HOUSE OF COMMONS

Energy and Climate Change Committee

Oral evidence: Linking emissions trading systems, HC 739, Tuesday 25 November 2014

Ordered by the House of Commons to be published on 25 November 2014.

Written evidence from witnesses:

- European Commission
- Department of Energy and Climate Change

Watch the meeting

Members present: Mr Tim Yeo (Chair); Ian Lavery; Albert Owen; Christopher Pincher; John Robertson; Sir Robert Smith, Mr Peter Lilley; Graham Stringer; Dr Alan Whitehead

Questions 151-212

Witnesses: David Hone, Chief Climate Change Adviser, Shell Research Ltd; Damien Meadows, Adviser, DG Climate Action, European Commission; Amber Rudd MP, Parliamentary Under-Secretary of State, Paul van Heyningen, Head, Industrial Energy Efficiency, and Ben Lyon, Head of International Negotiations, Department of Energy and Climate Change, gave evidence

---

Examination of Witnesses

Witness: **David Hone**, Chief Climate Change Adviser, Shell Research Limited, gave evidence.

Chair: David, good morning. Thank you very much for coming in. We are so eager to talk to you we are starting earlier than scheduled, so take that as an entirely positive matter.

David Hone: Fine by me, thank you.

Sir Robert Smith: I should remind the Committee of my entries in the Register of Members' Interests to do with the oil and gas industry and, in particular, a shareholding in Shell.

Q151 Chair: Could I start with a general question? How important do you think carbon pricing is for tackling climate change?

David Hone: It is the key instrument not for tackling climate change, but for reducing emissions, for putting a cost on the emitter for emitting CO_2 and therefore encouraging them to act and do something about it. I think there is no other instrument that has the same impact and does the job as effectively.

Q152 Chair: From the point of view of business, which of the instruments do you think is most acceptable? Is it through carbon taxes, or a market instrument such as emissions trading? I suppose it could conceivably be through some form of regulation—well, taxes are a form of regulation—or maybe a combination. What do you think is going to work best from the point of view of business?

David Hone: Our experience in Shell is that the emissions trading approach is the most effective. It both delivers the price signal and guarantees an environmental outcome, but also, importantly, it gives businesses quite a lot of flexibility in terms of how they can operate within the price regime as opposed to just paying a fixed tax of some description.

Q153 Chair: Yes, we might come back to how effective it is on delivering a price signal in terms of the EU experience so far a bit later on. At the Harvard meeting that you and I were both at in September, Professor Robert Stavins suggested that emissions trading systems are now emerging as the preferred policy instrument to generate a carbon price in many parts of the world. Do you agree with that and, if you do, why do you think that is happening?

David Hone: I would be hard pressed to disagree with Professor Stavins, but I think observationally, yes, it is emerging as the preferred approach, not just in the EU. China is moving in that direction, New Zealand is already there, California—a number of other jurisdictions are starting to look at it. From the jurisdictions point of view, the reason they do that is principally after discussion with the business constituency that they are targeting it at. That is where they get the most interest. They see it in terms of the flexibility that it offers.

Q154 Chair: Yes, but even if it is becoming the preferred instrument and, as you say, that is now happening in quite a number of jurisdictions, the progress of implementing effective ETSs, particularly in terms of driving a carbon price that is likely to affect investment decisions, is rather more limited. What is your assessment of the progress? When you look at the systems—obviously, the EU; China is a bit further behind in its development but catching up quite quickly; North America—how would you assess the progress that has been made?

David Hone: I think in all but the EU it is still relatively early days. Two systems are operating in the United States, in the north-east states and in California. Certainly the north-east states' is quite a mature system now, but in fairness it is targeted as a relatively low-price system. It does not have a great deal of ambition built into it and so you get the price that you get as a result of that, which has never gone beyond a few dollars.

The most mature system is in the EU and, as you noted, mixed signals have come out of that over the years. I think it is fair to say that the trading system in the EU that is at the core of our climate efforts here is a very well-functioning system. What has happened, of course, is that it has accumulated a surplus of allowances, and that has put a lot of pressure on the price, but the system is very sound and I think was well designed. It has worked flawlessly in terms of an emissions trading system—in terms of compliance, issuance of allowance, surrender of allowance, all of those functioning parts have worked very effectively.

Q155 Chair: Has Shell been actively supporting this evolution of emissions trading?

David Hone: We supported an emissions trading approach to setting a carbon price in the economy as far back as about the year 2000. In that year, we even established internally in Shell a very small pilot emissions trading system. It just ran for a couple of years, primarily to let some of the business people in Shell get their heads around what it meant and how it functioned. It was never meant to be an internal trading system of any grand design. It was just a system to get people going on and also to let policymakers such as yourself have a look at how we might think about the design and the implementation and how we might operate under such a system.

We were one of the very first companies to come out and support the necessity of the EU ETS being an absolute system. If you think back to 2002 and 2003, a lot of companies at that time were calling for it to be an intensity-based system. We were part of USCAP, which supported the implementation of cap-and-trade in the United States. Similarly, we were one of the companies that supported the implementation of the various guises of emissions trading in Australia; unfortunately that is not there anymore but we were very active on that scene for the many, many years it took to design it.

Q156 Chair: Would it be accurate to say that Shell is one of the leaders, if perhaps the leader, within its industry in terms of its support for the concept of emissions trading?

David Hone: I think the leadership is perhaps more for others to judge, but we have certainly had a very consistent position over 15 years or more and we have not wavered from that in terms of our desire to see emissions trading and absolute systems implemented.

Q157 Chair: On the point about the absolute system compared with a carbon intensity system, China clearly do not have any of the pilots yet to an absolute system, although I think one or two of them may have ambitions to do so. I certainly agree very strongly that given where the EU was 10 years ago it was right to start with an absolute system. We did not need to go through any other stage. Would you feel that in the case of China, whose starting point was rather different from the EU's, it did make sense to start with a relative system but with the hopefully increasingly explicit intention of going to an absolute system later on?

David Hone: I think both systems clearly function and can deliver a price. Given the clear growth in the Chinese economy and the expansion of various industries in some of those provinces that have emissions trading, it probably made sense to look at it from an intensity perspective, at least until they have some idea of plateauing in terms of overall emissions. I do not think a growth curve precludes the use of an absolute trading system. It just means that your absolute trajectory might go up for a few years before it starts coming down. An absolute system does not mean that the emissions always have to go down year on year. You could have an absolute system where the emissions rose but rose at a much slower pace than might otherwise have been the case. Given the uncertainty of economic expansion, I can see why they went for the intensity-based system.

