



Energy and Climate Change Committee

Oral evidence: [Outcomes of Warsaw COP 19](#),
HC 909

Tuesday 10 December 2013

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Members present: Mr Tim Yeo (Chair); Dan Byles; Mr Peter Lilley; Albert Owen; John Robertson; Sir Robert Smith; Graham Stringer; Dr Alan Whitehead

Questions 1-75

Witnesses: **Rt Hon Edward Davey MP**, Secretary of State for the Department of Energy and Climate Change, **Rt Hon Gregory Barker MP**, Minister of State, Department of Energy and Climate Change, **Peter Betts CBE**, Director, International Climate Change, Department of Energy and Climate Change, and **Ben Lyon**, Head of International Negotiations, Department of Energy and Climate Change, gave evidence.

Q1 Chair: We might as well start as you are here, Secretary of State. Thank you very much for coming in again. Most of this session is going to be about the CoP, what happened there and what comes out of it, but I would like to start with another extremely topical issue, which I know you will be absolutely on top of. That is the review of the fourth carbon budget.

We have already had the first stage of the Committee on Climate Change's review published and that was extremely clear in its conclusion. It found, "No significant change in relation to climate science or international and EU circumstances." It concluded, "Based on the legislative criteria, there is no legal or economic basis for a change in the budget at this time." I hope that in view of that very unequivocal conclusion and also, I am sure, your own thinking about the subject, you will agree that the only conclusion you can possibly reach is that you should keep the fourth carbon budget unchanged.

Mr Davey: Chairman, you are asking me to prejudge the review that we are going to do in Government. We will obviously listen extremely carefully to the advice of the Climate Change Committee and, indeed, to this Committee as well as other contributors. It would be wrong for me to prejudge a serious review that Government has committed to make.

Q2 Chair: Okay. Well, without prejudging it—I am sure you will have started to think about it—perhaps you could identify any factors that you consider might justify a change.

Mr Davey: I am not at the point of being able to do that, Chairman. We have not fully begun the process with ministerial involvement. Clearly, there is quite a lot of research and analysis happening preparing for the ministerial discussions, but I am going to be absolutely frank with you: we have not started the work at ministerial level yet.

Q3 Chair: Those of us who observe these things from a neutral but sympathetic standpoint might expect that the position of your Department would be in favour of no change, but there might be other Departments in Whitehall whose view would be different.

Mr Davey: I think probably a reasoned and reasonable observer might draw that conclusion.

Q4 Chair: In which case, you will have every encouragement from me personally and possibly from other members of the Committee—

Mr Lilley: Not from all of us.

Chair: —not from all of us, which is why I was careful not to say from everyone—to have a successful outcome to what will no doubt be a vigorous debate. Again, a neutral and sympathetic observer might conclude that if there was a change to the fourth carbon budget that might be for political reasons rather than on the basis of the evidence.

Mr Davey: No, it will be evidence led and I will certainly insist that any conclusions are evidence led, based on the facts and on the analysis. Climate change and Britain's legal commitments that we have made to tackling climate change are too serious to play politics with. We will base it on the evidence.

Q5 Chair: I am very reassured to hear that. From what we have seen so far of the Climate Change Committee, its conclusions would not provide any legal basis on which to justify a change in the budget. Of course, the way in which the budgets are set and approved is the subject of a fair amount of law.

Mr Davey: Absolutely. The review is a sensible process. We have cross-party agreement that the Climate Change Act architecture is something we will adhere to. Indeed, we have led the world with that legislation and I note the large number of countries that are now taking a legislative approach to create nationally—regardless of any international discussions—a legislative framework to help them and their Governments and their economies prepare both on mitigation and adaptation for climate change. The UK should be proud of what we have and, because we have been a leader in this area, we should adhere to it. It would send a very, very bad signal if the UK, having been out in front, were relatively soon after passing that legislation to not adhere to it.

Q6 Chair: A further recent development reinforcing your view was the publication of the IPCC Fifth Assessment Report, which proposed the concept of a global carbon budget for which the fact that the UK is in the lead would be a further reason to be meticulous in our conclusions from any review that is taking place.

Mr Davey: I could not agree more. I thought the IPCC's suggestion was extremely interesting. It would have very logical links to what we have done, as you said, and I thought the IPCC's Fifth Assessment was a seminal moment in the debate on the scientific evidence. I am sure we will discuss it later on and there will be different views within your Committee, but from our perspective we think an objective and reasonable analysis of the scientific evidence they put forward suggests that action is as urgent as ever.

Q7 Chair: Without wanting to alarm the Minister of State, who has just arrived, I think I can say that the Secretary of State is managing very well without you so far.

Mr Davey: But it is nice to have him here.

Chair: I noticed a comment from Lord Stern the other day, who told us that quarrelling within the Coalition undermines confidence, "Government-induced policy risk is a serious obstacle to investment." I think it is common ground between us that investment is very urgently needed in quite a number of aspects of the energy industry in the UK at the moment. Would you agree that the decision, when you finally take it, on the fourth carbon budget will be an opportunity to give a strong policy signal that might be able to alleviate some of the crisis of investor confidence?

Mr Davey: I do not accept there is a crisis in investor confidence. First of all, I think we should look at the track record of investment. We have had £35 billion of investment in electricity infrastructure, with £31.4 billion, I think, in renewables since 2010. This year, in addition, we have consented £20 billion of investment in low carbon, obviously with the lion's share going for Hinkley Point C, the first serious agreement for a new nuclear power station in the UK for a generation.

Yesterday, I was delighted to be able to announce the front-end engineering and design agreements being signed with the White Rose Project for the CCS project in Yorkshire. That is another step forward. Last week we had the FID enabling second phase announcement with a huge amount of renewables going forward to the go-early CfDs, representing 8 gigawatts if it all goes ahead of renewable energy in offshore, onshore, biomass and so on.

With that background of investment, the story in energy—and I have not even mentioned the investment in oil and gas in the North Sea—is an extremely strong one, I would argue the strongest in any aspect of infrastructure that this Government has. Investors are putting their money where their mouth is and showing that the policy framework we are adapting is very strong and attractive.

Therefore, based on the evidence, you have to ask yourself why they are still so confident in the UK. The Energy Bill particularly, with the contracts for difference at the heart of it but also the capacity market, is providing them with a stable legal and financial framework. Yes, the Climate Change Act, the fourth carbon budget and so on can support that, but having a practical legal and financial framework embedded in the Energy Bill is the critical thing to get investors over the line.

Of course, I want to have a successful outcome to the review of the fourth carbon budget. I think that will assist, but I could point to the EU 2030 targets as being important. I could obviously talk about the UNFCCC agreements for 2015 being important. All these things

give investors reassurance that not only the UK but the EU and the world are on an agreed pathway to tackle climate change, which will require the sorts of investments we are seeing.

Chair: I think that there will be particular interest, however, in one of the things that you mentioned that is under the British Government's complete control, which is the fourth carbon budget review. That is not a matter that has to be negotiated with EU partners or any wider international body. I should also remind you and the Committee about my interest in the Register of Members' interests. You have probably all heard me say that from time to time before.

Q8 Albert Owen: Secretary of State, you mentioned the importance of the Climate Change Act and the targets. If I could move on to targets specifically, the Commission on Climate Change concluded in June this year in their progress report that there needs to be significant increase in the pace of greenhouse gas emission reduction starting very soon if the UK is to meet those statutory commitments. Considering we have only met the first carbon budget because of the recession, how confident are you that we can deliver and increase the pace of emissions reduction?

Mr Davey: I am confident because the actions of the Coalition from day one have been to step up our practical actions in this area.

Q9 Albert Owen: Can you give some examples?

Mr Davey: Well, the Energy Bill I would say is at the heart of that because if we are going to make sure we have clean, secure energy at the most affordable cost we have to reform our electricity market. That is what the Energy Bill is about. The fact that we are already seeing a big increase in renewable electricity generation—nearly 16% already, well on the way for our target of 30% by 2020, and that is before some of the announcements that we have been making recently come on stream—suggests that we are getting to grips with the electricity side of the equation. We have work to do on the heat side and on the transport side, but we are seeing progress there. I would like it to go faster but we are seeing progress on both those fronts. Let me hand over to my Minister. Do you want to add any more to that?

Albert Owen: Good morning, Minister.

Gregory Barker: Good morning. My apologies for being two minutes late; for some reason, I had 11.05 in my diary.

I will just mention the successful rollout of the RHI. Although it is from modest beginnings, we now have over 5,000 installations for industrial and commercial applications. We have announced the rollout early next year of the domestic RHI and we are on track for that launch in spring. On heat, while there is a lot to do, we now have very solid foundations in place.

I would also point to the growing success of the Green Investment Bank, which is one of the Coalition's most successful green stories—an enduring institution created by statute, now a very strong part of the architecture of the City of London. The impact that that has had this year in opening up the IPO market for renewable energy is very significant and a

very good example of how strategic policy intervention using a relatively discrete amount of public sector funding can leverage an investment many times that from the private sector with a big policy impact.

