



Energy and Climate Change Committee

Oral evidence: [Low Carbon Network Infrastructure, HC 613](#)

Tuesday 26 April 2016

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Members present: Mr Angus Brendan MacNeil (Chair), Rushanara Ali, Glyn Davies, James Heapey, Matthew Pennycook, Dr Dan Poulter, Antoinette Sandbach

Questions 290 - 390

Witnesses: **Andrea Leadsom MP**, Minister of State, Department of Energy and Climate Change, and **John Fiennes**, Director, Energy Strategy, Networks and Markets, DECC, gave evidence.

Q290 Chair: Can I thank the panel for coming to give evidence this morning? Could I begin by asking the Minister and Mr Fiennes to formally introduce themselves for the benefit of those who are watching in the room and, of course, the legions who are watching online?

Andrea Leadsom: Thank you. Good morning, Mr MacNeil. I am Andrea Leadsom, the Minister of State for Energy and Climate Change and MP for South Northamptonshire.

John Fiennes: Good morning. I am John Fiennes. I am the DECC Director for Energy Strategy, Networks and Markets.

Q291 Chair: Thank you, John. I think we have met before. We are here to ask about a range of issues relating to the low carbon network infrastructure, and I will begin with some questions on system operation and design. We have had strong evidence in favour of creating distribution system operators. What is your view, Minister?

Andrea Leadsom: I think there is a wealth of evidence that distribution system operators from distribution network operators is a very beneficial move for consumers. We think that there will be enormous cost savings for consumers as a result of DNOs becoming more active in managing their part of the network, and so we are very much in favour of it. It is already starting to happen and of course, in terms of the specific cost benefit analysis, when a DNO makes a recommendation for a particular bit of storage or for managing their bit of the system more proactively, Ofgem will do a specific cost benefit analysis of that part of it and will make the decision accordingly. But in a big picture sense we are absolutely keen on it, as is Ofgem, and we are working hard towards it.

If I can, Mr Chairman, I would like to set the topline on DNOs because I think it might be interesting for the Committee. Connections to the electricity distribution network have increased significantly, with over 11 gigawatts of new generation connected between 2010 and 2015, which, as your members will know, means that in some areas network capacity has been fully utilised. So, while DNOs have worked hard to connect new projects, I have been quite concerned to hear about delays and higher costs of connection in certain parts of the country, and I am sure you will recall that this topic was raised by the Committee with the Secretary of State during an inquiry into DECC priorities last year. So I wrote to the DNOs and to National Grid last December 2015, pressing them to take a proactive, practical and innovative approach to ensure the best system solutions are identified and, in particular, highlighting the need to make sure they maximise use of the existing network infrastructure. We have had very positive reactions from all of the DNOs who have committed to working together to improve their performance and, since my letter—as I say last December—Ofgem has set its expectations for DNO performance on connections. Ofgem is also seeking wider stakeholder feedback on how the network companies have responded to the challenges of accommodating new connections.

If you will indulge me for one minute further, there is another point I—

Chair: Why not?

Andrea Leadsom: Thank you. There is another point that I think is very relevant to this and one area for the DNOs, because of this enormous increase in the number of network connection requirements. Under the current rules, only customers that accept a connection offer have to pay the costs—known as assessment and design fees—that are incurred by the DNO when doing the engineering design. The DNOs have to do an engineering assessment for every connection offer that is requested, but those who accept the offer are the only ones who end up paying. So you can have scenarios literally where a business may put forward multiple applications for a connection. They are all assessed at the cost to the DNO and none are then accepted by the business, but the guy down the road who does accept a connection offer then ends up paying the entire cost, so the averaged out expenses to the DNO.

One of the things that DNOs and some of their customers have argued is that this encourages the submission of speculative collective offers. For example, one DNO received 241 connection applications from one customer and none of the connection offers were taken up. A case has been put by DNOs that the introduction of upfront assessment and design fees would, for example, make the costs of DNOs more fairly allocated to those who want to use them, so that is a measure. We have launched a call for evidence to see whether the market agrees with that. At the DNO level, as things are changing in our system, it is going to be important that we do more to ensure cost reflective activity is going on. Thank you.

Chair: What you have said there is very interesting, and I am sure Antoinette Sandbach, who finds this issue very dear to her heart, will be dying to come in, so Antoinette.

Q292 Antoinette Sandbach: I do. I wonder if you are distinguishing between larger projects, for example, above 5 megawatts and smaller projects, and also between smaller businesses that are perhaps looking for a three phase connection. There is a real issue in rural

areas of businesses getting a three phase connection, often at exorbitant cost to the business, and I wonder if you are distinguishing between the different types of application to connect.

Andrea Leadsom: Obviously this is a matter for the DNOs as regulated by Ofgem, and as things stand the small domestic or micro business connection isn't subject to connection charges. It is the non-domestics that are. What I have just been referring to is the cost of the engineering assessment for the connection offer. That is where we are looking at consulting on whether in fact you should pay upfront for that in order to, I suppose, reduce the incentive for multiple applications.

Q293 Antoinette Sandbach: Minister, for example, I have had on the phone today a farmer who is being charged £21,000 for a 100 yard connection to a three phase pole. Those sorts of costs—and he is at the lower end of the scale—for small employers in rural areas are prohibitive. The evidence out there from organisations, like the NFU, the CLA and many other organisations, is that this is a real and sustained problem in rural areas.

Andrea Leadsom: Yes. Obviously on that specific case I am sure you will be writing to me. If you weren't thinking of it then I urge you to do so and, of course, I will look into any specific case like that.

Obviously specific examples are difficult to deal with in Committee, so I think the general point is that we do want to move to a situation where the cost of connection is more cost reflective and where we reduce the overall costs of the DNOs by moving—as the Chairman referred to at the start of the session—towards more of a distribution system operator so that the DNOs can be more proactive in managing demand side, storage and so on, which should reduce the costs for all of the participants in that network.

Q294 Antoinette Sandbach: I think the concern is, particularly in rural areas over distances, that what is happening is the rural economy is being penalised at the expense of the urban economy where connection distances are inevitably shorter. I wonder whether you have any plans to look at any adverse impacts on the rural economy.

Andrea Leadsom: The call for evidence that we have put out should certainly highlight if there are widespread or very clear evidence that the rural economy is being penalised. I think later in the session you want to come on to locational pricing but certainly the policy, as it stands now, is very much to have cost reflection on the grounds that it is our assessment that, overall, reflecting the actual cost is a better system than trying to choose between different segments. I think this particular call for evidence on the assessment and design fees will also bring out issues, like the ones you have mentioned.

Q295 Chair: Thanks very much. We will be returning to that later this morning, and your earlier words gave the opportunity for that meander but it was a worthwhile meander, one that affects an awful lot of us.

If I can take us back to where we were. Currently, all system-operation responsibilities lie with National Grid. DSOs may create confusion some feel with some asking who is responsible for what. What will DECC's role be in establishing a clear hierarchy, a framework or pattern of who is actually in charge for future system operation?

Andrea Leadsom: There are a couple of ways to look at that. First of all, just to set the scene of: what does DECC do versus Ofgem, versus National Grid? DECC is responsible

for the policy setting. I think you want to come on to talk about the independence of the system operator later.

Chair: Yes.

Andrea Leadsom: DECC would be responsible for looking at the structure of how the energy system works and the policy areas. Ofgem will look to DECC for policy steers on how they should then regulate and implement the topline policy, so Ofgem is then responsible for looking at the factors. In direct answer to your question, if and as we move away from DNOs to DSOs, it will be through Ofgem's regulation of the system that they make clear to National Grid, as the national systems operator, and to the DNOs, as they become more like DSOs, as to where the boundaries lie. Obviously those will tend to be geographic. The national system operator operates the big highways and motorways of the grid and the DNOs look at the more local and regional. Ofgem will be regulating both and then of course National Grid manages the day to day operations of the system, so the expectation is that more system operation at the distributed area is going to add to National Grid's ability to manage the system more efficiently and, therefore, cheaply.

Q296 Chair: Is it DECC's view then that any confusion or any uncertainty is a matter for Ofgem to resolve between the DSOs and National Grid and not for DECC?

Andrea Leadsom: I would never abdicate responsibility. At the end of the day the success of the energy security, the cost of bills and the decarbonisation ultimately all rests with DECC. If there are very clear issues of a lack of clarity or whatever then of course it is for DECC to clear that up with Ofgem but, yes, in a sense what I am saying is, day to day, Ofgem will be clarifying that to system operators and DECC should be responsible for ensuring that that is clear at a policy level.