Q158 Sir Robert Smith: On the choice of route of trading versus carbon tax, is it political implementation that steers down the trading route rather than the tax route? As an economist, if you put a price on the raw material at source, surely that feeds through to all the decisions that follow on in terms of use of carbon and is a simpler one to operate?

David Hone: I think you are right in that both provide a price at some point in the supply chain and that affects the supply chain right through. From that perspective, from the pure economist perspective, I think you could have as many people come into this room and argue one way as the other, and you probably have done.

From an implementation point of view, I do not perceive that they are different. Implementing a taxation-based system is probably just as complex as implementing an emissions trading-based system. You only have to look at some tax codes to see that they are equally as complex. They require just as much consideration about energy-intensive, trade-exposed emitters and all of these considerations come out. Perhaps the only difference is the property right associated with the allowance that is core to the trading activity. Perhaps another consideration is that the emissions trading systems have tended to come out of environmental legislation, which perhaps is why it tends in that direction rather than taxation-based legislation that immediately becomes the jurisdiction of the Treasury.

Q159 Ian Lavery: How do you see the ETS schemes expanding in the short, the medium and the long-term future?

David Hone: Do you mean the European emissions trading system in particular or all of them?

Ian Lavery: Why not both?

David Hone: I think the European emissions trading system will expand with the expansion of the European Union. For instance, if Turkey became a member of the European Union, then the ETS would apply there as well. It could be that a few other outlying states decided to adopt the emissions trading system and join, in the way that Norway has, for instance. I think over the longer term the expansion of these systems is going to be through linkage, and that is probably the area where there is most opportunity. We have seen it already: the California emissions trading system expanded by, in effect, linking with the proposals in Quebec. Quebec started off by linking immediately with California and you have an expanded emissions trading system there. You could imagine perhaps other jurisdictions in that area that are looking at emissions trading deciding to join that system rather than creating their own from the get-go. I think that sort of expansion is probably the direction these systems will go in—linkage between very big systems. So say you had an accumulating system in North America over a number of years that could eventually potentially link with the ETS—but I think that is an evolutionary process over a number of years.

Q160 Ian Lavery: We have been to China. A delegation from the Committee went to China and we discussed the potential in China for linking schemes. How important do you think China's experience of development and linking its ETSs will be for the future of linking across the world?

David Hone: I think the first step for China is to get the system to work there. At this stage, we have multiple pilots running. I think there is a desire to have a national system, but there are still a number of steps to go through to get it to that. It is also not clear to me whether a national system will be based on one of those systems in particular or whether it would be designed again from the get-go, having looked at the experience in a number of jurisdictions and then establishing a national system. That is effectively what happened in the EU. There were pilots on a much smaller scale than in China. There was a pilot in Denmark and effectively an emissions trading system in the UK, but then what happened is that the ETS was designed again so it was not just an outgrowth of the existing systems. They were effectively put to rest and a new system was put in place. I guess that is also a possibility for China as well.

Q161 Ian Lavery: How important do you think the overall system in China is, whether it is the seven pilots or whether it is the national scheme, with regards to linking systems to the rest of the world?

David Hone: The prospect of China linking with the rest of the world is some years off. Yes, it will be important when it happens and yes, the developments in China are very important in terms of the implementation of carbon pricing, but I think it is too early to look at China as a potential linkage with outside of China itself. They do not have a viable single system there yet that you would link with.

Q162 Ian Lavery: How far off do you think that is? In your experience, how far off do you think they probably are from selecting one national scheme in China, if indeed that is the way forward?

David Hone: I think probably by 2020 we will have that—well, before, but there is at least a two to three-year gap of implementation. We saw that in the EU, which did it at a pretty fast pace. I think by 2020 you could have a single system operating in China.

What is the next step after that? It may be growth with other Asian economies rather than linking with another major system. For instance, in the way that the EU system has grown and included countries like Norway, that may be a next step for China, but I think there is a way to go yet before that becomes clear.

Q163 Ian Lavery: In terms of risks and opportunities for businesses if indeed the ETSs link, what do you think are the main risks and the main opportunities?

David Hone: Let me start on the second part. The main opportunity for business in linking of emissions trading systems is to see a lower overall compliance cost. That does not necessarily mean that the carbon price immediately falls. It means it expands the range of opportunities and the range of projects available at, for instance, the current carbon price. That therefore offers more opportunity and, as I said, lowers the overall compliance cost. That is the principal reason for wanting to do this. As systems expand, as emissions trading systems expand, the overall cost of compliance tends to fall and I think that is the opportunity that you are looking for.

The risk is potentially that the linkage does not work out as planned in terms of the flow of revenue or the flow of allowances from one side to another, and potentially one of the Governments becomes unsettled by this and decides not to continue with the link. There is potentially a bit of political uncertainty about linkage, but that would be all. I think it is the opportunity that you are looking for rather than a potential risk.

Q164 Ian Lavery: Finally, what key requirements do you think must be met before any scheme can be linked?

David Hone: The key requirement from my perspective is that there is some alignment between the abatement opportunities in the two economies. For example, if the EU was to link with another major system, the EU system is primarily targeted at the power generation system and industry and, therefore, you would ideally link it with a system that was similarly targeted so that it was also focused on the power generation system and effectively had the same goals. In that way, you get a rough alignment of the abatement opportunities in the two systems and, therefore, that sort of economy of scale of emission reductions.

The other important factor is to look at some of the design elements of the two systems. For example, if one system has a floor price or a ceiling price, if they have different borrowing or banking rules, there potentially has to be some alignment between these before linking can take place or you may get a forced flow of allowances in one direction or the other because of that.

Q165 John Robertson: What is your current assessment of how well the EU trading system is working at the moment, particularly in driving down emissions?

David Hone: As I said earlier, functionally the emissions trading system works. There are no issues with how it mechanically operates. The clear issue is with the price signal that it is delivering and that is having no impact on emissions at the moment.

Q166 John Robertson: Why? Is it too low?

David Hone: It is too low, yes. What has happened over a number of years is that a surplus has built up in the system for a number of reasons. We currently have a price of just a few euros. There really are not any abatement opportunities in the economy that are triggered by just a few euros of price. The first real and effective level of abatement comes through fuel switching, so from coal to gas, and that is probably in the tens of euros—at €20, €30, €40 you progressively start to see changes in that. We saw that in the early stages of the EU ETS. Then the next big tranche of abatement starts to come as people look at carbon capture and storage and that effectively starts to be triggered at prices above that. Neither of those is happening at the moment as a result of the EU ETS.

Q167 John Robertson: Would you say that the trading system needs to be reformed or just tweaked?