Q10 Albert Owen: Can I just refer back to what the Chair was asking about? There are some mixed messages. How do you square the move towards low carbon with shale gas? I think I have asked you this individually in the past, both here and considering targets. Do you see shale gas as a transition from coal to low carbon or do you see it in itself in the mix? If so, is that going to help us meet those targets?

Mr Davey: Yes, I think shale gas has an important role to play. I am extremely keen to roll out shale gas exploration in this country and, hopefully, production. You will note that I asked my Chief Scientist, Professor David MacKay, to look at all the environmental aspects around shale gas in order to reassure people that the environmental issues that people are concerned about—whether it is water sustainability or the allegations that there could be toxic effects to the water table or, in particular, methane emissions—if you are properly regulated could all be dealt with.

If you talk to some of the shale gas developers in the United States, who have learned lessons from the early years, they are now investing in what they call green completions for the shale gas extraction. I think shale gas, if done with proper regulation, can have a real benefit.

What Professor MacKay shows in his report is that, for the UK, shale gas would probably be substituting for LNG coming from other parts of the world. The carbon footprint of domestically produced shale gas is less than the carbon footprint of LNG shipped from the other side of the world but obviously being tapped into by someone from the other side of the world. Therefore, it seems to me on the basis of the evidence that I have seen from my Chief Scientist that shale gas can make a contribution.

In terms of the electricity that can be generated, clearly if that is substituting for coal that is a massive step forward. One of the reasons why I was so delighted yesterday—and this is, of course, with the CCS coal project—to get real movement there is to show that whether it is coal or gas, if we can have CCS then both coal and gas have a role to play in a low carbon future.

Q11 Albert Owen: Okay, thanks for that. The NAO also states that quarterly reporting against the carbon plan is incomplete. The reports from the last quarter of 2012, a year ago, are still outstanding. How can we be confident, as you have suggested, that the Government is making progress in delivering against the carbon plan when we have not even seen the reporting on it?

Mr Davey: I will be honest with you, Mr Owen—I did not realise that there was an incomplete report. I am very happy to go and look at that.

Albert Owen: Can somebody else help you on that one?

Mr Davey: We will write to the Committee. We pride ourselves in the robustness and rigorousness of our reporting regime. It sounds like there might have been an issue of timeliness, for which, if that is the case, I apologise.

Albert Owen: By October it had not been produced.

Mr Davey: Okay. Well, I was not aware of that, Mr Owen, but we will look at that.

Albert Owen: You will publish those reports as soon as you can?

Mr Davey: Absolutely.

Q12 John Robertson: Secretary of State, I would like to move on to Warsaw itself, which I am sure you are thankful for. From a UK perspective, how do you think the Warsaw negotiations were?

Mr Davey: Well, we certainly met our objectives, even though it was very clear that as we were making progress the talks ahead are going to be challenging. We certainly did not get everything we would have liked, but we got more than our bottom line, put it like that.

To be specific, the key thing to make the progress required from the Durban agreement ahead of Paris in 2015 was to make sure that countries were going from Warsaw to start preparing what they are going to do and to be able to put that in the public domain ahead of time. In that way, those types of pledges and their contributions can be assessed in a public way and analysed so we can see whether the combination of those would get us to where we need to be as a world. The fact that people have gone away to do their homework on a timetable I think was a positive development at Warsaw.

There were other things I was particularly pleased at. For example, with respect to deforestation, the REDD+ discussions ensured that a new rulebook and new finance arrangements were agreed that will strengthen the work on forests, which is really important. The rules around MRV—measurement, reporting, verification—were also agreed. I refer to those as the building blocks—the foundation stones, if you like—of getting the treaty in 2015. If people were not going away and doing their work, if we had not done things on rainforests, if we had not done things on MRV, we would not be in a place where we could see that we will get to a negotiation in 2015.

There was quite a lot of progress. We would have liked faster progress. I will be very frank with you—I would have liked to have seen more success in pre-2020 mitigation. We pushed very hard, both the UK and EU, on agreement on HFCs and that was not forthcoming. We did not get everything we wanted, but in terms of the critical things needed to get us to the deal, yes, we did and that was successful.

Q13 John Robertson: It sounds to me from what you have said that there is not much movement from Doha. Doha was a sort of staging post where we were hoping that we would make some kind of detailed step forward in 2015. It strikes me as if this is the same. 2015 appears to be becoming more and more important, just going by what you have said there. Would that be how you would see it?

Mr Davey: 2015 is the critical conference and Durban always foresaw that. What Durban said was that there was going to have to be an agreement signed in 2015 that would apply

to all parties. Both Doha and Warsaw did not see any row back from Durban, really critical. What Doha saw were some of the previous negotiation tracks closed so we could open the programme to get us to 2015. What Warsaw achieved was a timetable and a work programme in detail to get us to 2015 with some of the foundation building blocks that needed to be agreed early on agreed.

Q14 John Robertson: Sorry to interrupt. Do you think that there is a clear understanding, then, that an agreement has to be made when we get to 2015 by all parties?

Mr Davey: Yes, that is what was agreed in Durban. There was no rowing back from that. There were attempts by some parties to try to take us back to pre-Durban, trying to insert in some of the agreements references that would have implied that the future agreement will not apply to all parties, but those attempts were not successful.

We ensured—and this is in many ways the critical thing—that the preparations apply to everybody. Everybody has to go and make preparations. We were clear that in terms of the timetable, which is people publishing things by the end of quarter 1, 2015, that only applied to countries that were ready to do so. That basically means the larger countries where the vast majority of emissions come from.

Q15 John Robertson: Where does that leave Canada, Australia and Japan, who have really moved their position?

Mr Davey: Let me deal with those three countries. The agreement still applies to them and they have not resiled from playing an active part in the UNFCCC. Let us take those countries in order.

Japan was the most disappointing. I have been clear and on the record that we wished Japan had not reduced its level of ambition in the way it did. We understand why they did, though. After Fukushima, because they have effectively turned off their nuclear fleet, it is going to make it very difficult for them to reduce their carbon emissions as they replace that electricity generation with a lot of fossil fuel production. We understood why they did it. We hope that as they adjust their energy mix and take account of carbon emissions in their longer-term plans they will be able to come forward with a 2030 target that gets them back on track. They are, it is worth noting, still committed to a 2050 carbon reduction target, so they have not resiled away from the overall need, and indeed they were very generous with their international climate finance. I still see in Japan a desire to get back on track and be part of the international efforts to tackle climate change, but they have felt unable to be as ambitious as they were post Fukushima.

Australia is interesting. The new Government has kept the previous Government's target for carbon emission reduction, but it is changing the overall policy mix to achieve that. We are obviously engaging with them, trying to understand where they want to go on it, but we hope that they will—in order to achieve the targets they are still committed to—adopt the right policies.

Both Japan's and Australia's recent decisions did impact the atmosphere in Warsaw. We still think Japan could revisit their 2020 target again; we hope they will do. But when one

looks at some of the detail behind the headlines, I do not see them giving up on their efforts. Fundamentally, they still believe that they need to take action.

Q16 John Robertson: Secretary of State, I do not question your commitment to climate change and how you feel about it, but I have a distinct feeling that the Government's position has changed. When the Prime Minister talks about green crap and things like that—

Mr Davey: He didn't.

John Robertson: Well, that is what comes over in the media and that is what is being touted about. Nobody but nobody, other than you, has said that that is the case. The fact of the matter is it would appear—

Mr Davey: For the record that is not the case—

John Robertson: Let me finish. I let you finish; you let me finish, okay? It would appear that there has been on many other occasions on other things a definite stepping back of commitment by the Government. I do not know where that puts this Department because I have absolutely great faith in where you want to go and you will have our full backing on it, but I just wonder whether our Government, like the Australian Government, is taking a step backwards.

Mr Davey: Well, first of all, thank you for your confidence and your support. That is appreciated. In terms of the Government's policy it has not changed. We are committed to our carbon targets. All parties reaffirmed their support for the Climate Change Act. The Energy Bill, which is critical to delivering this as we discussed earlier, was supported by all Members at Third Reading bar eight. There is huge support for these measures. Minister Barker talked about the Green Investment Bank and so on. The policies are in place and are as ambitious as ever.

I have to say about your reference to the Prime Minister that is not my experience of his commitment to this agenda. It has been interesting, has it not, that no one has been able to put the alleged remarks in inverted commas? No one has been able to prove that the Prime Minister said that. What you can prove is what the Prime Minister said most recently on climate change. I am going to quote him because these are in speech marks; this is on the record. When he was at CHOGM in Colombo he made what I thought was a very pertinent statement. He said, "If I said to you, 'There is a 60% chance your house might burn down. You want to take out some insurance?' you take out some insurance. I think we should think about climate change like that. Even if you're less certain than the scientists, it makes sense to act both in terms of trying to prevent and mitigate." He was absolutely clear that we need to act on climate change and when I have talked to him in private he is clear we need to act on climate change.

John Robertson: Well, I seriously hope you are right and I hope and pray you are not proven in the future to be wrong.