Q297 Chair: Forgive me for pursuing this a little further, but quite often in energy we come across people who say, "It is a DECC matter. It is an Ofgem matter" and it usually belongs to somebody else and not within their silo. So, as a Committee, we should not come across a situation where Ofgem will tell us that, "This is a DECC matter"? Ofgem will know what to do to resolve any confusion here. Is that the ministerial view?

Andrea Leadsom: Yes, except where of course—this is a perfect example where you are moving DNOs to DSOs—you get an area where the policy is being discussed and consulted on. I can well imagine, as I think we all know on this Committee and in the Department, that energy is undergoing a genuinely radical transformation. We have seen a massive increase in the number of local connection requests and in the type of power generation. Therefore, that creates the need for DECC to consider what the policy should be around charging connections, and some of the examples we have just gone through. I can well imagine Ofgem saying, "We are waiting for DECC to decide what is happening there". I can absolutely see on the ground why people might say, "Well, we are waiting for DECC" but ultimately, once those policy areas are clarified, which can take time—literally this isn't a small tweak in the structure of our energy. There is a real transformation going on for the better but, nevertheless, that does require that we work very closely, even more closely than usual, with Ofgem to make sure that there is clarity.

Q298 Chair: I think it is because of your words there, with the rapidly transforming and rapidly changing energy space, that I think people are looking for any confusion to be cleared up quickly and having a clear steer on how that is being done. Can I ask, is DECC planning to separate National Grid's system operation functions from its other business departments?

Andrea Leadsom: We have been very clear from the Secretary of State's reset speech last November that we would like to see more independence in the system operation. We are looking very closely at what the options are. Those range from "stick with what we have" to a fully independent system operator. We are looking at models elsewhere in the world and the Committee will be aware that in the States they have fully independent system operators. There are strengths and weaknesses of all models and there is a kind of possible "best of both worlds" or you might call it a halfway house, depending on your perspective, where you would have much greater independence but within the National Grid umbrella. We are looking at a number of different options and we will be making an announcement later this year on that, but, rest assured, we are looking very closely at what will be the best system to ensure that there are no conflicts of interest, that there is genuinely the empowerment to be able to meet the challenges of the changing energy landscape and that it will be very clear and very cost effective.

Q299 Chair: Thank you. Going back to what we were saying earlier, it seems the responsibility for network strategy is held variously by DECC, by Ofgem and by Grid. Which of these is going to provide the long-term whole systems approach, which is what many people want? It is clear guidance. When it comes to the independent system operator or whatever the choice is, clear guidance and quick guidance is what people are looking for. Some have called for a systems architect even. Can you see any merit in that approach and is that something the Government are considering as well?

Andrea Leadsom: Yes. The whole systems approach is absolutely vital. In electricity each of the Government and Ofgem need to understand the whole system costs and benefits of different technologies and make sure that the charging regimes, and the system, continues to be designed to allocate them fairly. That is absolutely central for ensuring an efficient and secure market. We are working very closely with Ofgem, and you will be aware that we commissioned an external study on the whole system impacts of electricity generation technologies. That is being peer reviewed and is nearing completion. The idea is that we will use, in particular, that whole system impacts work to inform our work that then makes sure that different technologies pay properly the costs that they incur on the system, and that is only right that they should do that. It will help to guide the charging policy but also getting the best deal for consumers, which is what this is all about.

Q300 Chair: When will that study be published?

Andrea Leadsom: We are looking at whether to publish it or not. The peer review isn't as yet complete. Do we have a date on that, John?

John Fiennes: I don't have a date. I think we are hoping to get it out shortly but I don't know exactly when.

Q301 Chair: Then a final question from me at the moment. Of DECC, of Ofgem and of National Grid, in your view, Minister, who is best placed to give us a whole systems approach?

Andrea Leadsom: I am not fudging it but genuinely all three will need to understand a whole systems approach. DECC because obviously we are responsible for policy and, in order to make the right decisions on storage versus DSR versus intermittent generation versus interconnection, you need to understand the costs and benefits of each. For National Grid because likewise they will need to allocate precisely which technologies they are using day to day, and then of course for Ofgem because they have to regulate them. So there isn't one piece of that threesome that can ignore the need for more information on a whole system cost. It is going to be important that that underpins everything we do in the future.

Of course, I think philosophically, as a key part of the massively fast moving energy landscape, technology and so on, it will be core in the future, and it will be taken as read in the future that you understand a whole systems approach to energy because, if you don't have that, then you would not be able to make proper allocation decisions. So, in a sense, I turn your question on its head and say we are on the back foot by not having that information today. The reason for that, of course, is because it is such a fast moving picture that it is quite difficult to keep up with the developments in technology, the costs and the impacts and so on, so we are working hard to get up to speed but it will be important for anyone who is key to the energy management—so including DECC, Ofgem and Grid and, indeed, the DNOs—to understand whole system impact.

Q302 Matthew Pennycook: Good morning, Minister. Can I turn your attention to energy storage? DECC has already accepted the need to create new regulatory conditions and First, I want to get an update on the timeline. Does it remain the position that the Department intends to set out proposals for reform by the spring of next year?

Andrea Leadsom: Yes. As you will be aware, the National Infrastructure Commission has given their report where they are absolutely keen, as indeed DECC is, to take advantage of the opportunity from new storage. In fact, energy storage was identified by the last Government in 2012 as one of the eight great technologies where the UK can lead the world, so yes it is an absolutely top priority. We are not setting ourselves the target of a particular month or date but we are working hard to try to identify, with the storage innovators, what exactly is the quickest and most expedient route to providing a supportive regulatory environment.

I myself had a roundtable with about 15 or 20 different storage organisations to hear firsthand what they think the problems are. I know that because on the Bill Committee we had some discussion—which you attended, Mr Pennycook—about whether perhaps changing the licensing was the answer. As I explained there, that is absolutely one answer but it is not the quick and easy solution that some might think because it would require massive changes to network codes, which could themselves take two or three years.

I probably should have said in my introductory remarks that we are literally about to publish a call for evidence on smart systems, which will bring in all of the many anecdotes and pieces of evidence that we have taken from the industry on what more we can do to promote smart systems. To be totally frank with you, we are already working informally behind the scenes—and have been for months on this—but due to purdah rules we have not been able to get that formal launch out there but we are pressing for it to take place as soon as possible. I can absolutely assure the Committee that informal discussions are

taking place all the time, not just on what more we can do to support storage but also what we can do on DSR and so on.

Q303 Matthew Pennycook: You mentioned 2012 as the year when it was announced that storage would be one of the great technologies. I think it would be fair to say that we have known for quite some time that energy storage can help to create a more secure, cost efficient system and that there are regulatory barriers in place. Could I ask: why do you think—and it may not be under your watch, it may have been in the last Parliament—it has taken so long? Why would it have taken nearly five years by the time we get potential reform to get to that point where we are creating a level playing field?

Andrea Leadsom: It is a difficult one because obviously I joined the team in May 2015. The one thing I would say about energy is the overwhelming amount of new technology is quite stunning. I don't think members of the public or people generally realise how much amazing new innovation and technology is going on right across the energy space, not just in the grid but as we know in the renewables sector, in the nuclear sector and in energy from waste. You name it. Literally, the innovation is enormous. There will no doubt be a case of some issues of where do you focus your firepower first but, of course, I think, particularly where storage is concerned, it has always been a technology where the industry itself believes it can make its own way. It is not like offshore wind where the only way we were ever going to get it off the ground was with subsidies, for example. Storage has never needed that kind of support, so I think it is an absolute priority of this Government—since I have been involved since May 2015—to ensure a proactively, positive regulatory regime. But I think if I can speculate, and it is only that, that because storage is something that is going to happen anyway, it was possibly not seen as such an urgent priority as other technologies that have enormous potential and that needed much more intervention to get them off the ground.

John, would you like to comment?

John Fiennes: I think that is absolutely right. Of course, there was the Low Carbon Networks Fund, which was operated by Ofgem as part of the last price control until March 2015, which mobilised up to £500 million to support projects to try out new technology and so forth. That was a major intervention but, as the Minister says, my personal take on this is that the technology is advancing very fast. Costs are falling very fast. There is a growing recognition of the potential for low cost intermittent renewables here and around the world, and that is adding pace to the whole environment. My personal perspective is that there are still some situations where battery storage makes good financial sense at the moment, but that is as nothing to what will come when the costs fall down further. We believe we are doing the right work now to get ready for the right environment.

