renewable energy, technologies or offshore oil and gas, we are trying to invest in skills that will help to reduce the emissions of some of our leading sectors.

**The Convener:** Technical abatements clearly have a major part to play in our thinking for the future. However, what about behaviour change? Graeme Dey has a question on that.

**Graeme Dey:** Behaviour change is important. I have three questions; I suspect that colleagues will also have questions on the subject. I begin with the low-carbon behaviours framework document. Can you tell the committee why it has not been published and when we will have sight of it? What scope will the committee have for scrutinising it in line with our work on the draft RPP2? Can you give members some idea of what is in that important document?

**Paul Wheelhouse:** I certainly can. The low-carbon behaviours framework is due to be published on 4 March. It will outline what the Government will do to drive and support the move to low-carbon living in the lead-up to the first key climate change target for the Government in 2020. It specifies key behaviours that we are seeking to influence—it is important to define those so that the public understand what we believe will have the greatest impact—and it outlines the Scottish Government's evidence-based approach to behaviour change and the actions that we will take. It also explains how we will measure progress, which will be of great interest to the committee.

To support the behaviour change chapter in the RPP2, a framework has been developed in close collaboration with our key stakeholders. It is

intended to be the next step forward in terms of "Low Carbon Scotland: Public Engagement Strategy", which was published back in 2010.

Why are the behaviours so important? Many stakeholders, including Stop Climate Chaos Scotland, the G6 and NGOs that I meet in the course of my duties have made the point that their perception—I am not saying that I agree with them—is that we are reliant on behaviour change. There is an element of truth, there. As I said to Parliament last autumn in my statement on the missed target, this is not about Government alone; we also rely on individuals doing the right things. It is a duty of Government to try to make that easy for them, to explain why it is important and to get the messages out. We have had some successful advertising campaigns in recent months on the greener Scotland theme and on encouraging people to reduce food waste. I am sure that the cabinet secretary will speak with some passion on that. It is important that individuals take simple steps to reduce their emissions.

The framework draws on methods of influencing behaviour change. It focuses on the individual, social and material model, which recognises that behaviour is contextualised and cannot be successfully influenced by targeting the individual alone. We recognise that some things are easier to do in certain parts of the country, so we need to be nuanced in how we seek to achieve our objectives. It is far easier for someone to hop on a bus if they are in a city centre than it is if they are in a rural area. We need to be sophisticated enough to know that we cannot expect uniformity throughout Scotland. Each individual, if they are given information about how to go about changing their life to reduce their impact on our environment, can in some small way or another impact on our targets.

I am not sure whether I have addressed all your points, Mr Dey. Feel free to tell me if I have not.

**Graeme Dey:** I do not think that you answered the question about why there has been a delay in publishing the framework. It would be useful to have the two documents together.

**Paul Wheelhouse:** I apologise for not answering that question. I hope that the committee will look at the low-carbon behaviours framework when it is published on 4 March. It has been timed to build into climate week, when public attention might well be on our climate challenge as a society. Its publication is a useful vehicle to get attention on carbon behaviours, so it comes at the right time.

With the greatest respect to the committee, other committees and Parliament, the public might not be switched on to what is happening here today. I apologise to the convener, who is bristling



at my suggestion that people do not watch footage of the Rural Affairs, Climate Change and Environment Committee. However, because climate week is a UK-wide initiative, there will be a UK-wide focus on the theme of the week, which represents a good opportunity to launch an initiative such as the framework and to get the maximum possible attention from stakeholders and the public. I hope that that is the case and I hope that the committee will have a chance to review the framework and that you will come back to me if you have any concerns.

**Graeme Dey:** That is perhaps my point. I wanted to confirm that there will be scope for us to write to you with any questions that arise from the document.

**Paul Wheelhouse:** Yes. I will be happy to answer questions.

**Graeme Dey:** Thank you.

I want to develop the point about behaviour change. Clearly, the role of Government is to provide leadership. As you said, tackling climate change is not just about Government, but how will you provide leadership in practice? What funding has been set aside for that? The committee has received evidence that the best way to persuade people to behave differently is to push the moral imperative rather than to highlight the possible financial savings for them. Do you agree with that, or should we try to strike a balance between the two approaches in trying to take people with us?

**Paul Wheelhouse:** I think we should do the latter; we need both approaches. In a perfect world, everyone would respond to altruistic messages, but often the drivers for important change such as emissions abatement come through resource-efficiency measures that are driven by a business imperative.

We need to get the message out about the moral imperative and the fact that taking action is the right thing to do, and I have tried to get that message across, along with the theme of climate justice. People might ask why we are spending money on helping societies abroad. That is a moral imperative and we must deliver on it. However, we also need to reflect on the fact that not everybody is focused on the issues, and that people might be driven by business factors. That applies across different sectors; I am not saying that it applies only in one sector.

We are all different as individuals and we need to appeal to all individuals in a way that they understand and which drives their behaviour change. There is a mixture. On the one hand, let us set out the moral argument for tackling climate change—I believe passionately that there is a moral argument—and on the other hand, we need to give people the information that will inform their

decisions, which will result in the appropriate behaviour change for businesses and individuals. Let us cement the message so that people believe not only that tackling climate change is the morally correct thing to do, but that it is in their best interests to do it, and in the interests of their family, business or community.