Mr Davey: Minister Barker reminds me that we recently had a presentation from the Government's Chief Scientist on the IPCC's Fifth Assessment. It was given to the Cabinet and we had a discussion. I think the general view round the Cabinet was this is pretty serious stuff; we need to keep committed as a Government to both tackling the UK's contribution to climate change but also show global leadership. The Government

continues to do that. We did that at Warsaw, we do that within the EU and we will do that nationally.

Q17 John Robertson: That is good to know. I just wish we had the same Cabinet commitment on the Big Six and sorting them out. Could I ask you one last question? The UK is exploring how to achieve its ambitions of limiting global temperatures to 2 degrees outside of the UNFCCC framework, is that right?

Mr Davey: Sorry, I missed the start.

John Robertson: The UK is exploring how to achieve its ambitions of limiting global temperatures to 2 degrees outside of the UNFCCC framework, is that correct?

Mr Davey: We are still very much focused on reducing our carbon emissions.

Q18 John Robertson: How do you get that?

Mr Davey: If I may, we are going to do that irrespective of the UNFCCC. Clearly, if we can get global agreements, both the UK and the EU can be more ambitious if we can get the rest of the world to support it. We obviously cannot do the 2 degrees by ourselves and at the moment the most worrying thing is, if you look at the evidence, the world is not on track to reduce our emissions to keep us within the 2 degree target. That should worry many, many people.

Q19 John Robertson: One last question that I did mean to ask. It was reported that Poland were using their own national interests in what was happening.

Mr Davey: That who was?

John Robertson: Poland were putting their own national interests over their duty as honest broker, as it were. I found that in Doha as well. Is it still the case that there are an awful lot of countries who put their own self-interest before that of the planet?

Mr Davey: Personally, I believe that wherever you live in the world it is in your interests to tackle climate change because I do not think there is going to be anywhere in the world that will be unaffected by the costs and the huge negative impact for the world of climate change. I personally think that people who think it is not in their country's interest to act are thinking in a very short-term way.

Q20 John Robertson: But what I really want to know is: did you see that?

Mr Davey: I accept your point, Mr Robertson, that there are some countries that seem to believe that they should leave all the effort to other people and they should continue to act as business as usual. Poland is often cited as one of those countries, but I engaged with my Polish colleagues an awful lot.

Marcin Korolec, who is now the climate change plenipotentiary for Poland, to use his new title, has seen a lot of the evidence. When you talk to him and his colleagues, they are

clear that Poland starts in a very different place from the UK. I think they want to adapt but they do not necessarily want to adapt at the speed that we would like them to.

Part of my work with my Polish colleagues is to talk about how we can work with them on shale gas, how we can work with them on nuclear, how we can work with them on CCS, renewables and energy efficiency—in other words, holding out the hand of partnership to work with Polish colleagues to see if they can adjust their energy mix more quickly than they are currently planning to.

Q21 Albert Owen: I totally agree with you on Japan. I am not too sure on Australia because following their election what the new Government was saying in its manifesto was basically that they are going to shift the direction and it will not be in line with what Britain's is.

This Committee was in Canada during the Warsaw talks and apart from the Mayor of Toronto, who dominated the news at the time, the other big issue was the Warsaw issues. We were talking with them about various things and they have moved very significantly away from other large economies, moving in a different direction. Tar sands are a big issue there still. There are a number of memoranda of understanding between the UK Government and Canada on energy and some of them are very good on CCS, for example. Do you worry that some of the world leaders are moving in that direction because they have been successful at being re-elected on platforms of moving away from the consensus of many of the large G8 economies?

Mr Davey: I think it is often important in this debate to look at what people are doing, not just what they are saying.

Albert Owen: But you did mention Canada and they are doing things that you probably would not agree with.

Mr Davey: What they are doing that I agree with is they are being very ambitious on CCS. I know this Committee has gone to see some of the work they are doing. When I have spoken to Canadian Ministers they are very committed to investing in CCS.

Whether it is the IEA or our own analysis, we believe that CCS has a critical role to play as one of the game-changing low carbon technologies. The evidence suggests that the world can reduce carbon emissions and keep to the 2 degree limit in a much more cost-effective way if we can pull CCS off. You can point to Japan or Australia or Canada. I would point you to the shift in the views in Washington and Beijing.

Q22 Albert Owen: That is where the consensus is. The question was basically that these are the countries that are breaking away and they are significant players. On Canada again, what they want to do is to get to the marine provinces and to export the oil and gas that they are getting from tar sands. They want it for the Asian market, so they are going to be big players. They are doing it for very commercial reasons.

Mr Davey: First of all, I still focus on the things that countries like Canada and, indeed, Australia and Japan are doing that will be supportive of the technological changes that we are going to see—CCS, in Canada's case. You cannot give a fair judgment on this without looking at how far the US and China have travelled in a very short time.

Albert Owen: I agree.

Mr Davey: This year I have been to both.

Q23 Albert Owen: But if you are fair, then you have to be very critical of the other side then. If you are complimenting one for moving in one direction, surely you have to criticise others for moving in the opposite because it affects Britain and it affects the world.

Mr Davey: Well, one is critical in a constructive way. I did not pull my punches about my disappointment at Japan's move, for example, because Japan has been a real leader. I believe they want to remain a leader and they have to make an adjustment, as I think you have admitted. We must focus on the significant shift in the actions, not necessarily the words in all cases, of countries like the US and China.

This process has had huge problems in the past because the US and China were not even focused in this area. The US has moved dramatically and it is not just shale. Shale is part of the story, but if you look at what they are doing in CCS—

Q24 Albert Owen: I acknowledge that. You said you were tough on Japan. Your predecessor was tough on Canada. I am hoping that you are going to be equally tough.

Mr Davey: I think Canada is going to be influenced more than anything by the US. What the US is doing on coal is really fascinating. I went to Washington recently and met Gina McCarthy, who is the head of the EPA there, and she is responsible for publishing the draft regulations that will reduce emissions from new coal power plants. She was explaining to me in detail the work that she is doing. She will then publish the draft regulations for cutting down emissions on existing coal power plants halfway through next year.

That is real action from the Obama regime that we have never seen before. That will have a big impact on thinking in Canada. The US has made it clear to us that probably in early 2015 they will come forward with how much they believe they can reduce their carbon emissions by in the future. Let us see what Canada does in that context. Let us not prejudge.

Albert Owen: I will make a final point. You make a very interesting point about America, but we put that to senior politicians in the province of Alberta and, indeed, at federal level. They do not want to be too reliant on the United States, which is why they want to get their oil and gas to the Asian market, so there is a worry there. I agree with you on part of what you are saying, but I think we should watch what countries like Canada are doing.

Q25 Graham Stringer: Just following on from those two series of questions, I have never heard a Minister come back from one of these international conferences being anything other than positive—even after Copenhagen, which was a disaster. Is there any particular reason why you did not give an oral statement as opposed to a written statement on Warsaw?

Mr Davey: Not particularly.

Graham Stringer: It is an important issue by your own definition.

Mr Davey: Yes. Did I give an oral statement after Durban?

Gregory Barker: You did after Durban, I think.

Mr Davey: Yes.

Gregory Barker: Yes—written last year; I think it was oral after Durban.

Mr Davey: Let us be clear. I think it is an important process. It is an important conference, but the critical conference is going to be in Paris in 2015. Durban was a particularly critical conference because it laid the framework for getting to the agreement at the 2015 CoP. No one was expecting Warsaw or, indeed, Doha to be breakthrough CoPs. When you bid for a statement, you have to have a particularly strong reason—it needs to have a major debate.

One of the issues, Mr Stringer, is the Labour Frontbench team on energy and climate change have failed to ask me a single question on climate change since I have become Secretary of State. If the Labour Frontbench was rather more interested in this issue than it appears to be, maybe then I would need to make more statements on it to Parliament. At the moment, they seem to be mute and silent on it.

Chair: Is there not enough disagreement on the Conservative side?

John Robertson: Chair, I think that the Big Six has monopolised things for the best part of nine months.

Mr Davey: Well, I have been Secretary of State for nearly two years.

Graham Stringer: I will try to up my game and ask you even more questions, Secretary of State.

Mr Davey: Please do.

Q26 Graham Stringer: Countries have to decide in just over 12 months, at the start of 2015, on their emissions reduction pledges. I think that is right, isn't it?

Mr Davey: Sorry, who did?

Graham Stringer: There is just over 12 months for countries to decide on their emissions pledges.

Mr Davey: Yes.

Q27 Graham Stringer: How will the pledges for the UK be determined?

Mr Davey: Well, we are working as we always have done within the EU context. Indeed, Pete Betts leads for the EU in many of the negotiations as a sort of EU negotiator. We have some big events coming up in the first quarter of this coming year. We are expecting the Commission to publish a White Paper in January, which we expect will look at the 2030 framework, which will be critical for the EU and, therefore, the UK's contribution. We also think that White Paper will look at reform of the EUTS, Europe's carbon market. The March European Council is down to consider that White Paper and may or may not give a high-level agreement about what the 2030 targets should be.