Q304 Matthew Pennycook: Leaving aside finance for a second, in terms of regulatory barriers are there any lessons here about how the Department can more quickly enable more innovative technology to come on stream, in terms of regulation?

Andrea Leadsom: I would say that we are firing on all cylinders to try to remain technology neutral and to give a fair crack of the whip to every great idea, and there are lots of them. So, yes, of course you can always improve the speed and the turnaround time but equally—and I gave the example to you—sometimes the consultation is absolutely key, because if we just assume, “Let's just change the licensing for storage, that is the

answer”, we could delay a supportive regulatory environment for storage out of ignorance, so the consultation process is important as is the industry itself developing some kind of uniform opinion. There are always lessons to learn. We can always do things faster, but I think the progress of storage is amazing and the UK is not falling behind. We are not behind the curve. This is a huge potential for the UK energy space and we are absolutely behind it.

Q305 Matthew Pennycook: The Institute of Civil Engineers, among others, have argued for network companies to be allowed to own and operate storage. Ofgem has disagreed on the basis that natural monopolies should not be allowed to be playing in these markets. In your opinion, which of those is right?

Andrea Leadsom: Essentially, electricity storage is covered by the definitions of both generation and supply within the EU’s third energy package. What that means is that regulated monopolies would have to keep their network operation businesses separate from any storage business that they wanted to pursue. I think that is where the view has come that they are not allowed to get involved with storage. However, they can take advantage of storage services for network purposes. There are a number of business models that are already available that allow them to access those services and that are compliant with the third package, so I think it is a bit more nuanced than the message that is out there.

Q306 Matthew Pennycook: I take from that the presumption is that the status quo will remain in place for the foreseeable future?

Andrea Leadsom: As I say, we are informally consulting and will be formally consulting in the near future and then there will be conclusions drawn. All I am saying is that, in the interim, it is not that regulated monopolies cannot take advantage of storage opportunities. It is just that, under the EU’s third energy package, they cannot use it in their network operation businesses if it is for the purpose of making money. They are not allowed to be both a generator and a supplier using storage. I think it is a “business as usual” stand, unless and until we change it, and that consultation will drag out whether it should be changed. I think that is probably the best way to answer that.

Q307 Matthew Pennycook: A final question from me, Chair, if I can. What role do you see, if any, for large-scale storage—I am thinking pumped hydroelectric or compressed energy storage—and do you see a case for the Government’s support of some kind for those technologies?

Andrea Leadsom: Potentially, and I am sorry to have to say, this consultation will bring out some of those points. Running through all of DECC policy is the desire to be technology neutral. We don’t wake up and think, “Today I live this technology” and tomorrow, “I love that one”. We are literally trying to get the whole system cost to see what the best value for the consumer is. At the end of the day, we are trying to keep energy bill costs down, and so we will be looking at the costs and benefits of a larger scale versus a smaller scale whole system cost, the potential economies of scale versus the potential exponentially higher cost, versus the appetite for Government subsidies because, as with offshore wind, we see a real cost reduction trajectory if we get stuck into that. There will be all of those factors to take into account, so I would be entirely neutral in terms of the technology: do I prefer a battery over pump storage? I have no view. For me,

it will be driven by the potential for getting consumer bills down while effectively meeting our energy security and decarbonisation goals.

Q308 Chair: Thank you. Minister, you mentioned a roundtable where you had those who are vested interests or those who were trying to develop storage at a meeting. What was their message to you? Did they have a central message?

Andrea Leadsom: What was the central message? I don't want to put words into their mouths. They will probably all write to you and say, "No, I didn't say that. I said this" but, as I recall, what they were all saying is that getting a supportive regulatory environment was key. They were absolutely acknowledging and urging us to consult and make sure that we took into account their views, as the experts in the field, rather than our own views on the back of an envelope. I would say the core message I took away from it was: don't guess at what we need, ask us. That is why we are doing what we are doing.

Q309 Chair: The reason I ask is we had Phil Sheppard in from Grid on 12 April. He mentioned a DECC sponsored carbon limiting technology conference, a roundtable, and the number one policy and regulatory perspective seems to be the charging regime around storage, where storage is double charged. If that sore thumb was unlocked it could be transformative, and it is only the stroke of a pen that really needs to happen for that to change.

Andrea Leadsom: Yes. That is exactly the example I was giving Mr Pennycook of where in the Bill Committee an amendment was proposed. I think it was introduced as a separate licence for batteries for storage operators, which would then abolish the double charging, as your contact put it. As I explained—that bit is true—the consequential of that is several years to change the network codes before we could implement it. That was an example of where us just simply saying, "Oh yes, we know the answer" isn't necessarily the fastest way to do it. So the point about the consultation is to look at what is the shortest route as opposed to the obvious but unintended consequences.

Q310 Chair: You have seen this for several years. You are now telling me that if you can find another route that is going to make it less than several years?

Andrea Leadsom: Absolutely, yes. That is the whole point of it. If we thought that—

Q311 Chair: How soon could we see this double charging changing? That would send a massive signal.

Andrea Leadsom: Yes. As I say, we are already informally consulting. We will be launching the formal consultation. That will then run for eight weeks. So as soon as we get a slot we will be announcing the formal consultation. That will run for eight weeks. Then there will probably be a further eight weeks?

John Fiennes: Sorry to interrupt. What we are hoping to do in the document is set a very clear intent of where we are going.

Q312 Chair: I think industry wants to see when the change will come.

Andrea Leadsom: Yes.

John Fiennes: Absolutely.

Chair: They might not all be bothered with our processes but they want to know when it will happen.

John Fiennes: Sure. The time table will depend on the nature of the solution that we come up with. We talked earlier about: is it Ofgem's job? Is it DECC's job? This is precisely why we are working very closely together with Ofgem to set out where we share our view of this. But of course if the most efficient solution of these things isn't Ofgem change then that will be a requirement they will need to take through. I would not want to give you a commitment now about how long that will take, but our intention in the document is to set this out as clearly as we can so that people can plan and they can see what we are doing in order to move it forward.

For completeness, I should also mention of course that we had the Competition and Markets Authority recently talking about the system of codes and whether it is sufficiently agile in response to the changes in the power sector. Their view was it wasn't and we should be doing more to beef up the ability of the codes to flex quickly in response to these sorts of challenges. You have already been examining of course, in pre-legislative scrutiny, specific proposals from us or elements of that. That is another area where we think there is scope for improvement, so that that sort of fast movement is able to come where that is needed.

Q313 Chair: Earlier the Minister said that four years ago there was potential for the UK to become a leader in storage. We are now four years down the track. I detect frustration every time I talk to people involved in storage. Forgive me if I am getting the wrong impression, but I still don't see a great urgency within DECC to have this changed. How many more years? I mean four years, I am counting. The meter is running.

Andrea Leadsom: That could not be further from the truth. There is an enormous urgency in DECC to resolve the issues for storage. I think I have been very clear that what we don't want to do is just work out in our own heads, talking to ourselves in the mirror, what the solution is and then go down a track that could delay things by years. So we are having this consultation and that then will look at what is the shortest, least line of resistance to creating a supportive regulatory environment for storage, and that will be the route we are taking. We are doing it with a great deal of urgency and, as I have also made clear, we are informally consulting now until such time as we can get the formal consultation out. I would be very sorry to see the Committee misunderstanding me on this point. It is a top priority. Storage is right up there as one of DECC's priorities to ensure a supportive regulatory environment in short order.

Chair: Thank you. We look forward to it being resolved within the year.

Q314 Rushanara Ali: Minister, you say it is a top priority, and indeed it should be given what the savings could be. The National Infrastructure Commission has predicted that Britain could save £8 billion a year if we used electricity better. Can you say in hard numbers when we will get to that point with the policy changes and reforms that you are saying you are making a priority and understand the urgency? When do you see us getting to a point of saving £8 billion a year?

Andrea Leadsom: The National Infrastructure Commission thinks that it could be £8 billion a year by 2030 as a result of smart systems. Now smart systems, there are various definitions of it but it tends to include storage, demand side response, interconnection and more distribution system operation and so on; more careful management of demand as well as supply and storage. That is the National Infrastructure Commission's perspective.

Q315 Rushanara Ali: Yes. Could you give us a sense of the steps towards that £8 billion over the coming years, so that we are not just looking at the 2030 date as the final end, so that we can see the trajectory in terms of savings?