To support that financially we are investing significant sums through the climate challenge fund, the junior climate challenge fund and the sustainable action fund. We are attacking different segments of society—communities, individuals and businesses—to try to help them to do the right thing.

**Graeme Dey:** Within that, what role is there for mass membership organisations such as Stop Climate Chaos Scotland and WWF Scotland, which have a clear interest in the subject? Is partnership working needed to enable the Government to get the message out about why people should behave differently?

**Paul Wheelhouse:** Partnership working is absolutely needed. Those organisations are positive examples. Another example is the National Trust for Scotland, which has more than 300,000 members. As an organisation, it can try to communicate positive messages to those members. Having had a positive meeting with NTS on a number of issues, I have no doubt that it will do that.

There are other NGOs out there that have memberships of similar size or that are substantial in scale. I have no doubt that they are providing positive messages to their members. We need to use those routes to get to people who we know are well aware of the importance of addressing climate change and who are probably primed and ready to help us in that mission. I encourage them to work constructively with the Government—I am sure that they will—to ensure that as many of their members as possible are on board. They could also help to get the message out through the media and the letters pages of newspapers to make people realise how important the issue is. Those NGOs could use the influence of their members to convert their friends, relatives and neighbours to take similar action.

**Jayne Baxter (Mid Scotland and Fife) (Lab):** Good morning, minister. I recognise that the Government has a role to play in providing leadership on behaviour change. Although mass membership organisations can raise the profile of the issue, it is my belief—there is strong evidence for this—that the way to get people and communities to think about their behaviour is through community infrastructure and local government. You spoke a lot about individuals and the public. Those messages can be got out to individuals and the public. However, issues such

as this are often grown and developed at local level as a result of involvement, engagement, peer support and people observing the actions of their neighbours. I hope that whatever is published on behaviour change recognises the role of local government and community organisations. When I spoke in the debate on biodiversity, I gave some examples of effective organisations in Fife that are leading the way on such matters. Will you comment on that?

**Paul Wheelhouse:** Absolutely. I recall that you made an excellent speech—it was the first that I heard you make.

On the local government community, as I think I said at last week's meeting, I am confident that I will have a good relationship with Councillor Hagan and, as a result, a positive working relationship with the Convention of Scottish Local Authorities. A lot can come down to personalities. Councillor Hagan is somebody who recognises the need to take decisive action throughout the public sector.

Contrary to some newspaper reports, about a quarter of the population in Scotland works in the public sector. As public sector organisations, we therefore have many people who are parts of families and communities and have a role to play. We have a leadership role to play in the public sector—for example, in informing public sector workers what the impacts can be and what they can do. We hope that they will set good examples in their communities and that people will take appropriate action.

We cannot control the behaviour of individuals, but if we can provide information to our staff and colleagues about what they can do, that will be an immediate early win. There may be some crossover with the mass membership organisations, but we in the public sector are dealing with a much larger group of people, and we can, using local government services, address messages to our workers and to people about what they can do.

We have an ability to connect with a lot of people—in the workforce and in the population more generally. COSLA and local government in general have a hugely important role to play in that. Local organisations—through community planning partnerships or other routes—also have an important role to play in delivering the messages.

10:45

**Claudia Beamish:** I have a brief supplementary question. You mentioned leadership in your answer to Jayne Baxter. I want to push you a little bit on the challenges of the step change and the consistency of Government messages. I am loth to

mention transport after what the convener said, but I will use it as a quick example. We have heard evidence of people hearing on the one hand about something that involves low-carbon issues, and on the other hand hearing about such things as active travel and use of public transport as opposed to the car. I appreciate the complexity of moving into that step change, but can you comment on that in terms of people's behaviour change and what messages are being heard from the Government?

**Paul Wheelhouse:** It is important to make the point that consistency and clarity around the messages are needed. If we can improve on that, I will gladly consider that.

On the issues around low-carbon behaviours, we have tried—with the campaigns that we have been running in the past six months or so—to define 10 helpful green behaviours that people can adopt. In transport, people are encouraged to take on active travel or to use public transport, for example.

Such behaviour is not always possible, as I said earlier. We have to be nuanced enough to know that in certain parts of the country, through no fault of the individuals concerned, people do not have access to regular public transport and are dependent on their cars. We have to be sophisticated enough to know that that is the case and to try to encourage, where there is public transport investment going in, greater take-up for modal shift. However, where infrastructure is already in place, we should try to get a higher utilisation of it to encourage more people to use the available services.

There are sensitivities out there about the scale of investment in active travel, but there is a genuine recognition within Government that active travel is a good way to deliver emissions abatement because it delivers nil—or near enough nil—emissions per individual. If someone is using a bicycle or walking, they are not producing significant emissions.

I do not know whether that deals with your point, but I recognise that consistency of the message is important on that front. We are taking steps—I will just give a couple of examples as we do not have much time. There is investment in car clubs, and there is smarter choices, smarter places, which is a four-year programme to try to encourage, with COSLA, increased active travel and public transport use. The report that we had done by the Carbon Trust on potential in the public sector identified a number of good examples of local authorities that are doing work in that respect—for example, by providing local work nodes for people rather than people having to go into a central location to work. In Aberdeenshire, for example, people can travel to a local centre to work and

connect to their office systems rather than go all the way to the main headquarters.