David Hone: The simple thing that needs to happen today is that ideally 1 billion to 2 billion allowances need to be removed from the system. We have removed temporarily nearly 1 billion allowances through the backloading process—but, of course, they are coming back again—but that still does not account for the surplus, so I think that is the first step that has to happen is that there has to be a correction in the system to effectively take up the slack.

The second correction is more difficult in that it requires the EU ETS to be the principal driver of change in the energy system rather than the range of regulation that is currently doing a lot of the driving.

Q168 John Robertson: SSE and companies like that have basically sat on both sides of the fence, as it were. They like the idea of the MSR, but they also like the idea of allowances as well. Are you saying then we should be, in effect, driving out the allowances and going towards MSR? If that is the case, should we be doing it before 2020 and bring it forward to—

David Hone: Our initial view on the required changes to the emissions trading system—we may have even said so at a Committee such as this—thinking back two or three years, was that we advocated for what was initially called the set aside, which was to take 1 billion to 2 billion allowances out of the system and have a once-off correction. That clearly was not going to happen, so we put our efforts behind the backloading. We were keen to see that go through not because we thought that was the most effective way of correcting the system, but because it sent an important signal that from time to time the regulator needs to step in and potentially correct these systems.

That has happened and, therefore, it has set the scene for the MSR as a long-term mechanism that effectively acts like the set aside. From that perspective, we support the MSR and we support its early implementation, ideally with the backloading 900 million allowances effectively being a first fill for the MSR. That is how we would prefer to see things move ahead.

Q169 John Robertson: DECC have called for 2017 as an implementation date. You would go along with that, would you?

David Hone: Yes.

Q170 John Robertson: What impact are the EU ETS reforms having on the prospects of linking with other ETSs that my colleague was talking about earlier?

David Hone: They do slightly complicate the issue, because then what you have is an ETS where, although it does not have a formal price floor and a formal price ceiling, the MSR has that effect on the system. Therefore, linking with a system that does not have that introduces complexities. If that other system produces too many allowances for some reason or has too many allowances in it, then it is the EU MSR that has to start taking up that slack. You would need to have some sort of design alignment ideally between whichever system we are linked with.

Q171 **John Robertson:** You have already said the market stability reserve is the way forward, yes?

David Hone: Sorry, it is the mechanism that is on the table and as such we support that. If it was—

John Robertson: Would you put another mechanism on the table?

David Hone: As I said, our initial preference was what was called the set aside, which was to do the once-off correction and take the surplus out of the system. The discussion has evolved since then and the MSR has appeared as a longer term solution and we are very happy to support that mechanism.

Q172 **John Robertson:** What has Shell been doing in research with the potential of the links of the EU ETS with other ETSs? Have you been doing any research in that area?

David Hone: Yes, we have but it is primarily through the International Emissions Trading Association. I chair the international working group of the International Emissions Trading Association, and during this year we have sponsored a new analysis of linking by the Harvard Kennedy School by Professor Rob Stavins, who I believe has spoken at this Committee. They released a new paper on that last week, which was partly sponsored by Shell. That continues a body of work that that group has been doing to underpin the science and economics of linking. It is not Shell research but it is the work that we have stood behind and supported over many years.

Q173 **Sir Robert Smith:** You were mentioning earlier in John's questions how you should not have other mechanisms within an emissions trading scheme. I can understand the argument against having other mechanisms in part of this territory. If we bring in other mechanisms here and reduce our emissions because we are part of the ETS, it just means that the rest of Europe can increase their emissions within the envelope.

David Hone: Yes.

Sir Robert Smith: But if you have a Europe-wide other mechanism, what is the downside of that?

David Hone: The downside is that that other mechanism, which is operating in the same space as the EU ETS, starts to cause emission reductions and what typically happens is that lowers the carbon price and raises the overall cost of achieving some reduction goal. That is because the other mechanism is typically picking off the abatement curve certain reduction opportunities, which are not necessarily the next best thing to do. Therefore, there is an overall cost increase to the economy for doing this. In the emissions trading system, as I said, the carbon price falls because the heavy lifting is being done elsewhere and therefore the emissions trading system no longer is the price driver. The resulting price you see is not a signal telling you what the next best abatement cost in Europe is or whatever the location happens to be. It is effectively almost an administrative cost of running the system, which is where we are today, or it is a reflection of a longer term price when maybe those other instruments are not in play and the ETS starts to come back into its own.

Q174 Chair: Looking ahead to the Paris COP next year, do you think it is important that the outcome of that should in some way feature carbon pricing?

David Hone: It should, but the current design that it looks as if we are going to see does not. If you go back through the history of the UNFCCC, clearly the Kyoto Protocol was designed around the idea of trading, carbon pricing, establishing a price on emissions and seeing that permeate through the energy system through the national targets and through the AAUs and the CDM and the other instruments within it. That is no longer the preferred system, so we have now this system of contributions, which does not include the notion of carbon pricing other than it may include or certain nations may bring forward an emissions trading system as their contribution.

What we think that the Paris agreement should do as a minimum is provide some tools to allow longer term linkage and growth of carbon markets to take place and ideally to catalyse that type of activity and see it accelerate.

Q175 Chair: That sounds a good way forward, but more specifically what might those tools be?

David Hone: This is an area where we have put most of our effort again through the International Emissions Trading Association. That organisation has a proposal for Paris—in fact, it is a text proposal—which effectively offers the parties the option to transfer parts of their contribution from one party to another. This is what IETA have called a straw man proposal in that they are looking for parties to contribute to the wording and think through how it might work and then implement it. That is how Shell has approached this through IETA because we think that a larger organisation like that—which is, of course, also an accredited observer whereas an individual company is not—is the more effective route forward.

Q176 Chair: Professor Stavins suggested that there might be what he called a hybrid approach—a mix of top-down and bottom-up measures. Is that something that you think would be beneficial to the advancement of carbon pricing through carbon markets?

David Hone: We are in a world where the ability to have top-down is limited. That is why the IETA proposal is, in effect, a minimal approach, which says that you can proceed with transferring parts of your contribution to other parties. The next step along that would be to have some sort of unified approach to doing that. That is the top-down approach; that you at least set some standards as to how that is done. You set the accounting principles, you set the mechanism by which the carbon unit transfer takes place, but you do not determine the type of carbon trading systems that national Governments may choose to implement. That is the difference with, say, the Kyoto approach, which effectively, although it did not absolutely determine the type of mechanism a national Government would implement, it certainly steered them towards a cap-and-trade system because, in effect, that is what the Government was sitting under itself.

Q177 Chair: Yes. Are there any sorts of things we ought to try or that might be avoided as a result of the Paris COP? Are there ways in which it could obstruct the growth of emissions trading and the linkage of existing systems?