Andrea Leadsom: Absolutely. Already we have seen with the DNOs an informal move towards more hand to hand combat in managing their networks. We are already seeing good beneficial assessments of business cases that Ofgem do that then approve the expenditure on those, whether it is storage at the DNO level or whether it is better demand side response at the DNO level, so we are already seeing Ofgem is approving positive business cases. What we would need to do as DECC, and what we will do in the fullness of time, is to add up those positive business cases to have a stab at, "Right, how much has that saved us so far in transmission?" It is going to be a jigsaw puzzle of pieces because the way that you will find the evidence is in the business case that National Grid makes to Ofgem for spending money on a big battery or the business case for an interconnection link. That positive business case will demonstrate the savings. It will obviously take time for that to add up, which is why I think the NIC says it will be £8 billion a year by 2030. That is obviously assuming everything else remains equal, so it is a dynamic situation but there is no doubt there is a wealth of evidence that says that more careful management of supply and demand and storage will enormously decrease costs. I would say within the next couple of years we will already have a decent picture of cost savings so far, and then it will be ongoing as time passes and as more proactive management of the system takes place.

Q316 Antoinette Sandbach: Lord Bourne suggested that you were not going to be tackling the regulatory barriers in relation to storage until 2017 at the earliest. Why is it that you are effectively delaying by a year, particularly when the National Infrastructure Commission recommended that you have resolved it all by 2017?

Andrea Leadsom: I imagine that is what Nick meant. We are looking at the regulatory barriers right now and we have been for two years. It is not the case that we are not doing anything, so I don't know but I imagine what Nick meant was—

Q317 Antoinette Sandbach: I am sorry to interrupt but he effectively said there would be no availability in this session to deal with those barriers, and I wonder why—given that you have already been looking at it for two years—you are prepared to delay it even further.

Andrea Leadsom: I haven't seen the transcript so I just cannot comment specifically on what he said or meant, but what I can tell you is—as John has just explained—because by its very nature we are consulting on what is the best way to create a supportive regime if it turns out that there is something Ofgem could do that would not necessarily even require legislation. If Lord Bourne was talking specifically about primary legislation that could be true. It could be that we would not get a slot for that until 2017, but that is precisely why we are looking at the shortest least line of resistance to achieving a supportive regulatory regime. That could also include: Ofgem could do this and that would be easy, and then we

could do this at licensing level and then we could do this at primary legislation level. You could also then find that you had a modestly supportive regime within a year and then more supportive within one and a half and then primary legislation nailed it within two and a half. I just genuinely cannot speak for what Lord Bourne was saying, other than to say that we are absolutely looking at it as a complete priority to ensure that we achieve what the storage sector is looking for and genuinely we see this as a great British opportunity.

Q318 James Heappey: Is it an institution in inertia, DECC and/or Ofgem?

Andrea Leadsom: Absolutely not. No. I completely reject that. I totally understand, when I do regular meetings with colleagues across the House people say to me, “Why hasn’t this happened? Why hasn’t that happened?” but it is quite interesting when you get into energy policy it is incredibly difficult to make progress. Why? Because there is no easy answer and also very often there is no black and white answer either. You certainly could argue that we consult all the time, and that slows us down. You could certainly argue that and you might as an individual say, “Don’t both to consult. Just make the decision and do it”. The reality is that in this transformational period of time: one, we need to get the best answer, not necessarily the right answer but the best answer and that requires consultation, and two, you have to take people with you. There are an awful lot of people involved in energy policy. It hits so many Departments, and three, a trilemma is very complicated. The issues for keeping costs down, lights on and decarbonising often work against each other. We have the added complexity of this is not just about—I don’t want to belittle anyone else’s policy area but you will all be aware of black and white issues—shall we do this or shall we do that? With energy it is like that alien’s game where you bop one on the head and another one pops up here, so everything you do has a counter-reaction somewhere else. In order to not make a bad decision we do have to go around a lot of loops and look at things from different perspectives.

Q319 James Heappey: Could you talk us through what the Government are doing to support demand side response?

Andrea Leadsom: Yes. Demand side response is absolutely key in every area of energy policy. We have brought it into the capacity market, which is incredibly important. As a finance person, I think of the capacity market as an insurance policy, so what are you spending on in the capacity market? You are buying insurance against the lights not switching on or the heating not coming on. The capacity market can either just pay lots and lots of premiums to make sure that there is any amount of electricity so that your lights can never possibly go off, or it can be cleverer than that and it can pay an amount for generation and an amount for reduction in demand. Having that balance is absolutely crucial to keep that insurance premium that all energy consumers have to pay. To keep the costs of that down you want the right balance between paying for more generation and paying people less—better value for money—by slimming down. We are very keen to promote that and, of course, we are now also very keen to promote what is known as aggregators who are intermediaries who are broking the concept of lots of smaller players, smaller businesses, whether it is switching the lights off or turning the air conditioning down or closing earlier or whatever. Nothing to do with brownouts, as some would have you believe, but everything to do with a proper commercial decision and a new potential industry that acts to the benefit of all energy consumers and to the cost of bills.

Q320 James Heappey: I wanted to touch on aggregation, so you got there before me. The other thing I wanted to touch on was individual load shifting and the importance of smart meters in facilitating that. We had an unequivocal answer from the Secretary of State when she came. Can we just check again that you are absolutely on target for the delivery of the smart meter programme to your current stated timelines?

Andrea Leadsom: We are absolutely committed to ensuring that everyone has been offered a smart meter by 2020. That is absolutely vital. We see this as an important shift that will enable people to take control of their own energy costs.

Q321 James Heappey: Isn't that not a change in language, committed to offering them one by 2020 compared to committed to them having one by 2020?

Andrea Leadsom: I don't think there is any difference in that. The point is we are not compelling people to have a smart meter. This has been tried in other countries. There was a bit of a backlash from some people saying, "Well, you cannot make me", so our policy has been to offer rather than compel. I think it is simply that that people are not compelled to accept.

Q322 James Heappey: The difficulty is, in achieving this quite significant part of demand side response, that the availability of smart meters and the understanding of the consumer of what they allow, in terms of individual load shifting, is quite an information project in its own right. Are you confident that you are doing enough to promote that, so that as people are being offered their smart meter they fully understand the benefits of what it will bring from a demand side response perspective?

Andrea Leadsom: I think it is absolutely clear that smart meters will massively put power into the hands of consumers. It will enable people to decide how much their electricity bill should be, which is a superb thing, so it is an unmitigated good for people. On the other hand, you cannot force people—well you could but we choose not to force people to take them—but on the other hand again we will do everything we can to persuade people of the absolute upside of having a smart meter.

Q323 James Heappey: What about the legislation to enable the tariffs that will enable the—

Andrea Leadsom: Do you mean half-hourly settlement?

James Heappey: Yes.

John Fiennes: So half-hourly settlement we are absolutely determined to see brought in. I think it is in 2017.

John Fiennes: That is electing 2017 but the decision then about when you move to mandatory, following the evidence from the work we are doing on how you have to make the transmission.

Chair: Antoinette, you want to follow up on smart meters.

Q324 Antoinette Sandbach: I do. You talked about offering consumers the option of having a meter. My personal experience is when asking for one effectively I was told by the supplier, "You cannot have one. We are not offering them until 2017 and you don't have that

choice”. Now, if you are keen to allow that consumer regulation why are you not requiring the energy companies to provide one if a consumer requests one?

Andrea Leadsom: I am interested to hear you say that because certainly most of the stories I have heard from people—which is not a terribly helpful thing to say—from my own constituents, for example, is that where they have asked for a smart meter they have been given one. I have not particularly heard that people have been refused. Of course, there is an issue in terms of smart metering, the SMETS 2, the upgrade smart meter that is desirable for people to have. It is a very soft rollout at the moment but certainly, as I understand it, most suppliers are making smart meters available on request.

Antoinette Sandbach: And the SMETS 2 meters?

Andrea Leadsom: Not necessarily. I think the point is that with smart metering there are still a few years to go, and the idea is that once there is a shared design that is when the in earnest rollout will take place. Before that, while there are some benefits to having a smart meter—you can see what you are spending and so on—the real benefit comes when you have half-hourly pricing so you can see, “Well, if I switch my washing machine on now it is going to cost me three quid. If I put it on in an hour’s time it will probably only cost me £1”. That is a real benefit, so the half-hourly settlement, which kicks in in 2017, will really help, but so too will a smart meter that will be the permanent solution as opposed to a temporary solution. I don’t think those things are inconsistent. I think the real push is going to come very soon.