We can do a number of things; perhaps we need to do more, but there are good reasons to believe that we can achieve the changes.

**The Convener:** Alex Fergusson has some questions about investment in and costings for RPP2.

**Alex Fergusson:** Thank you, convener. I also want to look at responsibility for delivery of targets. RPP1 was pretty clear on who was responsible for delivery of various targets and policies. As has been pointed out to us by the UK Committee on Climate Change and others, RPP1 was also probably clearer on where it was expected that costs would be borne for delivery of policies and proposals. It is difficult not to agree with that. Can we look forward to the same degree of clarity in the final RPP2 document?

**Paul Wheelhouse:** One of our overarching messages is that we have tried to avoid making the document too complex. I know that there has been criticism about lack of detail, but I simply direct people to the fact that RPP2 contains 168 pages and has a 77-page technical appendix. There is a lot of detail in that and, given the subject's complexity, we have strived to make it as simple as possible. That said, we are reflecting on some of the criticisms and are considering ways of presenting information a bit more clearly in the final document.

Mr Fergusson alluded to the balance between who is responsible for resources. Going back to the example of peatlands that I cited in response to Mr Don, I note that the Government has put about £1.7 million into the flow country project. The document shows that for the period up to 2027 the 21,000 hectares per annum proposal will cost not just the Government but society itself a total of £230 million. That very substantial investment shows very substantial ambition, but because of current uncertainties over SRDP and the incentives that we can provide to private landowners and other potential sources of private sector funding that are unknown at this stage but which might be attracted to peatland restoration, it is not possible for me to tell the committee exactly where the balance will be struck. That said, we are trying to make the document as readable as possible and I take your comments on board.

Although we have been able to be specific in certain parts of the document, many of the proposals in it require significant further work, including consultation of our delivery partners, to ensure similar clarity. To continue with the peatland example, the peatland plan that we are developing will have input from landowners, NGOs, the Government and others. Because

there are so many potential variables in ultimate delivery of the measures, it is simply not possible—nor, I would argue, is it sensible—to be too specific about the precise distribution of costs and how they will be borne.

Our approach in setting out what the economy will be expected to bear is consistent with the Stern review, which paints a picture of the economy-wide costs of delivering against climate change targets. This is not just about Government; we need to make clear the total cost to society, so we have to take on board what it would be reasonable to expect society to deliver within the timeframe.

**Alex Fergusson:** I obviously accept that when one looks into the future as far as this report does there will be variations and difficulties in being specific about costs, but it should be possible to be slightly more specific about who takes responsibility for delivering policies and proposals. I hope that the minister agrees that the clearer the level of responsibility from the outset, the easier it will be to monitor the on-going success of the policy and the targets.

**Paul Wheelhouse:** I accept that it is inherently true that the greater the clarity, the easier it will be to monitor and follow these things.

However, I also argue that in certain areas—for example, the peatland plan that we have announced—it is just not possible to say exactly how things will be delivered. As a result, we have had to be somewhat conservative—with a small c, I stress—in our assumptions about peatland restoration. I hope that in the technical abatement element of our modelling we have been able to show what we can do with regard to higher-level abatement towards the end of the period in question, but it adds another level of uncertainty to existing uncertainty.

I give an undertaking that, if colleagues feel that there are particular areas where we can provide a bit more clarity in the final report about who will deliver a particular project or line, I will see what we can do to allow the committee and colleagues to assess our progress.

**Alex Fergusson:** Again, on clarity, the draft RPP2 concludes that the cost for each tonne of carbon dioxide equivalent abated is expected to fall over time. I find that interesting because, as with all these things, one picks the low-hanging fruit first and it gets harder and harder—for all the right reasons, one would hope—to achieve targets. How certain can the Government be that that will be the case? What happens if, for instance, the carbon price remains low?

**Paul Wheelhouse:** I recognise that there is a risk that carbon prices will remain low unless we can get an agreement Europe-wide to cancel

some carbon trading units or backload them to some distance in the future. Depending on the outcome of the European Council negotiations, there will be either a minimal or a substantial impact on the carbon price.

There will be investment in new technologies, but such technologies are expensive in the developmental phases, as is the case with any technological development. We would expect offshore renewable projects such as wind power to be more expensive initially, but over time we know that the costs per unit generated will come down substantially and, we hope, drop below the cost of nuclear, which is an established technology. There are challenges to do with implementing new technologies, sector by sector.

That goes to the heart of the issue that I talked about. Technologies are developing all the time. We know that the costs of renewables are initially high but drop over time. Investment in carbon capture and storage will also be expensive initially and will drop over time. I could probably cite other examples. In RPP2 we estimate that significant costs have the potential to reduce, partly through market efficiencies but primarily in the context of the increase in cost that is likely in other inputs, such as petrol, diesel and nitrogen fertiliser in the farming sector.

I take the point that what RPP2 says looks counterintuitive in some respects. However, we know that costs are initially high but will come down as we decarbonise electricity and take on board new technologies. For example, in the offshore sector, wave and tidal power are expensive per megawatt but we hope that the average cost per unit will come down in the 2020s, as arrays are put in place.

**Alex Fergusson:** I share that hope. Our fingers are crossed on that one.

The table on rural land use in annex A shows the projected total cost of rural land use proposals rising from £16 million in 2019 to £321 million in 2020. That is quite a difference, in anyone's language. Can you explain the reason for the massive increase? How were the figures arrived at?