Clearly, the UK already has a position both in terms of the EU position and what our path should be. Our path comes from the Climate Change Act and the carbon budgets. The fifth carbon budget, which we set in 2016, will be looking forward to the 2027-2032 period. We have the fourth carbon budget up to 2027.

In terms of the EU position, we have said the EU should be looking at a 40% domestic—i.e. within the EU—reduction of greenhouse gas emissions by 2030 but prepared to go to 50% if there is a global agreement. The UK is both operating domestically following the Climate Change Act but also leading the debate in the EU. We hope that the UK and the EU will be ready to make our position clear on what we will be prepared to do even earlier than the first quarter in 2015. That would be our ambition.

Q28 Graham Stringer: Can I just clarify that about the UK and EU positions? Is our position autonomous?

Mr Davey: We have our own domestic position, which follows from our own domestic legislation. As you know, we have said in the 2008 Act that, irrespective of the EU, we want to reduce our carbon emissions by 80% on 1990 levels by 2015, and we have a series of carbon budgets. We obviously feed that into the context of the EU debate because not all the other 27 member states have that framework. We tend to be at the ambitious side of the argument at the EU.

Q29 Graham Stringer: Just to be clear, we are autonomous when we are above what the EU are doing but not below it. Is that one way of putting it?

Mr Davey: When we go to the European Council, whether it is the sectoral council that I go to or the full European Council that the Prime Minister goes to, we go to put forward what the UK believes is right. It tends to be the case that we are more ambitious than other member states and we are having to pull them up to our level of ambition.

Q30 Graham Stringer: Will this process be opened up to public consultation and scrutiny in here? Will Parliament have a role in deciding these emissions levels?

Mr Davey: Well, Parliament has had a pretty big role.

Graham Stringer: In terms of the legislative framework, but we are talking about specifics here.

Mr Davey: Parliament has passed the Climate Change Act, which has set us on a trajectory to 2050. We obviously publish the carbon budgets, which are very well scrutinised. Parliament has had a pretty big role with respect to that. I am very happy to answer all this Committee's questions on it, so Parliament has a role to scrutinise myself as Secretary of State in delivering on those legal obligations.

Q31 Graham Stringer: Are you confident in the international timetable? What processes are in place if it starts to slip?

Mr Davey: For 2015 or 2050?

Graham Stringer: For the emissions reductions for 2015.

Mr Davey: Stepping back a bit, what we want in 2015 is the world to commit to a set of reduction pledges that will keep us on a trajectory to meet the 2 degree limit. That is what we would like to see. We would like the scientific evidence to back up the pledges to show that the world is taking this seriously. That would be the ideal outcome in 2015.

Between now and when we get to Paris in 2015, I hope the work will be done that will assess where different countries are at, what contributions they are going to make and whether that will get us to that point. My suspicion is when we get to, say, Q1 of 2015 and most of the developed world, who are responsible for most of the emissions, have put forward their contributions, the analysis will probably show that the aggregate effect is short of what is needed for 2 degrees. That would be my guess, and then we will have to work at the UNFCCC to see how far that can be pushed up.

Clearly, if we can also agree on some pre-2020 mitigation, that will make the task in Paris that much easier. Do I think it is going to be a smooth, easy passage to Paris? Absolutely not. Do I think as a result of Warsaw we now have a programme and a timetable that sets out the route to Paris? Yes, I do.

Q32 Graham Stringer: You do not think the timetable will slip? That was the question.

Mr Davey: It depends what you are hoping to achieve in 2015. I have been really clear what I believe we should be achieving in 2015 and I hope we can get agreement on that. If people think we want something much less than that, well, that would be a step backwards. At the moment, do we have enough time? Are there processes in place to achieve what I would like to see in 2015? Yes, I think there are.

Q33 Graham Stringer: You mentioned mitigation then. How successful do you believe you will be in achieving mitigation before 2020?

Mr Davey: Well, the two processes are coming together. Prior to Warsaw, the Kyoto Protocol countries, who had signed up for K2 at Doha, had agreed to assess where they were in 2014 on pre-2020 mitigation and the EU was particularly focused in on that. The good news from Warsaw on pre-2020 mitigation was that all countries are now going to come together in June to look at their ambitions and pledges on mitigation pre-2020. Although Warsaw did not achieve any extra specific substantive measures—we particularly wanted action on HFCs; that was not achieved—what it did achieve was a real process on not just the Kyoto Protocol countries but everyone at that Durban platform coming together in June next year to look at pre-2020 mitigation.

That is quite important and maybe we have been underplaying the significance of it. I hope when Ministers do come together in June next year, we can see some real upgrading of the current mitigation efforts pre-2020.

Q34 Graham Stringer: Just a final question, if I may. You know from the previous questions that I have asked I do not think emissions reductions are doing their job in their own terms—that as we reduce emissions our carbon footprint goes up and more carbon

dioxide goes into the atmosphere. I think we are agreed on the facts on that. If the Climate Change Act had not been passed, would this country have been responsible for more or less carbon dioxide going into the atmosphere, taking into account consumption as well as production of carbon dioxide?

Mr Davey: First of all, I should say for the record I do not agree with your analysis. I do not want you or anyone else to think that I agree with your analysis, because I do not.

Q35 Graham Stringer: Do you agree with the fact that our carbon footprint has increased?

Mr Davey: If you look at a consumption-level approach to carbon emissions, it is certainly arguable that, because a lot of the goods that we were previously producing here are being produced elsewhere, that global carbon footprint is bigger in some ways of measuring it. I do not agree with you that that means that the overall framework is wrong.

The overall framework is pretty clear. We do not think we can do this by ourselves. We need an international agreement because trading patterns inevitably move the responsibility for carbon production to different parts of the world. I am afraid I do not draw the conclusions you do from this analysis of carbon emissions by consumption.

Q36 Graham Stringer: It is a matter of fact of what has happened that can be measured over the last six years or so. Are we responsible for more carbon dioxide going into the atmosphere or less?

Mr Davey: I am not sure whether I have the measurements and facts to hand because that is not the way the analysis tends to be done. Let us imagine we did it. The logic of what you are saying is that if a certain amount of goods are produced in China, for example, which have a lot of carbon content in them, that is carbon that we are responsible for.

The problem with that very intellectually robust approach of making sure that the carbon analysis points to the people who are consuming that carbon is that it is very difficult for us to influence industrial policy in China. I am not sure whether Beijing would want to give up control of industrial policy in China. It is an interesting and robust approach, but in terms of where it practically takes policy, we have to be responsible for the carbon emissions that are emitted by individuals, households, communities and businesses in this country and try to minimise those.

We should work very effectively with other countries to try to help them reduce their emissions. I am interested in practical policies that get us to where I think we need to be and the science tells us we need to be. While I do not disagree with different ways of looking at the problem, I still want to make sure that when we are measuring carbon and how well we are doing in reducing it, we are doing it in a way that takes you to practical policies.

Q37 Mr Lilley: The CoP reduced the obligations of the developing countries from making “commitments” to making “contributions” to the reduction in emissions. Is this a step forward or a step back?

Mr Davey: I am glad you have focused in on that word because there was a lot of debate around that particular part of the treaty and that particular word. It will be etched on my mind forever, I think, because we were up for about 40 hours in that negotiation. We ended up in a huddle of about 100 people trying to decide whether we should use the words contributions, commitments, actions and targets. There were different formulations being put forward by different countries.

We, and I am clear about this, would have preferred the word “commitments”. The Americans—I think it was Todd Stern—originally proposed “contributions”. When we looked at that, we felt that was a compromise we were willing to get to because it did not take us back to a pre-Durban situation. There were some countries that wanted to re-insert the divide between developed and developing countries, which is in the Kyoto Protocol and the annexes. We wanted to avoid that at all costs because that would take us back to a pre-Durban position. The post-Durban position that all parties should make efforts is what we wanted to preserve. We achieved that even though we had to accept the word “contributions”, not “commitments”.

Q38 Mr Lilley: Back to my question, is it a step forward or a step back? To be more precise, is it a step forward or a step back to a legally binding commitment?

Mr Davey: I think it is a step forward for this reason. We wanted to go away from Warsaw with all parties having to look at the contributions they are prepared to make. Whether you call them contributions or commitments, people are now going to have to bring them forward if they are ready to do so. That is quite significant.

When you boil it down, what is the significance between commitments and contributions? There were countries, I think, who felt that the term “commitments” had some sort of legally binding nature to it within that word. Therefore, they did not want to have a legally binding commitment ahead of the treaty. They wanted what they were being asked to do ahead of the treaty to be a contribution, not a commitment. When we get to Paris, clearly the legal status of these issues will need to be settled, but we were never going to settle the legal status issue in Warsaw. That was never our goal. I never expected it to be the case. The legal status aspect is, I think, certainly one that will need to be decided in Paris. I cannot see it being decided ahead of Paris.

Q39 Mr Lilley: You do not think that the reluctance of so many countries even to use a word like “commitment”, which has an echo of legal commitment, has any negative implications for the likelihood of achieving a legally binding commitment in 2015?