Chair: Thank you. We might ask you to write to the Committee about smart meters and the confidence of DECC regarding the 2020 target as well.

Q325 James Heappey: I want to ask very quickly on smart meters and then move on to my final question. Minister, would you care to offer what percentage uptake of smart meters would you deem to have been a success by 2020?

Andrea Leadsom: We don’t have a specific plan B. The absolute goal is that every consumer is offered a smart meter by 2020.

Q326 James Heappey: But you must have a measure of success. For example, the state aid broadband programme, the par uptake expectation is 30%. You must have a measure by which you judge the success of the smart meter rollout and I am interested to know what that uptake level is.

Andrea Leadsom: Energy suppliers have an obligation, which is regulated by Ofgem, to roll out smart meters by 2020.

Q327 James Heappey: Yes. But earlier on you said that you are committed to everybody having been offered one. That recognises that not everybody will want one. As a Department, do you not have a figure in mind for what would represent success? This is a huge public infrastructure project—huge—and I am not sure that you have a target in mind for what level of uptake you are hoping for.

Andrea Leadsom: As I have said, it is a regulatory requirement on all energy suppliers to roll out smart meters to every consumer by 2020.

Q328 James Heappey: So, providing that they have offered it to every consumer by 2020, even if only one in 10 takes it up, commitment fulfilled?

Andrea Leadsom: Let's be clear about this, is the Committee suggesting that there should be compulsion?

James Heappey: No. I recognise—

Chair: Minister, the question to you is: do you have a target in mind?

Andrea Leadsom: The target is all households.

James Heappey: That is all households to have been offered.

Andrea Leadsom: Well, unless you are advocating compulsion—

James Heappey: No one is suggesting compulsion. DCMS have managed to set a target for what they consider to be a reasonable uptake on the back of the state aid broadband programme. That target is 30%, which is quite low. It could be 15%. But I just wondered if DECC has ever set a figure by which it measures success for the uptake of the smart meter rollout.

Andrea Leadsom: The target is that all households are rolled out by 2020. That is the target.

Q329 James Heappey: So 100% of households have a smart meter in it by 2020. That is DECC's expectation?

Andrea Leadsom: I am choosing my words carefully because we have not gone down the route of compulsion. Nobody will be forcing consumers—

James Heappey: You are not compelled to take up broadband once state aid has delivered it to your area but DCMS have seen fit to say that, "We regard 30% as the par uptake and that would be reasonably successful". It then triggers payback from BT but, nonetheless, they set that as a par uptake.

Q330 Chair: If I could short circuit this. It would seem to me that DECC have not set a target of the number of smart meters in homes in the UK by 2020. Would that be fair to say? You have resisted that sort of target.

Andrea Leadsom: I am resisting setting a target because, frankly, for the life of me I cannot understand why the Committee would expect that. What would be the merit of guessing how many people would accept the offer? What is the advantage to—

Chair: The same merit presumably as in broadband.

Andrea Leadsom: No, it is an entirely different matter but if you want to get into that we can but I cannot see the advantage.

Chair: We have established there is no target. I don't want to get bogged down on this. Mr Heappey, do you have any final questions?

Q331 James Heappey: The final question, Chair, is Ofgem has successfully enabled networks to trial innovations but that funding and incentives are insufficient to roll out those innovations. How can we get network companies to adopt successful innovations as business as usual?

Andrea Leadsom: There is a huge amount of innovation being used in the network companies all the time. There are enormous innovations going on and they will have clear incentives to pick up those innovations that make their system network management more efficient, or more cost effective. They are regulated entities that Ofgem requires to submit business cases for their expenditure. Of course, if a good innovation is put to them that will improve their effectiveness or cost efficiency, then they have a very direct incentive to take that up.

Q332 Chair: If I could take you back, Minister, to demand side response. As Chair of the Committee, I tend to have a lot of conversations nowadays with people involved in all sorts of areas of energy. But those on demand side response are telling me that they have had quite a difficulty advancing things with the Government. They have asked that perhaps DECC thinks of some mechanisms to support demand side response, such as setting up a 5 gigawatts capacity goal, five to seven-year contracts for return on investment. Do you have any particular view on that?

Andrea Leadsom: Sorry, could you just repeat that?

Chair: Yes. On demand side response, there is a feeling of difficulty dealing with Government. In fact, one on demand side response said they have to talk to about eight Government Departments. We have a new word called octuplication as opposed to duplication. But one of the points that they particularly asked for was that the Government would set out some market mechanisms that would support demand side response, such as a 5 gigawatts target and/or five to seven-year contracts within that. Do you have any views on that, Minister, or would it be something you would like to take away and consider?

Andrea Leadsom: DECC is very keen to promote greater demand side response. The key point about our policy is we are determined to be technology-neutral. Our role is to enable ideas to be brought forward and to access, for example, the capacity market or other DSOs with a business case. We absolutely do want to promote more DSR but I do not recognise—

Q333 Chair: Who in Government should they speak to? Is it just DECC? DECC will deal with any regulatory issues or issues they might have?

Andrea Leadsom: It depends in what context. Essentially, if you have a demand side response idea you might go to a DNO, to Ofgem or to National Grid, depending on what the idea was. As I explained, how it works is that DECC has the policy. If it was truly innovative and had never been done before, you might talk to DECC about whether it could be included. That would be DECC's role. If it were something that had already been done before and you were doing something similar to what is already out there, then you target who you are looking to supply it to and do it that way.

Q334 Chair: The only one in Government would be DECC? You are saying that they would deal with it?

Andrea Leadsom: If it was a policy matter, yes.

Q335 Dr Poulter: I have a few questions about interconnection, which is an issue you have mentioned a number of times during your remarks today. The Government responded to the National Infrastructure Commission's report in support of 9 gigawatts of new interconnection. What does that mean in terms of National Grid proposing to connect us? Are you supporting all of those interconnectors proposed by National Grid?

Andrea Leadsom: Just to set the scene, Great Britain currently has 4 gigawatts of interconnection against four interconnectors—two to France, one to the Netherlands, half between Scotland and Northern Ireland and half a gigawatt between Wales and the Republic of Ireland—and a further five interconnector projects that would represent nearly 7 gigawatts that have had initial regulatory approval under Ofgem's cap and floor. We are keen on interconnectors.

The reason is they address all three elements of our trilemma. By connecting to lower-priced markets, it helps consumer bills. It keeps down the cost of electricity, or gas if it is a gas pipeline. Security of supply is improved because you are diversifying your sources. Certainly the 9 gigawatts proposed by the National Infrastructure Commission do not lead to all the eggs being in one basket, as some have put it. Nine gigawatts is not excessive. It is a decent amount of diversification. Also, a lot of the overseas generation is low carbon, whether it is French nuclear or Norwegian hydroelectricity and so on, so we can benefit from decarbonisation as well through interconnection. Of course, Ofgem assesses case by case the cost benefit to the UK consumer of every individual project and, where those are positive, we do tend to support them.

Q336 Dr Poulter: In terms of the new interconnectors the National Grid is proposing, are you in favour of the proposals they have put forward for all of those interconnectors?

Andrea Leadsom: Yes.

Q337 Dr Poulter: Thank you. That is fantastic. Just quickly, in your answer—which was very helpful, fairly comprehensive and very useful scene-setting on interconnectors generally—you made an assertion that interconnectors link with low carbon sources of electricity. That can be true, but I don't know whether you are aware of Aurora Energy's research that has said that the net Great Britain welfare impact of most new interconnector projects was negative. I wondered what your response would be to that. That was talking about the fact that there is probably a reliance on countries possibly burning more fossil fuels at times that Britain would be requiring the use of electricity through those interconnectors.

Andrea Leadsom: The Department has looked at the Aurora research and it will not surprise you that we do not agree with it. They do tend to do very good research but in this case they seem to have overestimated the downside and underestimated the positives. Ofgem does its own very thorough cost-benefit analysis, taking into account the energy trilemma. We would go with Ofgem's assessment.

Q338 Dr Poulter: If the wind is blowing in an area where there are sources of wind power that can provide energy to the UK, you would see that as being a desirable time to import energy? That would be part of your argument for decarbonisation?

Andrea Leadsom: Essentially, yes. Obviously the Norwegian interconnector that is proposed will be hydroelectric, which is dispatchable and low carbon. A lot of the 2 gigawatts to France is nuclear, so that is low carbon.