**Paul Wheelhouse:** The chart—which I think the Scottish Parliament information centre produced—illustrates the difficulty of attempting to make detailed projections so far into the future. Part of the work on the document involved making broad assumptions about when certain elements of emissions abatement will commence, along with the associated financial cost.

The spike in value for money reflects the assumption about the abatement that will be achieved from, for example, the proposal on 90 per cent uptake of nitrogen-fertiliser efficiency

measures, which starts in 2018, alongside the ongoing abatement that will be achieved from the farming for a better climate initiative, afforestation and peatland restoration. The drop in value for money in 2020 reflects the costs that are associated with commencement of the proposal that relates to developments in agricultural technology and practice. In reality, costs and emissions abatement that are associated with agricultural technology will probably come in more gradually and, potentially, earlier than we have assumed they will come in.

The costs that we have estimated in RPP2 have the potential to reduce significantly, partly through market efficiencies but primarily in comparison with increases in costs that are likely—I mentioned diesel, nitrogen fertiliser and so forth. Reducing expenditure on fuel and fertiliser will become increasingly attractive, because the price of oil-based inputs, including fertilisers, is likely to continue to rise, due to resource constraints and population growth.

That is the detail behind the assumptions about cost in the land use section. I am not sure whether I have dealt with your problem, Mr Fergusson. I see that you are girning a bit—

**Alex Fergusson:** Oh—

**Paul Wheelhouse:** I am sorry to shake your confidence there. The camera was not on you.

**Alex Fergusson:** I am sorry that you thought that I was “girning”. It might be more accurate to describe my expression as “slightly puzzled”.

**Paul Wheelhouse:** I might have picked up your question incorrectly. If that is the case, I am sorry.

**Alex Fergusson:** Not at all.

In your explanation, you used the word “assumption” more than once, which is understandable. Is it fair to say that we are, to a certain extent, dealing with a pretty inexact science?

**Paul Wheelhouse:** Yes. I have spent a large part of my career working in an economic consultancy. Forecasting is a difficult business at the best of times. Sometimes we are happy if we get the direction of change right, let alone the scale of change. That is not a general criticism of my colleagues in economics; the point is that it is extremely difficult to predict and forecast accurately. Any degree of uncertainty about underlying assumptions adds to the difficulty of projecting and forecasting accurately.

All we can do is use the best available figures, sense check them to see whether they seem to be reasonable and come back with an explanation if they look in any way like glorious assumptions. For example, we have used the best assumptions

that are currently available in order to produce the figures on rural land use, but I recognise that we cannot guarantee that outturn in the future.

11:00

**Jayne Baxter:** Given that the draft RPP2 outlines that sustainable development is integral to the Government's purpose, why have the associated costs not been included? I am thinking of social and economic costs, and the idea of winners and losers. Will those costs be in the behaviour framework?

**Paul Wheelhouse:** That is a fair point. There are certainly challenges, and we have made assumptions about the financial costs and the associated known societal benefits, but you are right that we have not set out in full the societal benefits and any other benefits that might be assumed.

A number of additional benefits might be found, so we should perhaps set out some examples of things that have not been costed and are not shown as having a financial value. For example, providing more opportunities for walking and cycling in a safe and pleasant environment is a good thing for society, but it is very difficult to monetise that. The same goes for reducing pollution from transport and industry, which results in better air and water quality. We can, to a degree, cost the impact of that on someone's health, but it is difficult to work out the overall cost for the benefit—I am mixing up my costs and benefits there, but you know what I mean—and put a monetary value on it.

There will be lower levels of fuel poverty, as energy efficiency measures will reduce household energy bills, which will result in warmer homes for those who cannot currently afford sufficient heating. There will be general health and lifestyle benefits such as a reduced incidence of asthma and respiratory problems and improved mental health, which will lead to fewer missed days at work or school. We know that investment in forests, for example, benefits people's mental and physical wellbeing, but it is difficult to monetise that. Other benefits include a reduced incidence of obesity from an increase in walking and cycling; a healthier natural environment from reduced congestion and greater use of public transport; and low running costs for schools, colleges and universities as a result of energy efficiency. There are many things that we could define as benefits to society or the economy, but at this stage it is quite difficult to put a price on them.

In my opinion the figures that we have provided, which amount to an average £1.2 billion annual benefit to the people of Scotland, understate the

full extent of the benefits from investment in emissions abatement, so you make a fair point.

**Jayne Baxter:** I commented earlier on behavioural change and buy-in. You have just highlighted many of the health benefits of investment, but we have—if you do not mind my saying so—a health funding crisis in this country. Perhaps we can get some buy-in from the health authorities by pointing out that those are good things and asking them to look at diverting some of their funding in order to spend to save. If those things are so beneficial to health, perhaps other agencies can take responsibility for providing some of them, as that is good news for them.

**Paul Wheelhouse:** That is a fair point. I mentioned last week my participation in the health inequalities working group led by Michael Matheson. The group will allow me and other ministers to gain a better understanding of the benefits for health of investment in the physical environment—such as forests and other potential outdoor recreation areas—particularly in areas of deprivation where there might be a lower level of access to such resources, which are often further afield. Those things will improve, as will our understanding of them. Dr Harry Burns, the chief medical officer, is clear that green prescriptions, as he calls them, will have a bigger impact than pharmaceutical prescriptions on certain mental health and stress-related conditions.