David Hone: Probably the biggest obstacle that it could place would be a requirement that contributions were entirely domestic. If it specifically said that once a Government had declared its nationally determined contribution that that contribution must be wholly and completely implemented inside its borders, that would be very problematic and, in effect, it would already be problematic for the EU because you then could not imagine, for instance, how it could have an emissions trading system with Norway. I do not imagine that is going to happen, but if something like that was implemented within the Paris agreement that would be very obstructive towards long-term development of a global market, yes.

Chair: Okay. Do any of my colleagues have any other questions? I think that probably concludes our session. Thank you very much indeed and good luck in the continued work that Shell is doing to advance emissions trading generally.

David Hone: Thank you. It’s been a pleasure.

Examination of Witness

Witness: **Damien Meadows**, Adviser, DG Climate Action, European Commission, gave evidence.

Q178 Chair: Good morning, Damien, welcome back to the Committee. I know we have had fruitful dialogue with you both in Brussels and in London in the past and we are very glad to continue it. Could I start by asking you about China? I know that you have recently been in China and the Committee was also in China at the end of last month so we have both had fairly current conversations there. What was your impression of how the Chinese are getting on with their pilots and with their ambition to replace them very soon with a national system?

Damien Meadows: I was very impressed to see the amount of commitment demonstrated. We visited Shanghai and talked to people about the pilot operating there right now, but also in Beijing we talked with officials in charge of establishing a national system. It seems to be moving ahead rapidly; the date of 2016 is very much talked of. Through the years of co-operation that have taken place between Europe member states officials and China, I think they have learned lessons from the European system and they have also learned what is good. We are very much looking forward to, through bilateral and multilateral co-operation through the World Bank Partnership for Market Readiness, helping them to establish their national system, obviously designed as they wish it to be but it should be one that is effective when it gets up and running.

Q179 Chair: Yes. I must say I could not help reflecting sometimes that the speed with which they are progressing may be partly because they are not required to obtain the agreement of 28 different member states to even quite minor amendments. Turning back to the EU ETS, how well would you say it is functioning right now in terms of driving actual reductions in emissions?

Damien Meadows: What David said about the system working functionally is correct, but what we need is the supply issue to be addressed, and here the proposal for the market stability reserve is moving forward. The rapporteur in the Environment Committee put forward his proposals I think last week saying that the backloaded allowances in his view should go directly into the reserve in 2021. If this legislation can be agreed early next year, that will have been crucially important on the supply side.

The other big development in the last month is the European Council conclusions of 24 October, where it was no small achievement to have 28 Heads of Government agreeing on the shape of the EU's reductions for 2030; in particular, they said a lot on how the EU ETS should be the main instrument and what it will look like. Commissioner Arias Canete in Parliament a couple of weeks ago said that as soon as the market stability reserve is agreed he is looking to present legislation to implement this in law moving rapidly in this legislature. With those two elements done, I think the EU ETS will be performing at full potential.

Q180 Chair: Clearly, we warmly welcome the establishment of the 2030 overall target and I entirely agree that that is a very helpful context for the further development of the ETS. Given that it is quite an ambitious target—it is one that the UK was obviously arguing for very strongly and, as I say, this Committee also very strongly endorsed—do you think that that now is really setting out a background against which the earlier implementation of the market stability reserve would be very helpful?

Damien Meadows: It is a sensitive political issue, but my commissioner has been clear at his hearing and in the Parliament that the Commission would not stand in the way if the Parliament and Council wish either to apply the reserve earlier or put the backloaded allowances into the reserve. What I see is the rapporteur of the Environment Committee is putting forward one of those options. Former Commissioner Tajani has also put forward proposals in the Industry Committee that support there being the reserve, so I think things are moving in the right direction for agreement of this.

Q181 Chair: The market stability reserve and the other things you have just mentioned would represent substantial reforms of the EU ETS. Are there any other proposals that you have in mind that would also help to drive a stronger incentive for low carbon investment?

Damien Meadows: Something that has not received that much publicity is the aspects of the EU ETS that already support innovation. The carbon price is important for long-term investments. It only stands I think at €7 today, but the system has raised €2.1 billion, which is being used for the White Rose project in the UK for carbon capture and storage and for 38 types of renewable projects. This is the EU ETS playing a different role to having a carbon price. It is using the revenues to drive expensive innovation forward to try to bring it down the cost curve. We were very encouraged that Heads of State supported this and said it should be expanded in the period up to 2030 also for modernising the power sector. In that sense, the ETS is playing a dual role. There is the carbon price incentive, which is there for the long term, and there is the support for innovation.

Q182 Chair: Are there any ways in which, if the market stability reserve is implemented as we would hope it will be, that could lead to a situation where the ambition of future emissions reductions could be jeopardised in any way? Could it actually constrain? If we have reached a situation where it was felt for scientific or other reasons we needed to go even faster, could it act as a sort of drag?

Damien Meadows: I do not think it could because the linear reduction factor is the key thing for determining the level of reductions, and through the legislative process changes can always be made in the future. When you look at the Fifth Assessment Report it is clear that more needs to be done.

Chair: Yes, indeed. One of the aspects of the Fifth Assessment Report, the notion of a maximum safe level of emissions globally, argues for further extension of cap-and-trade rather than anything else.

Q183 Ian Lavery: What role is the EU ETS likely to play in the future development of linked systems?

Damien Meadows: We are seeing that other countries are studying it closely, learning from it. Particularly with the European system now covering 31 countries, it has not been easy to get it to where it is. Further work is going on. The Koreans learned from the European system when they passed their own laws. The Chinese have many, many questions and are studying the system closely. We can also have examples of linking. We are discussing linking with the Swiss system—the negotiations have resumed there and hopefully will be concluded in the course of the next year. This would be a treaty-based link that we have with Switzerland, so something different to what there was with Norway and Lichtenstein.

The provisions in the law are quite open for linking, but there need to be other mandatory credible systems out there that want to link. My impression in China is they have their own homework to do first and there has to be the national wish to link up the systems. Korea, possibly earlier there might be this interest because they are an OECD country. Obviously, we got quite far with Australia in terms of linking systems before the change of Government. The ETS is there for linking with other Governments as they do carbon pricing. It is just we see globally it has been difficult in some jurisdictions to get a carbon price.

Q184 Ian Lavery: We have already discussed this morning very briefly the potential lessons from the current EU ETS. What do you think we could draw from this that would help us and assist the development of future linking?