Mr Davey: No, I do not. We did think long and hard about this because we had some sort of forewarning that this might be where the negotiation went down. Ultimately, while I would have preferred “commitments” because I do want to make more progress on that legal aspect, I did not think we would get there. Getting people to sign up to do the homework, to do the analysis, and that that applied to all parties—developed and developing—was the issue that we needed. That was the bottom line. Dealing with the legal status of it was not what Warsaw was about.

Q40 Mr Lilley: Do you see any similarity in your position in relation to your relaxed attitude—though the Canadians have resiled from Kyoto, they are doing a bit of CCS; though the Japanese have resiled from it, they may change their mind—and that of Voltaire’s character Candide: that all is for the best in the best of all possible worlds?

Mr Davey: Well, it is a fantastic book and Candide is, indeed, an interesting character, but I do not believe I have that level of optimism in life. I think I am rather more realistic than Candide. While I would like to think we have the best of all possible worlds, I do not think in reality we do. I think you will agree with me on that point.

Q41 Mr Lilley: No, we do not—you are quite right. As a Conservative, I tend to take a pessimistic view. I seem to remember, on the subject of Candide, that he ended up by saying we should all go off and tend our own gardens.

Mr Davey: But I am making clear I am not Candide, for the record.

Mr Lilley: No, and that is a shame. We were, I thought, making progress when you warmed so much to Candide. Why do you think we should continue taking such stringent measures when, according to the evidence we receive from the Climate Change Committee, China already has a level of emissions per head similar to that of this country and the average in Europe and, according to the evidence we receive from Lord Stern, their current emissions of 9 billion gigatonnes per annum are likely to increase to 12 billion gigatonnes by 2020?

Mr Davey: One of the things that makes me more like Candide than not like Candide is the progress that is being made in China on this issue. It is absolutely true that they have not got to what you would call their peak point for carbon emissions. If you talk to the Chinese, they are trying to analyse when they think they will get to their peaking point for carbon emissions. There is a debate going on whether it is going to be early, mid or late 2020s.

The fact that the Chinese are focusing on that, the fact that in their recent five-year plan they were focused on reducing the carbon and energy intensity of their economic activities, the fact that they are wanting to increase the level of electricity coming from non-fossil fuel production, I think, to over 11%, the fact that they are investing more in renewable energy than any other country in the world, the fact that they are engaged in a lot of the CCS debates, the fact they have the largest new nuclear programme in the world, the fact that they are now wanting to reduce coal generation because of the impact it is having on air quality in their cities are all very, very positive signs.

In talking to Minister Xie, their lead climate change negotiator, but also talking to a number of the Chinese leadership when I was in Beijing recently, it was clear to me they take this issue really seriously. They recognise that it is in their interests. When the Prime Minister was in Beijing, Premier Xi raised the issue. You have to listen to what the Chinese are saying and doing, that is the critical thing. Their actions show they are taking this issue very seriously and they are changing their growth model.

Q42 Mr Lilley: Yes, but their emissions, nonetheless, are likely to go up from 9 billion to 12 billion according to Lord Stern. He said a comparable absolute increase in per annum emissions and thus a smaller percentage increase—25% compared to 33%—in the next

decade will take China to around 15 billion tonnes in 2030. He has all sorts of recommendations as to how they can not achieve that, but that is his starting point.

Mr Davey: Mr Lilley, China is at a different stage of development to the UK and to most of the developed world. When you look at different countries and where they are at, there are some countries that have clearly passed their peak and are able to reduce emissions in a cost-effective way. There are others who are still developing fast but they are fast approaching a point where they can peak in their emissions. There are other countries that are going to see increasing emissions because they are so poor and inevitably with some development they are going to see emissions increase. As someone who wants to see prosperity for all around the world and growth in the poorest countries in the world, the international agreement has to take account of where different countries are in their development phase.

Q43 Mr Lilley: On these figures, China, which already almost has the same emissions per head as us—maybe for the reasons that Mr Stringer pointed out, that they are really emissions but you do not want to count that—will have emissions per head far higher than we have ever had at any stage in our economic development, as far as I am aware. Doesn't that make a nonsense of us being so ahead of the game, if others are not playing the game?

Mr Davey: No, I do not accept that analysis at all. It seems to me completely reasonable to understand that China is at a different growth level. They still have hundreds of millions of people in poverty, even though they have managed successfully to take hundreds of millions out of poverty. I am impressed by the way the Chinese leadership is taking this issue so seriously.

I am not sure whether I said this to the Committee before in your presence, Mr Lilley, but you probably followed, like I did, every discussion and speech at the People's Congress in China about a year and a half ago when the buzz words were ecological civilisation. It is interesting, I have talked to a number of Chinese thinkers and politicians about what creating ecological civilisation means. It means changing their growth model so that over time—not next year, not necessarily in five years' time because it will take a lot of investment to get them in the right place—they intend to change their growth model so that the environmental disasters that they see that their people face can be reversed. It is very interesting.

If you look at what is happening in China in the cities and in the provinces, the biggest cause of social unrest is environmental problems—the air that people breathe, the water that people use, the degradation of the land. That is why at the People's Congress they talked about creating an ecological civilisation. When you hear that, when you see it being implemented and you see the measures being taken, then I think it is worth taking that seriously. It reminds me of the growth phases that we went through in this country. When you go on the Terrace at the House of Commons—I am sure you occasionally wander onto the Terrace—I am always reminded of the story of how the Thames used to be an open sewer.

Mr Lilley: I think with respect for the benefit of the Committee, this is very interesting but nothing to do with CO2.

Mr Davey: I think it has everything to do with CO2 because CO2 is one of the externalities of growth.

Q44 Mr Lilley: But not the one the Chinese are primarily obsessed with. They are rightly worried about their inhabitants dying from PM2.5 or whatever emissions it is from coal that kill them. The process of getting rid of that is of great benefit to humanity and they also get rid of CO2, but that is not their driving force, is it?

Mr Davey: Let us be clear. Economic growth has a lot of externalities that can be loosely described as pollution. First-year undergraduate economics shows that profit maximising activity can improve the utility of society but it cannot take into account externalities of the market, it cannot price in—with pollution being the biggest one.

Whether it is PM2.5 or the health of the lungs, whether it is effluent in the rivers or CO2, these are all externalities and a modern, sensible democracy that believes in market forces needs to take account of those externalities and needs to price them properly. It has not happened in the past and needs to happen. China is catching up with the impact of externalities on its society and its economy. It is doing that fast. It is taking them seriously and I very much welcome the fact that they are doing that. I would have thought that all liberal market economists would want to see externalities that do damage to our planet and our people taken properly into account.

Mr Lilley: I am sure the people of China will be glowing with warmth at the fact that you and I approve of their desire to get rid of pollution.

Sir Robert Smith: I remind the Committee that I have an entry in the Register of Members' Interests particularly to do with oil and gas and a shareholding in Shell.

To reinforce that point, during our visit to Canada, close on our tails were delegations from China to come and learn and study the CCS project that we went to see. I think the reinforcing of that learning phase and the education to China, because that is an externality that does affect climate change.

Mr Davey: I could not agree more.

Q45 Dr Whitehead: One of the big parts of the CoP was obviously the question of the discussion of the so-called Warsaw Mechanism and of what compensation for loss and damage would look like. How would the Warsaw Mechanism, in your view, actually work in practice? What do you think was agreed at Warsaw in terms of something that could work in practice and how might that do so?

Mr Davey: The Warsaw International Mechanism for Loss and Damage, which we agreed to establish, is fundamentally about how we help poor and vulnerable people deal with the effects of climate change. It comes under what is called the Cancun Adaptation Framework. That is where it sits in the UNFCCC architecture and I think it will help the UNFCCC institutions to understand the issue of loss and damage better, to be better informed about it, to co-ordinate their actions better, to be able to spread best practice to tackle this issues more efficiently and focus the attention on that extreme adaptation more carefully.

If you are one of the low-lying islands of the Pacific and there is a danger that rising sea levels are going to cover your island and you will have nowhere to live, or make your fresh water wells so brackish that you do not have fresh water and the island becomes uninhabitable, then clearly we have to find a way to deal with those people and those countries. We have to understand that process better and we may have to work with other parts of the UN—with the refugee section, for example. That is what I see the Warsaw International Mechanism doing, looking at those really extreme parts of adaptation to climate change.

Q46 Dr Whitehead: I agree, it does focus on those extreme elements of climate change, but do you think it does anything more than shine a torch on those issues? Bearing in mind that there is no liability arrangement attached to the mechanism in respect of developed countries, do you think there should have been any form of liability mechanism?

Mr Davey: No, compensation was not a part of the discussions around the Warsaw International Mechanism and we do not think it should be. It is not a part of the new mechanism. I think what you are talking about is trying to understand the problem better, trying to improve the policies that you could adopt.

For example, we do see regional insurance mechanisms being talked about and maybe that is the way forward—that you have some sort of insurance mechanisms. I think a global one would be quite difficult to bring about, certainly in the short-medium term, but we are beginning to see some regional ones. I am not an expert in this area. I do not know whether Pete wants to comment.