Over time, we may well improve our understanding of the health benefits and be able to put a price on the savings in terms of drug treatments and improved health outcomes for individuals. You are right that we should try to attach values to those things; we will get there eventually, but we are not there at present.

**Jayne Baxter:** I use the word “transport” again. Health boards can say exactly what it costs them if someone misses an appointment and a big factor in that is the lack of access to appropriate transport. A definite link can be made in that department, and a saving could be demonstrated.

**The Convener:** Does the minister want to comment on that?

**Paul Wheelhouse:** Indeed. I can raise that point with the Minister for Transport and Veterans, but I presume that he is being asked that right now.

**Alex Fergusson:** I ask the minister to satisfy my curiosity again. I refer to the table on rural land use in annex A. In the last five years of the plan—between 2023 and 2027—there is a very large increase in emissions abatement. Over those same years, there is a £2 million decrease in the total cost of RLU policies and proposals. I am a little bit confused about how you equate the two.

**Paul Wheelhouse:** The simple answer to that is the point that I made earlier—I think to Mr Hume—about planting forestry and investing in peatlands: there is a delayed kick-in in emissions abatement. Also, we do not know which solution we will deploy as an additional technical abatement option in 2025 to 2027, so more detail on the costing of that may need to be taken into account. There are two issues: the mix of the final technical option will determine the cost and, in areas such as forestry, there is a delay between investment in planting now and emissions abatement later. That does not necessarily match up very well.

The situation is unusual compared with what happens in other portfolios. There might be a more immediate hit from energy efficiency in the year in which you invest in it, whereas, in rural land use, the impact on abatement of improvements in soil quality, peatland restoration and forestry can be delayed. In the case of forestry, abatement builds up over time. *[Interruption.]* Andrew Henderson may want to explain a further point on that.

**Andrew Henderson (Scottish Government):** I was highlighting to the minister that a lot of the costs are borne through the proposals, particularly things such as the additional technical potential and others that we have already discussed. I am looking at the proposals line in the annex A table on rural land use. Members will see a significant upshift in abatement from 2020. The minister explained that before, when we discussed the spike in the graph that SPICe produced as part of its report. That upshift is an illustration of the costs and investments that are associated with the proposals, as set out in the table.

The assumptions that we as part of the RPP team, our technical support colleagues and our colleagues across sectors, particularly in rural land use and agriculture, have made have, by necessity, been comparatively broad brush in some areas. We therefore see a particularly steep rise as a new proposal comes on stream. That is a far blockier approach than would happen in reality. We expect to see things coming on more gradually.

Unfortunately, that is a reflection of the uncertainties in projecting so far ahead with the data that are available to us. Sometimes setting out the figures in tables or charting them in graphs gives a false sense that numbers are absolute and definite. They certainly are not. The figures are indications or best estimates that show the direction of travel, based on the models that are available. There is a lot more uncertainty and fuzziness around the edges, but that reflects something that we have taken great pains over with RPP2. A vast part of the project has been built from the bottom up. We use modelling particularly for the baseline but, unlike equivalent

documents elsewhere that we are aware of, in which top-down modelling has been far more prevalent, RPP2 is based on assumptions on policies and proposals from the bottom up. We think that there is a lot more realism in the specifics that have been set out in the document than there would be if we were simply to show a model and say, “Look, if we change this input or that input, that’s how the outputs would change as a result.”

**Paul Wheelhouse:** It is worth bearing it in mind that for RPP2 in the round we have assumed emissions abatement across the entire Scottish economy, regardless of whether we have the full range of powers in each sector. I had some discussion about that subject with Mr Fergusson in the aftermath of my statement to the Parliament. I do not want to overstate that, and I hope that the committee recognises that.

Other Administrations are taking a simpler approach—they apply targets to the areas in which responsibility is devolved and they apply UK-wide targets to areas that are not devolved. For example, Wales has a 40 per cent target in areas for which it has devolved responsibility, but it adopts the UK-wide approach for everything else.

In some respects, we are being brave. We are setting out ambitious targets—and it is right to do so. We do not have the full range of delivery powers, so we must make some assumptions about what is happening at UK and EU level. Indeed, although we welcome initiatives such as the green deal, we must make assumptions about how much funding will come to Scotland. A number of uncertainties feed into what Andrew Henderson referred to as the “fuzziness”. It is difficult to be precise about when and how things will happen, but we have made the best possible stab at the phasing and level of investment that we think will come through.

**Claudia Beamish:** I return to the issue of social costs and benefits. You provided us with an encouraging list of examples relating to the step change that I asked about. Can you reassure us about the interdepartmental work that needs to happen between health and education, not only about behaviour change but about discussions that you might have as the Minister for Environment and Climate Change with the Cabinet Secretary for Health and Wellbeing on, for example, obesity and how working together throughout Government can target, perhaps through preventive spend, the many outcomes that we are looking for?

**Paul Wheelhouse:** I am happy to do that. Before my ministerial appointment, I was on the Finance Committee when it looked at preventive

spending. I recognise the issue about breaking down silos and working more closely together.