Damien Meadows: The importance of sound monitoring guidelines from the outset is one of the things that we see other jurisdictions have learned very clearly from Europe. When we set up the European system, it was done quickly: the law was passed in 2003; the first compliance year was 2005. The registry systems are also crucial. We had these hacking attacks in Europe and getting this right is important. The World Bank has been helping China with the development of their system. Issues of allocation: what I understand is that the Chinese systems would look at benchmarking from the outset for some sectors rather than grandfathering as Europe started with. This rewards efficiency to a greater degree. Interchanges of people involved, whether bureaucrats or elected representatives, with other countries helps them learn from our lessons.

Q185 Ian Lavery: Is there anything in particular you think we or the EU ETS would need to reform before we would link up?

Damien Meadows: In terms of the timelines, when we look at the large systems out there—the Korean, the Swiss or systems in the Americas—the reform will likely have advanced a long way by the time linking comes on the table. The market stability reserve it seems can be done by early next year. European Council conclusions obviously do not replace the legislative process in Europe, but it is very clear of the expectations of Heads of Government. Other countries already now know what they are looking at in terms of how the EU ETS will look. I have also seen the perception abroad of the EU carbon price not being high enough. That is a common comment we have and with a market stability reserve I think we would see more interest in linking.

Q186 Ian Lavery: Is linking likely to result in carbon leakage of the energy intensive industries?

Damien Meadows: There has been no significant evidence of carbon leakage up until now. There are a number of reports making that clear. Heads of State made very clear that free allocations should continue. That is one of the issues being related to adopting the market stability reserve; some people have wanted to address it in that legislation. The legal proposal will come forward in line with what Heads of Government have said. We are probably looking at a system where other countries are going to go for free allocation as well. That is what I heard from the Chinese discussions. Clearly, economically, auctioning everything would be the economists' choice, but I think free allocation is a reality here. If China acts in a similar way as Korea, this reduces the likelihood of carbon leakage. In common with Denny Ellerman, Robert Stavins and others who have given evidence, I do not see a global pricing system for steel, cement, refineries coming through the UN system soon. It is an issue of action by states and that is where China, Korea and the US states and others are very helpful for moving forward.

Q187 Christopher Pincher: Can I just follow up on that, Chair? Richard Leese from the MPA has suggested that linkage may result in leakage. I know the EU has argued that because of the accumulation of allowances, partly because of the recession that we have all been subject to, and also because of a low carbon price, the likelihood of leakage is less than perhaps was estimated a few years ago, but there are no figures or at least I have no figures around that. Can you give us some idea of what the EU estimate is of that potential leakage reduction? Otherwise we are just waving our fingers around in the air and saying it feels right but we just do not know.

Damien Meadows: In terms of up until now or in terms of the future?

Christopher Pincher: In 2009 there was a view in the EU that there might have been a degree of leakage because of linkage packages. What I now understand is that linkage leakage is likely to be less. I just wondered what the estimate might be.

Damien Meadows: In terms of the figures on allocations to industry and actual emissions, this is where Sandbag and other organisations have published quite large data sets and are saying that allocations to industry generally have been above actual emissions. In that sense, there is no need to pass a carbon price through to customers because you are allocated everything that you emit. It is sometimes an oversimplification. There are complicated issues of blast furnace gas transfers to other installations, how these things are reported, but generally industry has received close to its actual emissions in terms of allocation. This means that it is hard to see how leakage would happen here because there is no carbon price necessarily to pass through down the supply chain.

When the Commission impact assessment and materials are done like this, there is more information out there. There is a lot to be collated but industry very much talks about it as a future issue and now talks about investment leakage, saying they might build in Brazil or whatever instead of Europe. This is where the EU ETS has given support to new investments in Europe. I think there have already been upwards of 200 sets of free allocation to industry already in 2013 for either greenfield or expansion of existing plants in Europe. Europe is still an attractive place to do business and the EU ETS, as a cost-effective approach to address climate change, is supporting that. There are also specific investments such as for White Rose, which is bringing new demonstration projects at a large scale into operation in Europe.

Q188 Sir Robert Smith: What are the European Commission's main priorities for the COP21 in Paris next year?

Damien Meadows: I think what we really want to see at Lima is a good framework decided for national contributions so that it is possible to assess them and to see how much we are on track for limiting climate change to 2 degrees before Paris, as well as getting a legal text out there for negotiation so that we can have an instrument with legal effect adopted in Paris.

In terms of markets, the UNFCCC can facilitate carbon pricing globally. We have been very encouraged by Ban Ki-moon's summit, by the work of the World Bank's PMR and by the International Carbon Action Partnership. For me, to see the UN encouraging and facilitating carbon pricing across the world would be very positive. I think in earlier sessions you have discussed impediments and incitations to carbon pricing, and the UNFCCC can do both. To facilitate transfers between nations is clearly something positive. On the other hand, you have in the Kyoto Protocol a share of proceeds, essentially a tax on transferring things between countries, and my personal view is this would not be welcomed, for example, by the Americans in terms of encouraging broader linking.

There are issues such as: would Europe link its system with sub-national systems? This is something our law would allow with California, with Quebec, but it is not clear how that would work under the UN umbrella because these are not states. In common with what I have seen from other witnesses, I do not think we will get elaborated text in Paris on this but certainly support in the direction of carbon pricing would be tremendously important.

Q189 Sir Robert Smith: Is the European Commission doing anything to promote that direction in terms of heightening the agenda for carbon pricing in Paris?

Damien Meadows: For two and half years I was head of unit for international carbon markets and we spent a lot of energy in the negotiations pressing for accounting systems, but also for reform of the clean development mechanism and the development of a new market mechanism. These have had limited success, which is a shame, but with 190-plus parties and a unanimity rule it is sometimes quite hard to get things that even go in the right direction.

We have also been working a lot with countries around the world and through World Bank and other initiatives to encourage carbon pricing. I think it is fair to say the main developments on carbon pricing have been through the World Bank discussions, IETA's work, the bilateral actions, and also other Governments around the world considering, "Do we want a tax? Do we want to have command and control?" or, "What is this emissions trading thing?" Aside from Alberta and, I think, South Africa, where they are looking at taxes, generally it is perceived that emissions trading seems a more favourable way of giving a market signal.

Q190 Sir Robert Smith: Do you agree with Professor Stavins that in a way the COP is moving towards a hybrid system of bottom-up as well as top-down?

Damien Meadows: I think a hybrid system is good. If top-down elements can come that favour carbon pricing and favour taking carbon action, that is fantastic. On the other hand, what we have right now is a system of bottom-up countries and regions pricing. The top-down should not impede that. It is clear that both through the UN but also bilaterally having systems that can link together is important. I think Korean colleagues and others see this. Also when you go through parliamentary processes for designing a system, you often end up at similar outcomes. There are pressures from all stakeholders. Generally, systems that are adopted should be robust and should have integrity, and we see that coming bottom-up. If there can be top-down provisions to help ensure that, fine, but Europe has also ensured we could not have double counting even without that coming from the UN level. A hybrid would be good if it could be achieved.