Pete Betts: There is certainly one in the Caribbean which we are contributing to.

Mr Davey: It is trying not just to do some academic exercise of telling us how severe the problem is, but to look at the best practice to both try to avoid that level of loss and damage if we can, but also find ways of how you might prepare for it should it happen.

Q47 Dr Whitehead: As you said, this is not a compensation mechanism but it is presumably a something mechanism. You have mentioned the question of insurance, but insurance itself presumably requires an insurer, and insurance requires contributions to insurance. How does this differ from compensation exactly? Would even those offset mechanisms be allied to some form of contribution, which does effectively indicate in what direction liability for those extreme events, for example, might be set at?

Mr Davey: I think we need to make some distinctions here. There are some people around the loss and damage debate who think that compensation linked to liability of countries around the world with some sort of historic responsibility means that certain countries—particularly the developed countries—should be putting their hands in their pockets now and in the future to compensate for loss and damage. That is not what was agreed at Warsaw. It is not part of the Warsaw International Mechanism. Clearly, it is not part of analysis that will flow from the Warsaw International Mechanism.

Part of the analysis though, I think, will involve things like insurance, which will not be a question of historical responsibilities and liabilities; it will be an insurance mechanism. The question is how can those be built and that will be what flows from the work. I cannot

prejudice that and it is quite a technical area, but, as Pete was saying, there are some examples where you have some embryonic regional insurance mechanisms.

Let us say there is an island with 5,000 inhabitants and that island becomes uninhabitable. Clearly as a world we have to work out where to resettle these inhabitants; we are not just going to leave them to sink beneath the waves. That is a very critical issue; it shows you how challenging climate change is going to be.

Q48 Dr Whitehead: Things such as sea level rise and cyclones—indeed, yes, where a nation exists on a porous coral reef, the water by storm surges could render it unusable, for example, even if the island was not overwhelmed itself. That is, however, an event that just happens to that island and is not necessarily more extreme than weather events elsewhere.

So how does the mechanism distinguish between what is an extreme weather event, which in any event there is still a lot of difficulty in attributing directly to climate change, and where that extreme weather event has taken place and its consequences for a particular community? I imagine a number of developed countries may well say, “There is an extreme weather event that has just occurred off our national coastline, but there is nothing for us there”, or would there be?

Mr Davey: I think what you are posing is exactly the right sort of question. There is a spectrum of problems that are going to come as a result of climate change—certainly, that is what the science is suggesting. You could say it is a spectrum of adaptation, with loss and damage being at the extreme end of that, but there being some pretty awful other events that are close to losing your whole island or losing where you live.

Maybe we could link that to the tragedy in the Philippines. We do not know whether or not that typhoon was caused by climate change. The scientists no doubt will look at that, certainly, I would not say that it was definitely caused by climate change. The fifth assessment report did suggest that later on in this century the frequency intensity of tropical storms may well increase as a result of climate change, but the science is not clear on that yet.

What the science does suggest made the tragedy in the Philippines worse is the sea levels and the impact of storms has been made worse for certain lower lying islands and countries because sea levels are higher. I do not see that on the extreme that I was talking about with the islands, what it means is we have to take some potentially quite significant adaptation measures to protect people from the impact of weather events that may or may not be caused by climate change, but the combination of that with higher sea levels.

We know from the UK’s very recent experience that flood defences can really protect people, their lives, their properties and their economic activity. The recent storm tidal surges we saw even last weekend, which had a big impact on a number of ports and towns and people, the initial evidence is that those impacts were dramatically reduced. People’s lives and homes were saved because of investment in flood defences. I am not saying that the tidal surge was caused by climate change—in fact I am pretty sure it was not, from the evidence I have seen—but taking adaptation measures, if you like, coastal defence measures can protect people very, very significantly.

It looks increasingly likely we are going to have to take a large number of those sorts of measures in a large number of places around the world, and I think we will need to do

that under the Cancun Adaptation Framework generally. Some of that will be the sort of adaptation we have been talking about for some time. Some of it will be on the loss and damage end of the scale. I hope that it is clear.

Q49 Dan Byles: I want to touch on the issues of mobilising long-term finance, which of course has been an ongoing issue for factories in the various meetings. What progress do you think has been made on mobilising long-term finance?

Mr Davey: I think there is some progress and I want to pay tribute to the Climate Change Minister and bring him in in a second because there has been an awful lot of work on private climate finance. Clearly, at the early stage a lot of the work has been on public finance and the UK has been one of the most generous providers of public finance in the industrial climate finance area. Some of those funds are building up.

The key fund, the Green Climate fund, is one that we hope will be a critical part of that going forward. We are clear as a Government, the EU is clear and I think people who look at this issue are clear that if we are going to mobilise the \$100 billion that we have said we are going to do by 2020, there is no way that will be able to come from the taxpayers of developed countries. A large amount of that will be private finance and Britain has been leading the way in that area. On that note, I want to pass to my colleague, Mr Barker, who has done sterling work in this area.

Gregory Barker: Thank you, Secretary of State. Yes, I think Britain does lead in this area but we still have a lot of work to do globally to bring credibility to private finance because there is still a great deal of scepticism in developing economies that private sector finance is a surrogate for public sector finance or a disbelief that private sector finance will flow at the scale and pace required. That scepticism is misplaced. There is increasing evidence that private sector finance is being deployed in greater numbers and that we are developing new financial policy instruments to work more effectively with private finance.

The UK is in a particularly strong position to lead on this, for two very obvious reasons. Firstly, we are the only member of the G7 to meet its millennium development goals. We have genuine visible credibility with developing economies in terms of our public funding and no one doubts the UK's commitment; the Prime Minister's restatement of that is very well understood.

Secondly, because of the expertise contained in the City of London, we have the private sector institutions and the individuals capable of creating these new products, leveraging on the back of public sector investment, the most effective direct investments into these developing economies. We are helped by two particular factors on top of that. One, in recent times, is the collapse in the cost of a number of renewable technologies—particularly solar, where the price has fallen dramatically and so is capable of being scaled up much more effectively and affordably.

The second, the change in investor attitudes towards developing economies, particularly beyond the usual suspects of, say, China, where there is obviously huge investment flows. However, investor attitudes towards sub-Saharan Africa only a few years ago were very cautious indeed and now Africa is seen as hot. Investors are wanting to tap into new ways of accessing that forecast economic growth. A number of climate-related sectors are very attractive ways to do that. If we can create stable regulatory

regimes and appropriate financial instruments to allow investors into clean energy, energy is something that Africa needs to expand. Clean energy, particularly distributed energy, offers huge opportunities and the UK is there.

We will be playing an increasing role in the next two years in leading this. We have a new initiative that we are working on with the US and a number of other countries, called the Global Innovation Lab, which is partnership with the private sector to design new policy tools to drive forward this leveraging of private sector finance. We are also looking at ways to showcase what is happening because a lot of this is around confidence. It is happening, but we need to have much better visibility on those investment flows.

Q50 Dan Byles: Are you still looking at a 25% to 75% split, public/private? That was a figure you gave in December last year.

Gregory Barker: I don't think there is a specific scientific figure. I have heard other figures bandied around. Some people have said 60/40, others have said 20/80. I don't think there is—

Dan Byles: There is not a set target.

Gregory Barker: There isn't a set target, but I think there is acceptance that the majority of that figure, in the long term, is going to have to come from the private sector, and we are looking to mobilise the maximum number, which we hope will exceed the \$100 billion figure. There is still a lot to do. I had a series of bilateral meetings in Warsaw with Ministers from developing countries and there was a very useful roundtable hosted by the EU on this, which included Finance Ministers as well as Energy Ministers from developing countries. There is an appetite now to engage on this more seriously, but it's credibility.

Q51 Dan Byles: You would not agree with the *Financial Times* who reported, "There was little movement on a much more ambitious programme that would see \$100 billion a year flow from developed to developing countries." Do you think they are being over pessimistic in that regard?

Gregory Barker: It wasn't a breakthrough. That is not entirely inaccurate reporting because this is something that is incremental, it is growing. We are not just suddenly going to agree something at Warsaw; the private sector, by definition, moves of its own speed. We are seeing year-on-year incremental improvements. The capitalisation of the Green Climate Fund next year will be an important milestone but even that, the Green Climate Fund will only be part of a bigger jigsaw. It's not going to be the whole solution.

Q52 Dan Byles: If the Green Climate Fund board sign off the GCF, when do you expect that to be operationalised?

Gregory Barker: By next summer, I hope.

Q53 Dan Byles: Thank you. On a slightly wider picture, going back to some of the issues that you have already touched on about the big 2 degrees challenge that we face. Secretary of

State, you said earlier in response to Graham that you think the 2015 picture is likely to show that we are still short of the action needed for 2 degrees. Was that the phrase you used?

Mr Davey: Yes. What I was saying is when we get around to assessing the contributions of the large countries that we expect them to make by the first quarter of next year, we will find that the aggregate of that is probably going to be short.