If it is any reassurance, I am encouraged by the degree to which there is collaboration between ministers. For example, I have had bilateral discussions with Derek Mackay, Minister for Local Government and Planning, on building regulations. Last week, we had four ministers involved in discussions about active travel and the future of and investment in cycling. We are working across departments—health, education, the Minister for Commonwealth Games and Sport and me—to talk about how to develop active travel. That is not as formal as the health inequalities working group, but we are working together to consider how to promote the take-up of cycling. That is an example of collaboration.

I have had a bilateral with the Cabinet Secretary for Education and Lifelong Learning about encouraging greater involvement of environmental themes in the curriculum for excellence because there are ways in which environmental topics can be used to deliver the underlying techniques and knowledge of maths, science and English to pupils. The Cabinet Secretary for Education and Lifelong Learning—as a former environment minister—is enthusiastic about that, too, so there is cause for optimism that we will work closely together. I assure you that we are working together. I see it as my role to champion environmental messages across Government, as I was asked to by my environmental NGOs from day 1 of taking up the post.

**The Convener:** Let us turn to peatlands. Thanks to the peatland newsletter that I receive from the Environmental Research Institute in Thurso, I am well aware of the scientific researchers who are, as we speak, swarming over our peatlands to better understand carbon reduction. The rural land use table in the draft report shows expected emissions abatement in 2014-15 and onwards building up almost immediately. Is that a good reason for making the 21,000 hectares per year of peatland restoration proposal a firm policy in the final RPP2? A lot of people hope that that proposal will become a policy.

11:15

**Paul Wheelhouse:** I share your enthusiasm for peatlands, which have tremendous potential to deliver the abatement in emissions from rural land use that we seek. There are still some uncertainties about the delivery mechanisms. Once we have clarity on the delivery mechanisms, we can formalise the proposed investment as a policy—the support of the Parliament will, of course, be necessary for that to happen.

I share your instinct and that of those stakeholders who have expressed support for peatlands, which I think have a great role to play. As Bob McIntosh indicated, we hope very shortly to have greater certainty on the science and what the research tells us about the abatement from peatlands, so we will be able to fine tune our figures and better understand what level of abatement will be delivered by the proposed level of investment.

It might be premature to be precise at this point, but we can certainly look to give as much clarity and certainty as possible on the direction of travel—to use that slightly corny phrase—and the scale of ambition in relation to peatlands. I would like to have the peatlands research in front of me so that I know exactly what the delivery mechanisms are. I would also like to have a better understanding of what the SRDP is likely to look like. There will be a consultation on that this summer, which people with an interest in peatlands can use to feed into us how they feel that our ambitions can be delivered locally and nationally.

In addition, we are waiting for the Intergovernmental Panel on Climate Change agreement on international accounting for peatlands. As I understand it, from 2015 onwards we will be able to count peatland restoration towards our climate change targets.

**The Convener:** We have heard quite a bit about the expected expenditure of around £230 million over the period to achieve the reductions that we are talking about. Mention has been made of front-loading. Has the Government explored any models for innovative funding, for example by considering how downstream beneficiaries could contribute?

**Paul Wheelhouse:** In a number of areas of policy, we are looking at new and innovative forms of funding, and I am certainly open to suggestions that the committee—the interest and expertise of a number of whose members I recognise—might have about what it would be possible to deliver. I know that MSPs who are not members of the committee—Fiona McLeod is one such member—are interested in looking at funding mechanisms that might deliver peatland restoration.

Many companies invest in environmental projects through corporate social responsibility programmes. We might be able to encourage some of them to switch their investments from more traditional ways of delivering environmental benefit to new areas such as peatland restoration to accelerate the rate of investment.

Bob McIntosh might have some thoughts on that subject.

**Dr McIntosh:** It is an extremely interesting area. It is always difficult to get the real beneficiaries to meet the costs, but there is a good example of that in south-west England. As an alternative to concrete mechanisms for preventing floods and treating water, the water companies there put money into land management operations. Rather than having to cure the problem, they wanted to avoid it arising in the first place. That is the best example yet of the ultimate beneficiaries paying people upstream in the land use sector to deliver benefits for them.

**Paul Wheelhouse:** There is a parallel example in forestry. I am sure that all members of the committee are well aware of some of the tensions that exist between forestry and farming. However, there might be circumstances in which land that it is not possible to use for grazing and which is not very valuable from the point of view of wider farming activities could be planted with trees to provide natural flood defences and thereby help farmers further downstream. That is an example of investment in forestry having a downstream benefit by preventing the flooding of more valuable agricultural land.

**The Convener:** We will come on to look at forestry.

The water companies could have a part to play, as could wind farm operations near peatlands. There is a case to be made that communities that are on the edge of peatlands that already get community benefit from wind farms could invest in those peatlands, as that would benefit the community and the whole surrounding area.

**Paul Wheelhouse:** Absolutely, convener. I share your optimism about such a route. Each renewable project has the opportunity to define what community benefit might be used for. I mean no disrespect to projects that make cosmetic changes at a local level through, for example, the planting of flowerbeds and so on, but I think using some of the funds for peatland restoration and other forms of environmental investment would be a very positive investment for the future and might make a more substantial impact on the environment and stimulate low-carbon employment opportunities.