Q191 Sir Robert Smith: Is there any danger if the top-down gets too prescriptive?

Damien Meadows: The European countries are the most multilateral I think you will find anywhere in the world, but what we see is that the United States has difficulties with top-down. I think China and India also have difficulties with top-down. Europe is there in the UN negotiations looking for as much as can be achieved top-down, but at the end of the day we have a bottom-up system here in Europe and bottom-up systems can work together.

Sir Robert Smith: Thank you very much.

Q192 Chair: You have been closely involved with the EU ETS for a number of years now and we have followed its progress with interest and sometimes with concern. There was a period a little while back where I felt there was a risk that the concept of emissions trading was struggling to gain acceptance outside Europe, but my very strong impression now is that what has happened in the last two years means it has critical mass and much wider traction than it had five years ago. Is that your impression as well?

Damien Meadows: Yes, the tide seems to be turning here. The instrument has been technically functioning all along, but with the market stability reserve I think the supply issue is being addressed. I think what Heads of State said about this being the main instrument and setting out so many of the design parameters is enormously important, plus the support for innovation. Things like this are only now starting to get picked up in the press. Another thing that has had very little reporting is that member states have earned €3.6 billion auction revenue in 2013 and they have reported to the European Commission that €3 billion of this has been used to tackle climate change—in France to insulate social housing, in Germany for climate funds and so on. Clearly, this is a national issue but it is copying what New England is doing in the trading system where the RGGI system pays for energy efficiency improvements. It makes it more attractive globally. You do not see hypothecated taxes at the global level nor do I ever expect to see them. These aspects go beyond the pure carbon price but they are also reasons why the EU ETS is a good instrument. Yes, certainly, it looks much better now than it did two years ago.

Q193 Chair: Just on that point you mentioned about the use of the revenues, which of course may well increase significantly in future as auctioning spreads, does the Commission have any view about whether with part of those revenues—since they are effectively derived from payments made by the purchasers of allowances, which would be principally business—it would also be legitimate or desirable to reduce corporate or personal income taxes?

Damien Meadows: I think this is an issue for national decisions on how to use those revenues; it is just the legislation says that member states should use half of it to tackle climate change and member states are saying they have used more than half. Clearly, there are issues here where governments will always be deciding how to use their money, and this is one of them.

Chair: So there is no requirement for uniformity among the national governments as to how the allocation of those revenues is used?

Damien Meadows: No, there is no requirement for uniformity.

Q194 Chair: On the issue that was raised in our previous session—I am not sure whether you had arrived by that time or not—about emissions trading systems that are not absolute systems but that are based on a carbon intensity target, as the Chinese systems, for the most part, seem to be at the present time—they may evolve into absolute systems in due course—is it conceivable that you could have a link between an absolute system and a relative system, or do we have to wait for other systems to move to an absolute basis before linkage could be contemplated?

Damien Meadows: The legislation refers to linking with absolute systems and linkage with absolute systems I think is straightforward. Relative systems have their downsides, I think, in terms of the complexity of how they work if economic growth is less than expected, making the targets more stringent and these kinds of things, so I think we will see a move to absolute systems from Governments that want working, robust systems. Therefore, I have not seen anyone asking for linking of a baseline and credit system and we are not discussing that at present.

Chair: Okay. Do any of my colleagues have any further questions? I think that probably concludes our session in that case. Thank you very much for coming in. We are intending to visit Brussels in the new year.

Damien Meadows: Thank you, everyone.

Examination of Witnesses

Witnesses: **Amber Rudd MP**, Parliamentary Under-Secretary of State, Department of Energy and Climate Change, **Ben Lyon**, Head of International Negotiations, Department of Energy and Climate Change, and **Paul van Heyningen**, Head of Sustainability and Estates, Department of Energy and Climate Change, gave evidence.

Q195 Chair: Good morning and welcome to your first appearance before us—the first of many, I am sure. I think we know both of your colleagues so we do not need to waste time with introductions. Could I start off with a general question? How well do you think the EU ETS is functioning at present in terms of driving emissions reductions?

Amber Rudd: Good morning, Mr Chairman. It is a great pleasure to be here. I think that you are doing an inquiry that is hugely relevant to our ambition. I am delighted that you are focusing on it and I look forward to the responses that you get and your conclusions.

In terms of our current EU ETS, I think there are two main points in terms of how well it is doing. The first is it is doing very well in having a leading role in providing a structure that works, that is delivering, that is demonstrating to international participants that this can be done; a structure that we feel protects industry in the right way and demonstrates that the market can move with the prices. I think it is very positive from one point of view. From another point of view there are elements of it that are disappointing. The carbon price itself has, of course, fallen dramatically, being at about €7 per tonne at the moment, and that has created some concern about its effectiveness in actually doing what it has been set out to do, which is to reduce the amount of carbon in the market. However, it is a market so it is not for us to determine the price. It is largely considered to be a result of the economic recession, and we have been taking steps to liaise with our European colleagues to ensure that something is done about the additional carbon credits that are sloshing around the system and could continue to. There is more to be done. It is like a school term report, "Good in parts; more to do."

Q196 Chair: Given the decision—which, as you know, we have warmly welcomed—by the EU over the 2030 targets, the outcome of which was exactly what the UK had been arguing for, do you think that, against that background, the EU ETS should now be the centre of climate policy within the EU?

Amber Rudd: I think that it is central to climate policy in the EU. Talking to member states it is central to their ambitions, as it is to ours, and I feel that the commitment that we have—that as you know the UK was leading on achieving, and it is very good to have your support—will help to endorse and make more certain the framework of the ETS in order to actually reduce the carbon emissions. Anything that adds certainty is going to be good for the market and, in our view, the ETS is central to it.

Q197 Chair: Given that I think there is quite widespread agreement now about the need for some reforms to address the shortcoming that you acknowledged earlier on about the price just not being high enough to influence investment decisions, I am aware that DECC has argued that the market stability reserve should be implemented earlier than the current 2021 date that is envisaged and certainly, again, that is a position that this Committee would strongly endorse. Are you confident that, in practice, that earlier date is likely to be achieved?

Amber Rudd: We will continue to fight for it. It is difficult to anticipate whether we will get full agreement from our European colleagues. Some were sceptical about the market stability reserve, and of course initially we were pushing for cancelling some of the surplus. We arrived at this compromise and we will continue to be ambitious to bring it forward. We think it is absolutely essential to deliver an effective market stability reserve as soon as possible, but we are very pleased that at least an agreement has been put in place. I think a lot of the achievements that we have through the EU ETS and through the market stability reserve are increasingly about putting the structure in place and then improving the delivery mechanism within that so that once we have everything effectively in place we can reduce the amount of carbon credits, as has been done. Once we have the market stability reserve in place, we will continue to be ambitious.