Obviously a key part of interconnection is accessing lower carbon sources, but so too, first, is the possibility that electricity can travel in both directions so it gives us the opportunity, when we have a surplus, to be able to export it and reduce energy costs that way, but also, because of the diversification, it enables us to have access to other places should we need it, from a UK security point of view.

Q339 Dr Poulter: There is an implicit acceptance in what you are arguing that this is going to decarbonise our energy supply and that interconnection is likely to mean that Great Britain will become a net importer of electricity. Is that fair, do you think?

Andrea Leadsom: No, not at all. We would not be a net importer of electricity. Through the interconnectors, those are private businesses that send the electricity where the price is higher. That tends to be in the UK so we tend to receive electricity rather than export it, but that does not make us a net importer. We are very reliant on our own resources for electricity generation. As I say, the advantage of interconnectors is it gives us access to other markets that have other sources. It is quite useful to diversify your sources of electricity.

Q340 Dr Poulter: If, as you say, you are fairly confident that the UK is able to be self-sufficient with energy and there is no attempt by the Government in this to become a net importer, then why are we pursuing interconnectors so actively?

Andrea Leadsom: As I say, because it addresses our three energy targets. First, importing electricity from places where electricity is cheaper bears down on the price of electricity here. Secondly, it is diversified so, therefore, it gives us an extra element to our energy security, while always bearing in mind you do not want to become overly dependent on imported electricity for reasons of energy security. Thirdly, the sources do tend to be lower carbon. If the Ice Link were to go ahead—the Prime Minister has set up a taskforce to look at an interconnector to Iceland—it would be geothermal electricity. There is the potential for interconnectors to provide lower carbon electricity. The advantage for the UK is that it meets all of our energy priorities.

Q341 Dr Poulter: You would see our energy security as the UK being supported by the fact that the interconnectors are to a range of countries? They support our energy security as well as supporting our decarbonising agenda?

Andrea Leadsom: Yes. Essentially, the UK has red-lined that we want to be responsible and be able to be in charge of our own energy security. It is absolutely non-negotiable. We will always ensure that the lights stay on. Interconnection can contribute to that energy security.

Q342 Dr Poulter: In terms of dealing with the diplomatic discussions that need to be had, and some discussions with the industry more generally to smooth the way for interconnection, what role are you, other Ministers, DECC or perhaps the Foreign Office playing in supporting this endeavour?

Andrea Leadsom: The Secretary of State, Lord Bourne and I meet with energy suppliers across the whole range of the energy space. We are constantly meeting with energy suppliers and obviously many of them have quite sizeable operations here in the UK. Also, when we go on trips abroad we will make a point of seeing key counterparts. In that sense, we are a part of the team that looks at where the next prospects are, where the best prospects are and so on.

At the same time, it is a key role both for DECC officials and for specific proposals. The interconnector proposals will come through and be evaluated in the usual way by a cost benefit analysis by Ofgem, which looks at whether that will be to the benefit of UK consumers or not.

Q343 Dr Poulter: Thank you. What I am trying to get at, I suppose, in asking that question is that there may be an ambassadorial role for the Department, for perhaps other Government Departments, your colleagues in the Foreign Office or the Minister for Europe, to have this on their agenda when they have discussions with their European counterparts or counterparts from elsewhere. I wonder whether there has been active discussion with the Foreign Office to push this agenda and how high you would say it is on our diplomatic agenda with some of those European neighbours.

Andrea Leadsom: On his trip to Iceland the Prime Minister set up a taskforce to look at the prospects for an interconnector from Iceland, which would be the longest subsea cable in the world. It is a team right across Whitehall. It is a team. Whenever a Foreign Office Minister or another Minister is travelling somewhere that could have useful energy interests communicated, then we always make sure that is included in their brief as a point to raise. Yes, it is a good point you make and it is certainly something that very much happens. It really is a team game. We often have inter-Ministerial meetings on issues like what more we can do with overseas target countries, and interconnection may well form a part of those discussions.

Q344 Dr Poulter: One final question to pick up on that. You mentioned Ice Link and the Prime Minister's recent trip. There is also Greenwire. They would involve developing a level of new generation overseas to support those projects and then connecting it to the UK grid. Do you foresee there being any potential financial support or other support beyond just the diplomatic engagement from DECC in helping these projects to happen?

Andrea Leadsom: The favoured approach for interconnectors is that they are subject to a cap and floor arrangement, where there is a maximum and a minimum price payment that enables them to get the investment funding to build the interconnector in the first place. As I understand it, they are all now subject to cap and floor arrangements.

John Fiennes: Yes, they are. There is a bit of history on Greenwire particularly, where we did work with the Irish Government and there wasn't an agreement that it offered value for money. We are not aware the Irish Government wants to pursue it further at this stage. The Ice Link project the Minister mentioned seems to us to have more promise in that respect but we will need to see where the working group ends up.

Of course, at the same time it may be that it is possible to make more progress with countries like Norway, under the cap and floor mechanism, when there is no additional

financial support for generation at the far end. Quite recently we had an agreement on an interconnector to Norway on that basis, which offers fantastic value to the GB consumer from that point of view. I think it was last week that the Norwegian Government published a White Paper that set out their intention to allow more developers to make proposals for connections to their market, which is also an encouraging sign. They may be interested in further developments there.

Andrea Leadsom: Yes. I am now keen on the prospect of offshore wind connected to an interconnector. You could imagine an offshore wind project supplying intermittent electricity but backed up by an interconnector from somewhere like Norway, somewhere with dispatchable low carbon power. Those sorts of innovations could be very interesting.

Q345 Chair: On that, Minister, with the Viking Link, we could see from our visit to Wokingham that the southern half of England is a net importer. Given that the Viking Link cable is coming in south of the Humber, it is clearly intended to be primarily an import cable. Are we in a situation where we can be thankful to Denmark for their investment in onshore wind and also in offshore wind? We are benefiting from that.

Andrea Leadsom: At the moment, Denmark would be thankful for the UK for the billpayer subsidy for the most prolific offshore wind installer in the world. The UK has 50% of the world's offshore wind and the Danish developers have benefited enormously.

Q346 Chair: Specifically on the electricity that is coming in on the cable, we are benefiting from the excess of capacity they have built in Denmark in wind and the cheaper energy that will flow through that as a result.

Andrea Leadsom: Number one, interconnection can add to our diversity but we don't want it to get to a point where we are no longer diverse, that is we are dependent on imports. That is what I am hearing as your subtext. Nine gigawatts is nothing close. It is an extra source that is useful to the UK.

Q347 Chair: With respect, my subtext is that the building of onshore wind in Denmark has led to lower energy costs in Denmark, which is why they are exporting it to us. They can make money coming in this direction.

Andrea Leadsom: As I say, interconnectors are a useful additional source of electricity to the UK. You could say the same about the French interconnectors. They thought of building nuclear power stations 20, 30 years ago, built them, and are now providing cheap electricity to the UK as well.

It is a useful source of diversification of access for the UK. There is no compulsion on us to take electricity from interconnectors and of course as the technology improves in our own onshore and offshore wind resources, and solar and so on, as we are seeing, the UK use of our own domestic renewables is increasing very quickly. In electricity, low carbon sources—which includes nuclear—were up to 45% last year, which is incredibly impressive. Who would have thought that five or six years ago?

Q348 Chair: Thank you. Indeed. Can I take you forward to the talk of the Ice Link and Greenlink? Will this be an example of foreign CfDs?

Andrea Leadsom: No.

Q349 Chair: I believe there are some. There will not be? Foreign CfDs will not be used in these?

Andrea Leadsom: In interconnectors?

Chair: In the Greenlink or Ice Link.

John Fiennes: If I may, for the Ice Link proposal at this stage we have a working group to see whether an interconnector could be mutually beneficial and, if so, how that would work. It is conceivable that we will end up saying—

Q350 Chair: Will Greenlink then have foreign CfDs?

John Fiennes: Greenlink is a pure interconnector under cap and floor and is being assessed by Ofgem on that basis.

Q351 Chair: Would any CfDs be used in Greenlink?

John Fiennes: No.

Q352 Chair: Thank you. On a point in Iceland, the nervousness in Iceland about the Ice Link is that Icelandic consumers who are selling electricity might be buying in European market rates. Is there any work being done to ease that concern in Iceland?

Andrea Leadsom: Ice Link is a taskforce at the moment. It is an evaluation. It would be a massive project and all of the implications are being assessed. It is by no means a done deal. It is a taskforce, as things stand.