**The Convener:** Thank you. Before we move on to forestry, Graeme Dey would like to ask a supplementary question.

**Graeme Dey:** How soon could we achieve a sufficient scientific knowledge base that would be specific to the Scottish environment and which would enable us to strike the right balance on peatlands and realise carbon storage potential without impacting on biodiversity? I am sure that you are aware of the Game and Wildlife Conservation Trust's concerns about areas of

shallow peat soils, which it feels might benefit from sensitive management in order to maintain existing carbon stocks, rather than active rewetting. The trust's belief is that protecting above-ground biodiversity gains would be more beneficial than focusing on the limited storage capacity of shallow peat.

**Paul Wheelhouse:** It is not a black-and-white world. When I visited the RSPB Scotland reserve at Loch Leven, I saw that traditional farming and livestock practices were being used, if at a lower intensity, to keep the wetlands in the good condition that they needed to be in and to prevent the reafforestation and recolonisation by silver birch and other species of an area that had been cleared of poor-quality conifers and restored to wetland.

In some cases, it might be more valuable to prioritise the restoration of deep peatlands that might allow us to sequester more carbon than to target areas of shallow peat. I would certainly welcome seeing any evidence that the committee has gathered on the issue, as it might be helpful in informing our policy in this area.

**The Convener:** Alex Fergusson has some questions on forestry.

**Alex Fergusson:** Minister, you will be glad to hear that, as we have already covered a fair bit of forestry, I will probably be pretty brief.

I am sorry to keep returning to the confusion over the planting targets, but the change from 10,000 hectares a year to 100,000 hectares over 10 years obviously allows for flexibility within the annual targets, which will have its own pluses and minuses. However, the chapter on rural land use indicates that, as far as abatement is concerned, the actual policy is to

"Increase Afforestation Rate to 10kh per year".

I appreciate that abatement will accumulate as plantings are made and trees reach a certain stage of maturity, but I wonder whether you can provide any clarity on how you will achieve those targets; if possible, whether you have any plans for targets beyond 2022; and, if you do not have such targets at the moment, when they might be confirmed. After all, as you have rightly said before, forestry is a long-term planning issue.

**Paul Wheelhouse:** Our message is consistent with the agreement that we have through WEAG arrangements, which limits the planting target to 10,000 hectares per annum or, at least, 100,000 hectares over the 10-year period.

As I said at last night's forestry awards dinner, which was hosted by ConFor, this Government is very committed to achieving a higher planting rate than we have had historically. We recognise the need to increase our country's afforestation



performance for a very large number of reasons, not just with regard to biodiversity but to provide a secure timber supply for the commercial processing sector and to meet our biomass aspirations across Scotland. As an owner of forestry, we know that there are a number of pressures on our national forest estate, including the need to provide the nation with sufficient wood supply to meet all these different demands and the need to meet our biodiversity objectives.

We are committed to delivering a high planting rate—in a second, I will ask Bob McIntosh to detail the specifics of the target—but I think that there are reasons to be optimistic. If worries about our ability to achieve the 100,000 hectares planting target over the 10-year period meant that we were basically storing up a big problem for later, I would be more concerned. However, the evidence so far is that we are on track to get towards the 10,000 hectares per annum target early in that period. The challenge will then be to maintain the planting rate at that level consistently. We will need to work with private landowners on that and we will need to see the detail of the SRDP, which will be key to incentivising planting and to giving confidence to the nursery sector to ensure that there is sufficient supply of planting product.

Perhaps Bob McIntosh can respond on what might happen in the longer term beyond 2022.

**Dr McIntosh:** The woodland expansion advisory group concluded that it might not be sensible to set very long-term planting targets because, obviously, the world will change—who knows what it will look like in 20 to 30 years' time? The group thought that a sensible compromise was to go for a planting target of 100,000 hectares over 10 years. We will need to review that figure in about eight years' time to see what would be appropriate for the following 10 years.

In the past few years, we have been well short of 10,000 hectares a year—hence the language about increasing the rate. A few years back, we were planting only 2,700 hectares a year. In financial year 2011-12, which is the latest year for which we have figures, the rate is likely to be about 9,000 hectares, so we are on a steeply upward trajectory. We hope to get to 10,000 hectares next year and in subsequent years, depending on funding, SRDP and all the rest of it.

In terms of the delivery mechanisms, the current proposal is to try to deliver about 9,000 hectares a year through the grants scheme by encouraging private landowners to plant and by asking Forest Enterprise Scotland to buy land to achieve about 1,000 hectares a year. Therefore, most of the target will be achieved through the grants scheme, which incentivises private landowners to plant.

**Alex Fergusson:** Thank you very much. That is useful.

I have a final question on the end-product, to which the minister referred. There is a very welcome proposal to increase the amount of Scottish-grown timber in the construction sector. Can you give us any further details on how that might be taken forward? If not, might more details be forthcoming in the final document?

**Paul Wheelhouse:** The wood first timber construction programme, which I believe is what you are referring to, should kick in from about 2022 onwards. I know that there is a desire for timber to account for a much larger share of building materials, not just through the use of traditional timber frame—obviously, that is very much a dominant technology in Scotland and is becoming more popular elsewhere in the UK—but in other materials throughout the house or office or property that is being constructed. We are looking at ways in which we can do that. Scottish Enterprise is working closely with Edinburgh Napier University and others to improve the science and the technologies that can be deployed to make our traditional soft woods more appropriate for being used in that way.