Q198 Chair: As you know, our current work is particularly focused on the potential for linking ETSs in different parts of the world. Do you think the reforms to the EU ETS need to be completed before links with other systems can be envisaged?

Amber Rudd: We share your ambition to make sure that what is the EU ETS at the moment can widen. Linking must be the goal, and it must be the goal to reach an international agreement. We will increasingly look towards international agreements as we go forward in the future.

The decision as to whether to perfect your own system first is a choice we try not to make. I think that we should be trying to do both—looking at linking opportunities and also increasing confidence in our own trading system. I do not think we should wait. I think we should continue to have those conversations on ETS linkages while improving our own system and improving the reforms, particularly as the international community is increasingly looking at different types of trading systems themselves. We understand there are a total of 40 regions, countries, areas or cities internationally who are looking at this—some more advanced than others; some of which, of course, you have seen—and we want to keep up with them and show that we have a system that is worth potentially copying, potentially improving on. We would like to do both simultaneously.

Paul van Heyningen: I would say, echoing what Damien Meadows said before in terms of timing, while we do not think there is an absolute prerequisite to complete all the reforms of the EU ETS that we would like to see before engaging in linking, in terms of the likely timing, there is a lot of momentum behind the EU ETS reform. We hope to be able to agree the market stability reserve early next year, whereas with linking there is progress happening. We hope to see a link with Switzerland soon, but other links are probably going to take place on a longer timescale. We would hope to see substantial reform of the EU ETS before we are likely to finalise links with other ETSs.

Q199 Christopher Pincher: On that topic of linkage, one of our earlier witnesses—you may not have heard him—Mr Hone, said that linkage should take place between like systems and the EU ETS is founded primarily, he said, on the power-generating industry. I wonder if you think that, therefore, linkage should be between those like systems, or do you think it can take place between the differing systems that you have just described?

Amber Rudd: I think we are going to have to be as flexible as possible. The fact is that different areas are creating their own trading systems in their own way; there are many differences between the Chinese cities' ones and regions' ones and ours. They are focused on spot; we are not. We are going to have to be as flexible as possible in order to create those linkages. There is no question that linkages are going to be difficult to achieve where there are a lot of differences between us. We are going to have to consider very carefully the legal positioning, the accountability of the different types of credit we are dealing with and, as you say, what they are actually focused on.

I think that sometimes it will feel like we are trying to link apples and pears but we have to be ambitious and try to find a common unit between them. One of the ways to avoid the differences is holding up the EU ETS as a system that works and as a system that can be reformed. In our discussions with the Chinese hopefully they can find some of our structures of use to them to try to build into theirs. Having similarities is going to be key to linkages, but where they are not similar, we are going to have to be ambitious about building bridges between us.

Q200 Chair: It has been suggested to us by some of the written evidence we have had that linking could increase risks of carbon leakage. Do you have a view about that?

Amber Rudd: It is something we are always concerned about and we are right to be so, because we want our country to continue to be as economically competitive as it can, but the evidence is that there has not been carbon leakage. My department did a study this year and there was no evidence of carbon leakage. It is something that we will continue to be vigilant about and people rightly raise with us, but at the moment there is no evidence of it.

Q201 Sir Robert Smith: What are the UK's main priorities for the COP in Paris?

Amber Rudd: Our main priority for the COP in Paris is to reach an agreement, an agreement that gets as close as possible to limiting the increase in the climate to 2 degrees or less. That is our main challenge.

Q202 Sir Robert Smith: Do we have thoughts as to the best way to achieve that?

Amber Rudd: We will be going to Lima in December for the COP in order to try to push that forward. We hope in Lima to agree a draft text and to look towards agreeing with other countries that they will come forward with their INDCs in the first quarter of next year. We are ambitious, we are working closely with international partners, and we hope to deliver that in Lima, in the first quarter of next year and for the end of next year.

Q203 Sir Robert Smith: Do you see carbon pricing as being an important part of that agreement?

Amber Rudd: In my experience talking to other members of the COP, carbon pricing is considered absolutely key to delivering on the success. For Paris 2015, we will not be targeting setting out a trading system internationally. What we will be talking about is trying to have, within the text, discussions about markets and countries being able to deliver their commitments through the markets. We hope that the text will deliver a framework, but this is a very ambitious target that we have and it is long term so we will not be spelling out the details of an international trading system that cannot, as Paul has said, yet be achieved. We hope that it will help to provide the framework for moving forward to more international trading systems.

Q204 Sir Robert Smith: Do you have any ideas as to what key bits of that framework you would like to see?

Amber Rudd: Ben, do you want to take this?

Ben Lyon: Yes. I think we can be quite confident of achieving some of these key bits because they exist right now. I would highlight three things. First, we expect the agreement will be very clear about allowing the use of market mechanisms in whatever form in order for countries to be able to meet their targets. Secondly, we would expect the agreement to specify that there need to be certain accounting rules to be followed in order to ensure environmental integrity of market mechanisms and how they are used. Thirdly, we would like to see scope for introducing a UN-wide, UN-administered or UN-agreed crediting mechanism to allow countries who are unable to create their own national mechanisms to generate units that can then be sold into other mechanisms. They are the three main components, but all three of those components currently exist under the Kyoto Protocol, in some of the ongoing negotiations in the Convention, or in the current draft texts that we have on the table going into the Lima COP. I think we are fairly comfortable that they are all in play for the agreement in Paris.

Q205 Sir Robert Smith: The agreement between the US and China, does that make pricing the important part of the mechanism? The Chinese certainly seem to think so.

Amber Rudd: We were pleased to see that agreement. It is encouraging to see China making a commitment. We would like, obviously, for them to be more ambitious but this really falls into the point that I am trying to make about creating the framework and then pushing for more ambition within that. It is good that China has stepped forward with a date. We would like them to be more ambitious but it is encouraging that the US and China have had that commitment together.

Sir Robert Smith: Thank you very much.

Q206 Chair: On that point, we now have the IPCC Fifth Assessment Report saying, “Here is the total amount of emissions that can safely be emitted consistent with a 2 degree temperature increase.” We have America saying they now have a slightly more ambitious target for reducing them—admittedly on a later baseline than we use in the EU but nevertheless it is further than they have gone before—and China announcing a date. This is a public session, but my observation of the culture in China is that, having announced the date of 2030, they will do that being fairly confident they can improve on that date. They would not say 2030 if they did not think they could do it three or four years earlier. All that is a very favourable context. This seems to me to be just the moment when we could really push for the expansion of emissions trading, because emissions trading is consistent with all these things that are happening, really major developments, and of course the EU 40% target for 2030. Given that it is certainly apparent to us that even places like China do regard the UK as a particularly valuable source of advice on emissions trading—it was kind of invented here, really, even before the EU—it seems that, certainly when we were in China last month, there is a real opportunity for the UK now to extend its influence to a quite disproportionate extent. Is that something that DECC sees as an opportunity as well?