Q353 Chair: It is embryonic at the moment. Can I ask just quickly about Brexit? Charlotte Ramsay was here, the head of strategies, markets and regulation of the European business of National Grid. She said that if the UK were to leave Europe it would have to work harder to have a similar voice. That was the view from Norway as well. Last night, I heard your colleague from the Department—this is Lord Bourne, Under Secretary of State—describing Brexit as “for the birds”. Is this view shared across DECC or are there different views within DECC on Brexit?

Andrea Leadsom: The Government’s position is that the UK should not leave the EU.

Q354 Chair: Do you share the Government’s position on that?

Andrea Leadsom: You will be aware that I do not share the Government’s position on that but, as a Minister of State for Energy, I can only tell you what the Government’s position is, which is that the UK should not leave the EU.

Chair: Fair enough. Thank you. Did you want to follow up?

Q355 Glyn Davies: I did not want to follow that question, no, but there is a question I want to raise on interconnectors, which is what we were talking about. I am not sure whether it is

one to which I could reasonably expect an answer, I just think it is worth raising. That is the position of British territories and whether a CfD could be used.

The reason comes from Alderney. I know there is a potential development in Alderney—I happen to have met the proposers of this development—and it seems incredibly interesting. First of all, it is tidal development, which is of great interest to the Committee and to me, and of course it is a good opportunity for an interconnector into Britain. If Alderney is deemed to be foreign and not British, of course it could not qualify for a CfD. I am just wondering what the position is on what is potentially a really useful form of energy in balancing the system for us.

Andrea Leadsom: Again, philosophically the Department will be technology-neutral and will look at what is good value for the billpayer. Technologies that have a steep downward trajectory in cost terms will always be given a shout but we are essentially technology-neutral. I am aware of that project, Mr Davies, and I share your interest in it but whether it will be fundable through existing methods is something that will be evaluated in terms of its benefit to consumer bills, that is whether it will contribute to our long-term plan to keep bills down as low as possible, and of course energy security and decarbonisation.

Chair: Thanks. With the pressure of time, we will move over to Antoinette.

Q356 Antoinette Sandbach: I am going to come back to connections and costs. We have had evidence of connection moratoria, long queues, unrealistic connection dates and high costs. Lapsing connection offers are very common in the grid connection process. That is a pretty damning indictment of district network operators, is it not, particularly given the subsidy that they get from consumer bills?

Andrea Leadsom: As I mentioned in my earlier remarks, having heard concerns about delays and so on I did write to all of the DNOs last December. The feedback from Ofgem is that they have taken that to heart and are really seeking to improve the position. As I also mentioned earlier, 11,000 new connection requests is an exponential increase. With the changes in our energy structure, what it means—no excuses—is that the DNOs have to come to terms with a completely different world now. This move from DNO to DSO is giving them the incentive, the opportunity, more flexibility and more ability to gear up to meet the new challenges.

Q357 Antoinette Sandbach: Some of the evidence we have received has suggested that planning consents and connection should be more closely aligned, for example, with local planning authorities involved in getting better integration. Is the Government looking at facilitating this?

John Fiennes: The position is that the national planning statements encourage people to put in their connection and their generation requests at the same time. However, the timeframes for the two elements of networks and generation can be quite different so it does not absolutely insist that the connection appear at the same time because you would lose the critical path, in effect, at that stage.

Q358 Antoinette Sandbach: Rather than what I would call short-term projects, they are looking at a far greater integration. For example, when local plans and neighbourhood plans are drawn up, that provision at that stage is made—

Andrea Leadsom: We are certainly encouraging greater anticipatory connections. Obviously there is the downside possibility that you end up with wasted money because those propositions did not come forward. Again, as the DNOs move toward greater system operation and frankly get used to the idea of far greater demand for connections, they are starting to look seriously at anticipating where the next demand may come and building connections in advance of that, which will improve things.

Q359 Antoinette Sandbach: In your earlier evidence you talked about the commitment to locational charging. In a previous report from this Committee in a different guide in 2015 it was recommended that DECC conduct an in-depth study on the pros and cons of replacing the regional variations of the network charges with a standard network tariff. Have you undertaken that work as recommended by the previous Committee?

Andrea Leadsom: The Government has absolutely looked very carefully at this issue. We have been very aware for some time that there is a big minority of calls—

Q360 Antoinette Sandbach: I am sorry to interrupt but what I was asking is whether DECC has undertaken that in-depth study that looks at both the pros and cons. The Government may well be aware of it but the recommendation was to conduct that study.

Andrea Leadsom: Yes. As I say, DECC has absolutely looked very carefully at the prospects for locational charging versus a single national network charge. It has been very carefully assessed and the outcome of that assessment is that it would risk an overall increase in network costs, which would be very unfair for GB customers.

Q361 Antoinette Sandbach: You accept then that regional unfairness, which Ofgem has quite clearly identified and which was identified in that 2015 report, is acceptable?

Andrea Leadsom: It is not that it is acceptable. It is that a change to the policy would risk an overall increase in network costs. It is not for Government to put up everybody's bills in that way.

Q362 Antoinette Sandbach: The reality is then that we see rural communities—the north of Scotland and particularly the north of Wales, the Merseyside region—paying substantially higher costs, particularly in electricity generation and transmission, effectively in electricity rather than in an electricity and gas network. They cannot access gas. They have no access to gas, they cannot access dual-fuel deals and you penalise them again in relation to transmission charges.

Andrea Leadsom: They are not penalties. It is essentially saying that the system needs to reflect the actual cost lest it lead to an increase overall in network costs. For example, in last year's Scottish Parliament Select Committee appearance Ofgem noted that a large, energy-intensive user located in central Scotland would pay £2 million a year in transmission charges compared to £4 million in London. The location of the generation and the users of it will therefore change the costs of transmission and the decision is that there should not a national approach to network charging.

Q363 Antoinette Sandbach: The evidence is that Scottish connectors pay over £18 a megawatt to connect, whereas in Kent and Essex it is £3.20 and in some places there are negative connection costs. Do you really think that is a fair way of dealing with it when, for example, much of the renewables is located in rural areas? They suffer the impacts of it, for example impacts on tourism if it is wind energy. They live with the impacts of large solar fields. Do you really think it is fair, when much of this energy is renewable energy that is being located in rural areas—there is no choice on the location when it comes to renewables; it is often where the wind blows the strongest—that they should be penalised yet again?

Andrea Leadsom: For example, the Hydro Benefit Replacement Scheme for northern Scotland consumers is a subsidy to consumers in the north of Scotland that equates to around £40 a household there. However, analysis published by Ofgem in October 2015 shows that 16 million households would face higher bills if we moved to a national electricity distribution charge, while 11 million would see reduced bills.

Q364 Chair: The scenario you are describing would be a cost-neutral scenario over all consumers, is that right?

Andrea Leadsom: If we moved to a national—

Chair: Would it be cost-neutral or not? That is the question.

John Fiennes: I believe it would not, Chair, because you would remove the economic incentives on locational generation and supply. It would add costs overall to all the GB consumers.

Q365 Chair: We will get to generation in a second. Is the model then not a cost-neutral model that is being described by the Minister? Those figures are not from a cost-neutral model?

John Fiennes: There are two things going on. First, there is the total cost to GB. That is where we—

Q366 Chair: Are those figures cost-neutral or not?

John Fiennes: I believe the numbers that are there are if you simply redistributed the current across, but the proposal if you were to move to a distributional—

Q367 Chair: Yes, but those figures are cost-neutral figures?

John Fiennes: I believe they are, Chair, yes.

Chair: Thank you.

Q368 Antoinette Sandbach: Given this in-depth analysis that DECC has carried out, would you be prepared to publish it, Minister, so that others can look at it and assess the quality and the extent of the analysis undertaken by the Department?

Andrea Leadsom: I will write to the Committee. Specifically for Scotland, however, if you moved to a single charge 1.8 million households would face higher bills while 700,000 would see reductions.

Q369 Chair: Would that still be cost-neutral?

Andrea Leadsom: That is cost-neutral.

Chair: Thank you.

Andrea Leadsom: Let us be very clear about this. What you charge is going to favour some and disfavour others.

Chair: Some would pay a lot less and others would pay a little more. We agree with you entirely. Minister—

Q370 Antoinette Sandbach: It is about spreading the load. Is it not about—

Andrea Leadsom: It is not only about that because—

Q371 Chair: If I can cut across you, we both understand each other. There is a philosophical difference here.