Again, perhaps I can ask Bob McIntosh—sorry to bother you again, Bob—to speak on the detail of that.

**Dr McIntosh:** Obviously, it is pretty clear that the embedded energy in wood is much less than that in carbon and steel or other construction products. If we can use more wood in construction, that must be a good thing in terms of the general carbon story.

Use of timber has increased, but a lot of work still needs to be done to get the right technical specifications. There may also be a behavioural issue, in that the custom and practice in the construction sector tends to default to things such as concrete and steel rather than wood. I think that the timber sector knows that it has a lot of work to do to market the material and to get the technical specifications right. However, the gains could be very high. A lot of work is going on to try to quantify those better in the context of introducing new technical specifications for British timber so that we can get more of it into the market. The process is slow, but it is moving in the right direction.

**Paul Wheelhouse:** It is clear from the speeches that were given last night at the forestry awards dinner that the sawn timber sector in Scotland is making great strides in taking a larger market share in the UK—it is up to about 40 per cent of the UK sawn timber market. An example of a large firm in the sector is James Jones & Sons Ltd, which has a site in Lockerbie in Dumfries and

Galloway. There are some good businesses in the sector with a high level of investment that are looking at ways in which they can gain market advantages through the increased use of timber in construction. I am confident that we have the policy support from Scottish Enterprise and others to give such businesses the assistance that they need.

11:30

**The Convener:** I am conscious that your time is tight, minister, but I have a couple of supplementary questions. I think that it was the Forestry Commission that was responsible for publishing a review of timber buildings some four or five years ago. Certainly, a review was published by some body; it may have been Heriot-Watt University, but I am not sure. However, it would certainly be a help to the climate change programme if the new range of timber buildings in the past five years were to encourage people to do even more in that direction. I hope that you might take that on board.

Obviously, there was tension because of the Forestry Commission buying farms, some of which had been on the market for a long while. Just to dispel the belief that arable land is being used for planting trees in any quantity, can we get a summary of how the buying of farms in order to plant trees will contribute to the targets that we have been talking about in this part of the discussion?

**Paul Wheelhouse:** As I am sure the convener knows, we have been actively liaising with NFU Scotland and, indeed, the woodland expansion advisory group on the issue. The report emphasised that a more integrated approach to tree planting would be necessary to bring farming and forestry interests closer together, but it envisaged that a win-win approach would be possible.

Forest Enterprise Scotland is taking the advice of reference groups and its own agricultural adviser on how to integrate farming and forestry on the land. It has purchased land and developed a number of starter farms to attract new entrants to farming where it is not appropriate to plant trees, so it is making land available for new entrants to use. There is a disparity between the perception and the reality of the scale of the number of units that have been purchased in that way and compete with farming interests. In practice, only a small number of farms have been bought on the open market and planted with trees. However, Forest Enterprise Scotland has made many purchases through private sales, in which someone asked FES whether it was interested in buying land that they had for sale. Forest Enterprise Scotland is therefore not competing

directly on the open market with those who have an interest in taking land for farming.

We are conscious of the sensitivities and concerns that NFU Scotland has expressed on the issue, and we believe that a solution can be delivered through working with both forestry and farming interests.

**The Convener:** How many of the 39 or 40 sales that we know about are direct sales rather than sales on the open market?

**Paul Wheelhouse:** I think that the number of open market sales in which the land has been planted up is in the low teens, but Bob McIntosh might be better placed to answer that question.

**Dr McIntosh:** We should remember that the contribution that Forest Enterprise Scotland is making through land sales is only 10 per cent of the programme, so it is not a huge issue. Unfortunately, land that is suitable for planting trees does not come on to the market in nice chunks; farms might have some land that is suitable for planting, but other land that is not. What Forest Enterprise is doing with the help of our reference group, including the agricultural sector, is to look at all the farms that it has bought and make a sensible appraisal of what should be planted and what should not. Typically, that results in about half the land that is purchased being planted and half being retained for agriculture, with some of it being used for starter farms for new entrants. There is therefore a process of reviewing each purchase and ensuring that the integration with farming and agriculture is the best that can be achieved, with the involvement of a lot of stakeholders, including the agriculture sector.

**The Convener:** Thank you. Graeme Dey has a final, small supplementary question.

**Graeme Dey:** It is a question that perhaps invites just a yes or a no answer. Some good work is being done out there to engage councils in leasing parcels of unused land for the purpose of tree planting. I understand, for example, that Perth and Kinross Council and the Woodland Trust are working closely on that. However, such buy-in is a bit patchy across the country. Given the Government's partnership work with COSLA, will you seek actively to encourage all councils to engage in the kind of scheme that Perth and Kinross Council is involved in?

**Paul Wheelhouse:** Yes. [*Laughter.*]

**Graeme Dey:** Thank you.

**Paul Wheelhouse:** There are good examples of such schemes. The collaboration in the Lothians and Fife to deliver an accelerated rate of planting is an encouraging example.

**The Convener:** I thank the minister and his officials for the range of evidence that they have given, which we will now review for our report on RPP2, in which we will give our views on it.

At tomorrow's meeting, which will begin at the same time as today's, we will take further evidence on RPP2, from the Cabinet Secretary for Rural Affairs and the Environment.

*Meeting closed at 11:35.*



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