Amber Rudd: Absolutely. I share your enthusiasm for the momentum that we have seen in terms of international commitments over the past two to three months, even. These are large commitments from the major emitters. That is getting headlines and deservedly so. We do see ourselves as playing an important—we hope central—role in being able to assist other countries. You are right, China has been talking to our department in order to make sure that they learn from the lessons that we have had. We would like to play an increasingly central role. We hope that we can do that partly because we think that we have the experience, but also partly because as other nations' systems develop we want them to have similarities in order to achieve the linkage that is the ultimate goal.

Q207 Ian Lavery: How might a global agreement in Paris next year on climate change improve the prospects of linking emission trading systems?

Amber Rudd: I think it could be an essential and important step forward because it will bring other countries into a commitment that they have not entered into yet. If they also enter into a commitment, that will increase the reach of the potential for trading systems. There are 192 parties to the COP?

Ben Lyon: 196.

Amber Rudd: There are 196 parties to the COP and we hope that we will get agreement from all of them at the end of next year. That is a very big reach in terms of the potential for reducing carbon across the world and it is additional surface, really, for building trading systems and platforms to deliver it.

Ben Lyon: Just to add to that, here in the UK we see emissions trading systems and other forms of market mechanisms as the key way to deliver the mitigation in the most cost-effective way. As all these countries come on board with their own targets, they will to an extent be playing catch-up to where the UK and the EU are. They will be thinking about, "What is the most cost-effective way we can deliver our target?" I think that really will deliver momentum for market mechanisms.

Q208 Ian Lavery: Among other people we have had Harvard Professor Robert Stavins, who argues that the COP negotiations are moving towards a hybrid system that would combine top-down and bottom-up approaches. I am just wondering whether the Minister agrees with this and, if the Minister does agree with it, how might we take the advantage of the development forward in order to benefit linking schemes?

Amber Rudd: Yes, I heard Mr Stavins in New York when I was out there with your Chairman at the last UNFCCC meeting. He makes a very compelling argument and I think that he is right to consider these two elements. Can we do it from top-down? Can we just dictate to other countries a central system that would be most effective? No, sadly not, even though that would certainly simplify linkages. We believe in a hybrid approach that comes from the bottom-up where each country sets out their own system. As I was saying to Mr Pincher earlier, that does mean that there are difficulties in terms of linking but I do not think that they are nuclear physics. We have to work within those difficulties in order to try to create the linkages. The hybrid system I think is the best way to do it because then you have each country setting up the system that works for them and, as was being said earlier when I heard the end of the presentation, it also delivers investment for each country in terms of developing a low-carbon economy.

Q209 Ian Lavery: In terms of the Paris meeting, the COP21 next year, there are lots of things, I am sure, that you would want to see come from that—I am sure we would as well—but specifically with regards to future linking, what would you like to see come from any potential agreement?

Amber Rudd: The most important thing is to reach the central agreement. Within that, as Mr Lyon has set out, what I would like to see are some of the key points of how each country can develop their own trading system and also, within that, similarities so that we can move to international linking in due course. I think Mr Lyon referred to an agreed crediting mechanism: that would be the most important part of any international agreement.

Q210 Ian Lavery: Professor Stavins warned that any agreement in Paris should not include issues that might hinder linking in the future. What will you be doing as the Minister to ensure that there is not anything included in an agreement that would harm linking for the future?

Amber Rudd: It is a fair point and I think that, while we are all ambitious to deliver on Paris next year and also to have a mechanism for having trading systems delivered internationally, we must not be so ambitious that we put people off, that we have too many different structures or that one country or region will say, "That does not suit us. We will not be embarking on it." We have to concentrate on the framework, like a toolbox that different countries can take down and operate in their own countries, rather than specifying exactly what needs to be done.

Q211 Chair: I think you may have just come in in time to hear the end of the previous evidence session, in which the issue arose of how the auction revenues might be applied and helpful confirmation from the European Commission that this remains a national decision, although the hope is that 50% of the revenues will be used directly for some climate change-related purpose. I have been surprised, in a way, given that there is a prospect of a significant increase in auction revenues over the next few years, that there has not been much debate publicly about how they might be used. I do not know whether DECC has given much thought to this—if it has, it has not shared it with me—but there appears to me to be an interesting choice about whether we want to use it maybe to top up the levy control framework money, so that, particularly in the 2020s, there is a certain pool for supporting low-carbon technologies, or whether, given that the revenue from the sale of allowances is derived principally from corporate purchasers, it might be appropriate to reduce corporate or personal income tax with part of the revenues. Is that a subject that DECC has been thinking about?

Amber Rudd: It is not. I am sure it is a subject that is close to the Chancellor's heart and is probably something that is for him to consider about the best use of those revenues. I remain committed and delighted by the amount of money that has, as the last speaker did say, been invested into the low-carbon economy. Quite high capital costs have been supported by that. It is something we could look at in due course.

Q212 Chair: I am not surprised at you saying this is really a matter for the Chancellor. That is an answer that we have got used to hearing from your predecessors in the last few years and occasionally we have had some frustration in trying to get the Chancellor to send one of his team to throw some light on what he might be thinking. Is this perhaps an area where DECC might want to make representations within Whitehall? We have expressed interest and indeed some concern, as you will recall at the end of the debates in Westminster Hall last Thursday, about the future of the levy control framework beyond 2021.

Amber Rudd: Indeed.

Chair: That is the only period for which we have certainty. Yet I was talking to a potential applicant yesterday who says that the preparation of an application runs into tens of millions of pounds if it is a major low-carbon energy project, with no certainty as to the outcome. Therefore, the sooner we can have some clarity about the framework through the 2020s the better. Perhaps—and this is only a suggestion; ever trying to be helpful, of course—DECC might want to suggest that, given that we could project, I think, quite substantial increases in auction revenues, there might be an opportunity to use some of those in that way?

Amber Rudd: I think that is a useful tip, Mr Chairman. I will write to you in due course about it and I will indeed take it up with the Treasury in terms of having a conversation about future revenues.

Chair: Good. Are there any other questions from any of my colleagues? Well, thank you very much for coming in. That is very helpful.

Amber Rudd: Thank you.