I want to take us on quickly, before I move to Rushanara, to transmission charging. Within the UK we have transmission charges. Scottish and Southern Energy will tell you that a wind farm in Scotland could pay up to £1.35 million more per year in grid charges for 50 megawatts, and something that is coming down the interconnector from any location in France will not face these costs at all. Within Europe, they are trying to move away from these distortions to charges and costs.

Do you think it is best for UK PLC, as it currently stands, that the highest euro cost per megawatt hour from the bureaucrats in the energy sector is in the UK? The UK has the highest cost per megawatt hour for grid charges and it is causing market distortions. Europe is trying to move away from this so that there is not a distorted market and renewables get the chance to be built where the resources are. How do you feel about that, Minister?

Andrea Leadsom: I am not sure I understand the question, Mr Chairman. I think you are asking me to—

Q372 Chair: I am asking you about the principle of grid connection charges and what they are causing in the UK. They are disadvantaging some generators in the UK versus generators in France.

Andrea Leadsom: I have not seen evidence that demonstrates that.

Q373 Chair: If we take an example of a 50 megawatt wind farm that is in the south of France, say 300 miles south of the Channel, and we have a 50 megawatt wind farm 300 miles north of the Channel, the grid connection costs for the one north of the Channel could be around £1.35 million higher per year than the one south of the Channel because the French regime enables development without market distortions or bureaucratic choices, whereas in the UK it has these distortions.

Andrea Leadsom: That is theoretical. I have not seen the evidence.

Chair: We will write to you on that.

Andrea Leadsom: I would want to look at if it was a level playing field. All I can say, again, is that the UK is half the world's offshore wind. I think you are talking about offshore wind.

Chair: No, I am talking about onshore wind.

Andrea Leadsom: You are talking about onshore. The fact is that wind is a massive UK success story. If it is the case that it is utterly uncompetitive and France is doing so much better then it defies belief that half the world's offshore wind is in the UK, does it not?

Q374 Chair: Thank you for that answer. We will write for further clarification on that. Thank you, Minister.

A final point from me before we come to Rushanara Ali is that there are many questions about the island CfDs and where they sit at the moment. I take it the Government has taken this to the European Commission. When do we expect the European Commission to give island CfDs the green light?

Andrea Leadsom: The latest on that is that we do not know. That is up to the European Commission.

Q375 Chair: It is in the hands of the Commission at the moment.

Andrea Leadsom: It is in the hands of the Commission and it should be a number of months. We will set it out as soon as we can.

Q376 Chair: The Government maintains its commitment to island CfDs as it did?

Andrea Leadsom: As you know, Mr Chairman, the CfD is a competitive auction that is in the interests of consumers. I do find it quite difficult because quite often Members of Parliament seem to speak out for their own projects as if somehow they should be favoured over the competition that keeps the costs down for consumers.

Q377 Chair: It is only a question of Government policy. Is Government policy and intention the same as it was?

Andrea Leadsom: Technology-neutral, yes.

Q378 Chair: Is it the same as it was?

Andrea Leadsom: It is indeed the same as it was, yes.

Chair: Thank you very much. It is a good answer. Thank you.

Q379 Rushanara Ali: Minister, I want to turn to the subject of district heating. The Government is making £300 million available for district heating. How will this money be spent and how will you be measuring the impact of the spending?

Andrea Leadsom: This is a unique opportunity. We were delighted in DECC with the settlement we got at the Spending Review for district heating. Heat networks provide a

unique opportunity to exploit large scale and often much lower cost low carbon heat sources such as recovered industrial heat and energy from waste. The £300 million of funding for heat networks as part of the November Spending Review is expected to support construction of up to 200 large heat networks in towns, cities and communities across England and Wales, and also to leverage up to £2 billion of private and local investment.

Q380 Rushanara Ali: Great. Thank you. Can you say a bit more about the timeframe for the 200 and the £2 billion leveraged investment? What is the expectation?

Andrea Leadsom: We have a Heat Networks Delivery Unit, and they are supporting currently 190 early stage projects in 118 local authorities. So far they have provided over £11 million of grant funding for feasibility and project development studies. There is a pipeline of over 280 projects and we will be consulting shortly on using the £320 million of capital support for around 200 new schemes, as I have mentioned. We are also running a £7 million heat network innovation small business research innovation that should stimulate innovation and help to support the supply chain. It is already underway. Obviously to a great extent business propositions need to come forward but it is already happening.

Q381 Chair: In 2013 DECC said that up to 20% of the UK's domestic heat demand might be served through district heating by 2030. This is obviously starting from a very low base at 2%. Are you confident, given this investment and given the pipeline of innovations that are coming through, that that could be met?

Andrea Leadsom: Again—I know I have said this a lot—we want to be technology-neutral and there are different possibilities. Decarbonising the gas grid is another possibility. Electrification is another possibility. District heat networks will definitely have a big part to play. What we have done is we have committed Government funding to it, we have an implementation team and we are working very hard to make it become a reality. Yes, I think it will play a very important part but as ever, with the amazing innovation in the energy spaces, you do not know what you do not know.

Q382 Rushanara Ali: Then why set a 20% target? It is helpful but do you see the contradiction?

Andrea Leadsom: I do. You are now doing the opposite. In the context of smart metering, you want a target there.

Q383 Rushanara Ali: I am just responding to your point about wanting—

Andrea Leadsom: As much as possible. Equally, I am sure you would be delighted if we reached over 20%. I imagine, I do not know—2013, again, predates me. I am not aware of that and why that was specifically identified at the time but what I can tell you is in our—

Q384 Rushanara Ali: Is your Department still committed to it?

Andrea Leadsom: Yes, but in our policy discussions we always recognise that things change quickly and it may well be that something better comes along or that district heat

networks work so well that we should be doing more of them than we had originally planned.

Q385 Rushanara Ali: At the moment, you are confident about district heating. Otherwise you would not use this money in this way.

Andrea Leadsom: Yes, absolutely. We have made a big commitment, which I have just outlined to you, what we are doing to make it a reality.

Q386 Rushanara Ali: Just a final question. The research from Wales West Utilities claims that a subsidy of 75pence per kilowatt hour would be sufficient to drive demand for district heating. Can you tell us what DECC's view is on this possibility and whether you are open to that possibility?

Andrea Leadsom: I am not aware of that piece of work. You can always, at any time, write to the Department with a piece of work that you want us to evaluate and of course we would be delighted to do that. There are a couple of things that you have wanted to put forward from today. What I can tell you is that we will be consulting on using £320 million of capital support for around 200 new district heating schemes. What that would amount to in terms of a subsidy per kilowatt hour I cannot quite calculate here and now but that is quite a significant sum. The concept of Government support for these projects is quite clear and the form it takes is something that this work will throw up.

Q387 Rushanara Ali: Okay. Could your Department come back to us with more details, giving a view on this?

Andrea Leadsom: Yes, definitely. If you want to send that specific point in then of course we will be happy to look at that.

Q388 Rushanara Ali: I just had one final question, which is about local authorities and planning in relation to district heating. What is your view on where local authorities can play a bigger role and also whether they should have more power in order to enable and enforce district heating to happen?

Andrea Leadsom: The National Planning Policy Framework sets out a clear expectation that local planning authorities should have a positive strategy to promote energy from renewable and low carbon sources. In particular, the framework asks local councils to look for opportunities where development can draw its energy supply from decentralised renewable or low carbon energy supply systems and also for co-locating potential heat customers and suppliers. That is already there in the local planning framework. Then obviously regulations that set good energy efficiency standards for new buildings can also encourage heat network development. That is also a decent opportunity for promoting heat networks.

Q389 Rushanara Ali: Has there been any assessment on how much take-up there is by local authorities, which ones are doing particularly well and how much progress they are making?

Andrea Leadsom: As I mentioned at the start, 118 local authorities have put forward 190 early stage projects.

Q390 Rushanara Ali: I meant in relation to using their powers.

Andrea Leadsom: Yes. They are required under the National Planning Policy Framework to have a positive strategy and I think the evidence that they have a positive strategy is that 118 of them have already come forward with projects that they are looking to get funded. There is the evidence that it is resonating and that local authorities are seizing the opportunity.

Rushanara Ali: Okay. Thank you.

Chair: Thank you very much, Minister and Mr Fiennes. Thank you especially for fielding quite a wide range of questions. Any robustness from the Committee was due to pressures of time that I was putting on them. I especially thank you for dealing with the ever-changing views and targets—well, sometimes targets and sometimes no targets. It is appreciated that you have taken the time and shared your views. We hope to see you, as ever, at some time in the future but thank you for this morning.