Q54 Dan Byles: I am curious whether you predict that the UK will be short or whether you are saying that our bit will probably be sufficient but that other countries will be short.

Mr Davey: What you need to do behind that is to work out what our fair burden share ought to be, as well as what we can realistically be expected to do. We are on the ambitious side of that. If we apply the analysis that we do to other countries, the aggregate would be more on track.

Q55 Dan Byles: Okay. If you are right that the aggregate is probably not sufficient, you do not necessarily expect that to lead to calls for greater ambition in the UK; you think it will be more people looking at the UK and saying, “Other people need to be doing what we are doing”.

Mr Davey: The UK’s contribution to the EU’s debate around 2030 has been to say that domestically the EU—and our share of that, of course—needs to be 40% by 2030. That was in the low carbon road map, I think, agreed by everyone, except Poland, in 2012. What we’ve already agreed domestically should be our base, but we should be prepared at Paris—this has not been agreed yet; this is the UK position at the EU—to go to 50% if there is an international deal. In a way, that is trying to keep some of our cards to our chest by simply saying, “Look, we’re prepared to move but you guys have to move as well. We’re not prepared to do it unilaterally”.

Q56 Dan Byles: Okay. What do you say to organisations like the Tyndall Centre who say that current UK domestic legislation, despite being among the toughest in the world, is incompatible with our internationally agreed 2-degree target because our domestic emissions targets are not up to the job of doing our fair share of hitting 2 degrees? I am sure you have heard that.

Mr Davey: To be honest, I haven’t.

Dan Byles: The case has been made by Professor Kevin Anderson from the Tyndall Centre that our domestic emissions production targets are not robust enough to match the rhetoric we are seeing on the international stage when we are signing up to 2-degree targets.

Mr Davey: I haven’t heard that and I am surprised because we are on the ambitious side and we are taking a lot of action. Normally we are criticised for taking too much action.

Dan Byles: Okay, thank you.

Q57 Sir Robert Smith: Last year you highlighted that it is going to be very important to get clarity on measurement verification in reporting. What sort of progress was made in Warsaw?

Mr Davey: Quite important progress, and one of the things I mentioned in one of my contributions earlier is that there was an agreement on the process for measurement, reporting and verification. Just to be clear what that agreement means and the significance of it, it will mean that ultimately the UN will be able to go and verify the emissions reported by any UN country, from China to the USA. That is quite a significant building block. It doesn't get us to the treaty but it's one of those agreements—the nitty gritty—that you need to have there. By agreeing that relatively early in the process, that's a very positive development.

Q58 Sir Robert Smith: Was it an overarching agreement that there should be or was there any detail as to how it would be—

Mr Davey: There's quite a bit of detail to be worked out yet. I don't think that the full detail—Pete, do you want to contribute to that one?

Pete Betts: It is highly operational in the sense that in the past there has been very much a firewall between supervised developed countries and supervised developing countries. We have now operationalised requirement on developing countries to produce a report with an inventory every two years and that will be subject to an international review team, co-led by a developed country and a developing country individual. They can make recommendations on how they opt for improvements. It is an agreement that had already been made, and we have now operationalised it. The first developing country reports are due in by the end of next year and should be reviewed during the course of 2015 in time for Paris. It's a pretty significant step forward.

Q59 Sir Robert Smith: Is there more progress that needs to be made to firm up the detail of how that would be verified?

Pete Betts: No, that system is now in place—it is operational, it is effective and we can look forward to the first reports coming in.

Q60 Sir Robert Smith: Just going back to the earlier Canada problem, one of the messages we have in Canada in a way is that, from the population's point of view, there are not many fears for climate change and its direct effect on Canada. I suppose that is one of the challenges in getting people to sign up to deals—if they do not see the direct effect. There are obviously global effects but we do not see, in day-to-day life, the direct effect.

Mr Davey: I am not an expert on the scientific analysis that suggests what will happen to Canada under the different scenarios. I would be very surprised if there were not some significant impacts, particularly if we got to a 3-degree world. Clearly, there can be indirect effects because the rest of the world will have significant problems, even under a 2-degree world. However, if we got to 3 degrees or more the washback to Canada would be significant.

Your point is that trying to get into the political debate today—the problems that we foresee—is a challenge. It is a challenge in every country. We need, therefore, for politicians and policy makers to be able to articulate the science in a way that comes across to people without scaremongering, without frightening people; I think there are solutions, as we have talked about.

With good presentation, people can understand that we need to act and we have a moral imperative to act. Going back to Canada, I don't know exactly how that political debate is going in terms of the effect on Canada but one could imagine that a lot of the permafrost in north Canada would probably melt under these sorts of global warming scenarios. That could destabilise a lot of the infrastructure there and that could have an impact even on their oil and gas production. I may be wrong on that, but it would seem to me the first principles and the sorts of things that, if I was a Canadian politician, I would be worried about.

Q61 Sir Robert Smith: Some Canadians saw it as a chance to open up more of the territory to development, but obviously there is the global picture as well.

Mr Davey: I am sure that's true. There are some people who see benefits and ignore the costs.

Q62 Chair: You mentioned last month that development money would not be used in future to pay for coal-fired power stations in other countries. Does that create a saving in Government spending?

Mr Davey: That certainly wasn't the driver, I can absolutely assure you. I haven't asked that question. It is a very interesting question. I don't think there was a whole set of projects that were lined up for us to fund, so probably the answer is it doesn't.

Q63 Chair: Right. If it did, I wondered whether there was some coal-related activity that this money could be deployed towards—possibly carbon capture and storage.

Mr Davey: I don't think we have found a new pot of gold.

Q64 Chair: Just on CCS, do you think that there is a lifeline for the UK coal industry from CCS in the future at some point?

Mr Davey: It certainly has that potential, though you must remember we are importing a lot of the coal that is being burned at the moment.

Q65 Chair: Is your Department looking at the potential for enhanced oil recovery in the North Sea as one way to improve the viability of CCS?

Mr Davey: It's one of the things that is obviously discussed but we've just got to get some of the pipe work there. Yesterday, I was up at Drax talking to the partners of the White Rose consortium. We have signed the front end engineering design agreement with them.

It was the guys from National Grid and Alstom who were showing me what is proposed and where the different saline aquifers are, that they would originally put the carbon.

But they were also pointing out that because we have agreed to the infrastructure to be oversized both a lot more carbon could go through there and, indeed, additional pipes could go off them—the pipe that is currently planned—to assist with enhanced oil recovery in due course. The agreement that we have had with them, and what is being proposed, is future-proofed to allow other activities to happen.

Chair: Thank you. We will be setting out a future session on the IPCC assessment report, but Mr Lilley had a couple of questions he just wanted to raise on that.

Q66 Mr Lilley: Yes, I gave you advance notice of this last time, so I am sure you have had time to rehearse, maybe do better than Lord Deben. I wanted to know what evidence it would take to make you less pessimistic about the potential impact of CO₂ on the environment. If I may be specific, how long would we have to go with the current pause in the rising temperature of the surface of the globe before you thought that perhaps the world is less sensitive to CO₂ than we had previously thought?

Mr Davey: Given that you have implied that I am basically the Dr Pangloss of British politics, presumably you think unlikely the idea that I could be pessimistic about anything. Nevertheless, let me try to answer your question specifically. I am going by the science. I am not a scientist, but the people who work for the IPCC, the people who advise me who are scientists, provide the intellectual framework that we analyse and we have to then take decisions on.

That intellectual framework starts with the physics, physics that has been accepted for well over a century—namely, that certain gases that go up in the atmosphere can have a warming effect. That physics, as I understand it, is uncontested. There is the theory about how the thing works and then there is the question about, how much stuff is going up? We have a much better handle on that—not just in terms of volume, but the types of greenhouse gases there are and the impacts the different types of molecules, different types of gases, have on warming. That theory, in evidence now, is much greater.

Then you look at—following that science theory—what might happen to the world's climate. What will the evidence be? When you listen to them, they talk about warming of land, warming of the oceans, ice caps and glaciers melting and sea levels rising. They talk about the acidity of the oceans, the impact on the climate generally and the potential increase in extreme weather events. Those are the sorts of evidence that would flow from that scientific framework. Then what we saw in the IPCC's fifth assessment were measurements that scientists have taken on those different areas.

You are talking about one of those, so let me engage with that one—the fact that the evidence so far is that, in the last decade, the temperatures measured on the land were not increasing at the rate that they thought they would. You described it as a pause. The IPCC fifth assessment describes it as a slowdown. They still note that the decade we are talking about had the highest temperature of any decade since 1850, so it was a slowdown but still with high temperatures, relatively speaking historically.

They also say that people who isolate that particular period of time are not being very scientific because their model suggests that there will be times when global temperatures—as measured on the land—slow down and increase. They suggest that, to

obtain a proper scientific analysis of this particular part of the evidence for climate change, one should take a longer period. That is a very long answer to your question, Mr Lilley.

Mr Lilley: It is very long, but it is not an answer to my question.

Mr Davey: I believe it is. What I am saying is that I go by the scientific evidence from the theory and the empirical evidence. What the scientists tell me is if you look at one bit of the evidence—the temperature on the land—and you look at it only for a particular period, you will not necessarily draw any meaningful conclusions.

Q67 Mr Lilley: My question was, how long would this pause have to go on before you thought that the world might be less sensitive to carbon emissions than previously thought? You did not answer it, so we take it that you think it could go on indefinitely. We could never see any more warming and still you would believe that warming was a threat.

Mr Davey: The answer to your question is that I listen to the scientists.

Q68 Mr Lilley: What did the scientists say to you? I have put this to one of your predecessors who sent the scientists from the Met Office round to me. They effectively said there is no evidence that would make them change their models.

Mr Davey: I would be interested to hear from the Met Office directly. When I have seen the Met Office and talked to them—and we should be very proud of Britain's Met Office; it is probably the world's leading meteorological office—the evidence that they put forward and all the different indicators are that climate change is happening and is real, that we should take it seriously and that it has some very disturbing effects that require action. When you listen to the Met Office, they are guided by the science.

Gregory Barker: If it is all right just to intervene, Secretary of State, when I visited the Met Office, the head of the Met Office said he would like nothing more than to be able to present conclusive evidence that climate change was not happening and that we could relax and not worry about it. That would make his reputation and would probably win him a Nobel Prize. However, that was simply not where the probability of science and the material was leading him. The idea that they are predisposed to this is just simply not the case.

Mr Davey: I agree with you. I would like it not to be happening.

Q69 Mr Lilley: Are you aware of the answer that Professor Kevin Trenberth gave when asked this question some years ago? He said this pause would have to go on for more than 17 years; it had then gone on for seven or eight. After 17 years, it would be significant—it would cause a re-evaluation. Do you discount that scientist but not others?

Mr Davey: I am obviously not aware of that particular scientist's evidence.

Mr Lilley: Get out more.

Mr Davey: Maybe that should apply to many Members of Parliament and Ministers. However, I would say about scientists that I think it was 259 scientists from 138 countries—I could be wrong on those exact numbers, but something like that—who worked on the IPCC's fifth assessment report. There were an awful lot of scientists. They

were from many countries. They had 50,000 comments, I think, on their working documents, making the fifth assessment the most peer-reviewed piece of science in history.

Q70 Mr Lilley: I am sorry, Secretary of State, but you do not understand my question. I am not saying that we yet have evidence that global warming is something trivial; I am asking you how long a piece of evidence would have to continue.

A second question. You mentioned melting ice caps. As you know, the combined ice on the South and North Poles has reached a record level compared with the last couple of decades. How long would that increase have to go on before that bit of evidence made you think again—or do you look only at one Pole and not the other?

Mr Davey: In answer to both your first and your second questions, I am afraid I have this novel view of listening to the scientists because I am not a scientist. I have a Chemistry ‘O’ Level, but not Physics or Biology ‘O’ Level. If my assessment of the science was what we relied on, we probably wouldn’t end up with a good policy. As a Secretary of State, I rely on people who have studied the science and are at an extremely high level. I am proud that our country has some of the best scientists in the world and they collaborate with some of the best scientists in other countries. It’s sensible that we listen to their findings.

Q71 Chair: On the question of the ice, which has just been raised, I wonder whether you noticed the US White House strategy, published for the Arctic region this summer. It said, and I quote: “Unlike anything previously recorded, the reduction in sea ice has been dramatic, abrupt and unrelenting.” I do not know whether you take that statement seriously; I do take it seriously. Coming from America, it is particularly interesting because they have not always been quite so subscribed to that conclusion.

Mr Davey: Certainly, Chairman, all the evidence I have seen in terms of the Arctic suggests that the ice loss has been dramatic and, indeed, many countries and companies want to see the impacts of the lack of ice on both navigation and other issues.

Q72 Mr Lilley: Is it the view of this alliance between the Chairman and the Secretary of State, which is a familiar feature of this Committee, that we should ignore the Antarctic and consider only the Arctic?

Mr Davey: No, not at all.

Mr Lilley: That is what you just did.

Mr Davey: No, I was talking about the Arctic; I didn’t discount the Antarctic. What I would say though is that I listen to the scientists. I have never had the pleasure of going to the Arctic or Antarctic myself, but I know we send some very clever people there and I listen to the evidence they bring back.

Q73 Mr Lilley: Unlike you, I did study natural sciences at Cambridge but I do not pretend, for that reason, to be a climate scientist, although it is all based on physics. But I did study what any layman in this country could study—the basic scientific method. It was laid down

by Karl Popper: if it cannot be disproved, it is not a scientific statement. What was laid down by Richard Feynman is that the scientific process is where you spell out a theory—a thesis, a hypothesis—you deduce from it the conclusions and you compare them with the evidence.

If the evidence disagrees with the conclusions—however elegant, however beautiful, however committed you are to the theory—it is wrong, full stop. Those were his words. One more scientist I will mention who said that, “Of course, scientists were always reluctant to admit that the theories to which they are attached are wrong and so science progresses from funeral to funeral.” I hope we will not have to wait until all the scientists in the Met Office are dead before we get any change of heart, if the evidence warrants it.

Mr Davey: The scientific method that you have described looks like—to me, from my reading of the IPCC’s fifth assessment—exactly what they have done.

Q74 Mr Lilley: Does the Government still support the report of the InterAcademy Council—the council of all the royal societies and their equivalent across the world? It did a review of the processes and procedures of the IPCC. The Government welcomed that at the time and said it hoped that the recommendations would be incorporated in the future; this was an analysis of the fourth assessment. The Council’s recommendation was, “Quantitative probabilities, as in the likelihood scale, should be used to describe the probability of well-defined outcomes only when there is sufficient evidence. Authors should indicate the basis for assigning a probability to an outcome or event.”

As you know, the principal headline of the IPCC’s fifth report was that they have increased their certainty about the seriousness of global warming from 90% to 95%. But I could not find any basis in evidence that they articulate—it seems to be a purely subjective assertion. Can you confirm that I am wrong and that they have implemented this recommendation or have they reverted to the old practices? Again, the same report said, “The authors of the IPCC reported high confidence in some statements for which there is little evidence”?

Mr Davey: First of all, should we ensure that the IPCC process is as good as possible and could it ever be improved? Yes, we should ensure it’s as good as possible and I am sure it can be improved. I am sure the members of the IPCC would agree with that. The particular point that you have read from that report, I am not, myself, familiar with. I don’t know whether it has been implemented.

The next question you raise is about whether the change from 90% to 95% confidence is based on evidence. I would be surprised if it wasn’t, but I can’t point you to the bits in the report which you have missed. I am sure you have read it assiduously but, from memory, I can’t point you to the bits that back up the change in probability that comes from the summary documents. I am sure we can write to you to assist with that process.

Mr Lilley: That would be very helpful.

Q75 Chair: As we are planning an inquiry explicitly on the IPCC fifth assessment report, we might call it a day for this morning. There will be an opportunity to explore these issues, I am sure, at greater length than for the benefit of everybody concerned.

Mr Davey: I am sure when you do that you will want to ask the questions about what it is that will convince any individual that climate change is happening over and beyond the evidence that is already there, because one could turn the question back. The evidence seems to me pretty overwhelming. I don't want climate change to be happening, but the evidence seems pretty overwhelming. Clever people, who are scientists, have come to that conclusion. My training is as an economist and I have things that economists bring to this on cost-benefit analysis and risk analysis.

Given the scientific evidence, one has—I think, as an economist—to take a risk-based approach and say that, given what the scientists are telling us, what is the most sensible thing to do to manage risks? As the Prime Minister most recently said when he was in Colombo, “If there's a risk that your house may catch fire you would take out insurance to count against that risk.” If there is a risk that these climate-change scientists are right, it would seem to me it is completely rational and sensible—in fact, imperative—that we take an insurance policy out and take the measures that my Department proposes and works with other countries to implement.

Chair: At the risk of encouraging suspicions of a conspiracy between you and me, I will say that I entirely agree with the Prime Minister's statement that you have just quoted.

Mr Lilley: Could I just make it clear that I have not, now or ever, disputed the basic science of the greenhouse effect? It is customary for those on your side to assert that those of us who believe that it may not be quite as damaging or that the costs of mitigation may exceed the benefits, do not believe in science. That is not correct. I put that on the record.

Mr Davey: I would certainly not make that charge against you myself. I don't like to see sides in this; as the Chancellor keeps telling us, we are all in it together.

Chair: Indeed, Secretary of State, you will be aware that occasionally members of this Committee travel in a representative capacity on behalf of the Committee to study particular issues. In view of Mr Lilley's close interest in the Antarctic as opposed to the Arctic, it is possible we might be able to secure funding for him to make a visit to the Antarctic. Mr Lilley, that was just to make sure that you are aware that we want to use your interest in this particular subject for the benefit of the whole Committee.

Thank you very much indeed for your time, Secretary of State. It has been a very interesting and useful session.

Mr Davey: Thank you.