



Energy and Climate Change Committee

Oral evidence: [Progress of smart meter roll-out](#), HC 665,
Tuesday 16 December 2014

Ordered by the House of Commons to be published on 16 December 2014.

Written evidence from witnesses:

- [Smart DCC Ltd](#)
- [Smart Energy GB](#)
- [Department of Energy and Climate Change](#)
- [Ofgem](#)

[Watch the meeting](#)

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

Questions 90-250

Witnesses: **Jonathan Simcock**, Managing Director, Smart DCC Ltd, **Sacha Deshmukh**, Chief Executive, Smart Energy GB, **Baroness Verma**, Parliamentary Under-Secretary of State, **Daron Walker**, Senior Responsible Officer, Smart Meters, and **Alan Over**, Deputy Programme Director, Smart Metering Implementation Programme, Department of Energy and Climate Change, **Rob Church**, Partner, Retail Markets, and **Rachel Fletcher**, Senior Partner, Markets Division, Ofgem, gave evidence.

Examination of Witnesses

Witnesses: **Jonathan Simcock**, Managing Director, Smart DCC Limited, and **Sacha Deshmukh**, Chief Executive, Smart Energy GB, gave evidence

Q90 Chair: Good morning. Thank you very much for coming in. As you know, there is a lot of interest in this subject and it is an important and urgent one as far as we and many other people are concerned. Could I start with you, Mr Simcock? We have had a lot of evidence given to us that has

criticised the DCC for delays in the rollout in the foundation stage, and indeed, the DCC is the wrong outfit to support a nationwide programme. What is your response to that?

Jonathan Simcock: I think DCC's role in the programme is not the easiest thing to understand, and it might be helpful if I spent a moment reminding people what the role of the DCC is. You will be aware that the suppliers are going to install meters into the homes of all the consumers. Our job as DCC is to provide the communications infrastructure that links those meters with the energy companies, so we are the tin cans and taut string between those two, the meters and the energy companies. Quite a lot of tin cans, because we will reach every household in the country in time, and quite a lot of taut string, so it is a national telecoms infrastructure that we are building, but that essentially is our role.

We have been in that position since the licence was awarded, which was in September 2013, and since then a great deal of progress has been made. We have mobilised a new organisation from scratch; we have signed very large service provider contracts with the communication service providers and with the data service providers, contracts that were procured by the department for which we are now the client. The communication service providers in particular have made excellent progress rolling out the infrastructure, so masts and the technology that will provide this communication infrastructure. We have procured the security infrastructure that will make sure this service is secure over its life and we have held hundreds of design forums with industry to make sure that they are involved in the decision-making about the design of the service, so an awful lot of things going extremely well.

I think you are referring to the area that has been challenging. In order to build an infrastructure like this, to develop a service like this, you have some foundations, some essential things that you need in order to be able to plan with confidence, and those things are the requirements, that is a definition of what we have to build and the technical specifications there, let us say the foundations on which we have to build them. Getting to complete and stable technical specifications, getting to a clear definition of the requirements for the service has taken longer than it was anticipated to take. We have been working closely with the department to help to finalise those and we are now at a really important point, because for the first time we have that. The requirements are captured in the code, the Smart Energy Code. That is almost all released now. We will see the last bits in January, but we know what is in it and the technical specifications that we will build on, the version that we will build on was published in November, so for the first time we can see what we have to deliver and therefore we are consulting with our stakeholders on what we think is the right way to build and deliver that service. Today, in a few hours, is when that consultation closes and we will see what our stakeholders think of our plan, but there is a huge amount in the DCC programme that is going extremely well, and this area, which has been challenging, we have been working very closely with the Government and other stakeholders to address those challenges and we are now, as I say, consulting on a resilient plan that the whole industry can have confidence in.

Q91 Chair: Nevertheless, last month you said that you were delaying the go live date; the costs are up by another £90 million. If that is excellent progress, I dread to think what satisfactory progress would have meant in terms of delays and cost. Who is going to bear the cost of the energy suppliers adapting their IT systems to work with yours?

Jonathan Simcock: The energy companies will make that investment.

Q92 Chair: In other words, the poor old electricity consumer will pay for all of it?

Jonathan Simcock: I am sure they will pass it on to their consumers, yes. None of that is new cost, Mr Chair, if I may be clear. That has always been part of the business case for this programme.

Q93 Chair: If it was always part of the business case, why did all these companies design systems that are not compatible with yours?

Jonathan Simcock: They are operating their legacy systems. They need now to invest in the new systems that will be compatible with DCC.

Q94 Chair: Do you have any incentive to keep those costs as low as possible?

Jonathan Simcock: The answer is yes, we are highly regulated. Ofgem, who you are seeing later, have the authority and the role of looking at our costs, and if they do not think that we have spent the consumers' money effectively and efficiently, they will take action against us, so it is a very, very serious matter for us if we do not spend money in an appropriate way.

Chair: A very serious matter.

Jonathan Simcock: Yes.

Q95 Chair: Given that the National Grid and the distribution companies run rings around Ofgem on a routine basis and make considerable excess profits, what will happen if you do the same thing?

Jonathan Simcock: The profit that DCC can make is written down in the licence. It is a number of pounds each year, so it is very clear and very explicit. The other companies in the energy sector are regulated in a different way than we are. They agree a cost envelope in advance with the regulator, and then if they can reduce their costs lower than that, then they benefit. That is not the regime that we are under. We spend the consumers' money in the best way we possibly can, and then after the fact Ofgem will make a judgment about whether we have done a good job or not. There is absolutely no incentive for me to do anything else other than to produce value for money for the consumer.

Q96 Chair: One of the problems that have been raised with us consistently is about the smart meter access in tower blocks and other multi-occupancy buildings. What is your preferred solution to that?

Jonathan Simcock: Coming back to the role of DCC, our job is to provide what is called the wide area network, so the communications infrastructure across the country that then will link with the home area networks, what happens within the building. What happens within the building is the accountability of the energy companies and you will be aware that there is robust and well-understood solutions for small buildings and tower blocks there is still work to do. It is more an issue for the suppliers than it is for me. In my opinion, it is not really a technical issue that needs to be solved. Technical solutions will emerge to solve it. I do not think it is rocket science, if I may say so.

What industry needs to do is to decide how it is going to handle it from what you might call the business model point of view, so if you need a network in a block of flats, is it the first supplier to install the first meter who puts it there for everybody, if there are several suppliers in the same building, or is some other party going to put it in in advance before the suppliers turn up to do

their installations or what? I do not think it is a difficult problem to solve, it just needs industry with, I am sure, leadership and support from DECC to get their heads together and decide how to handle it.

Q97 Chair: That is a very long way of saying you do not have a solution and you are quite happy to wash your hands of the problem.

Jonathan Simcock: No. We will work with industry in order to make sure that every property in the country gets served by smart meters, but what happens in the home is just not part of my remit.

Q98 Chair: Okay. That is a short way of saying you do not have an answer and are happy to wash your hands of the problem.

Let us give you a turn now, Mr Deshmukh. You lead on smart meter communication and we have witnesses who have said that there has been an unwillingness among the industry to share information on smart meter progress. What is your view about that?

Sacha Deshmukh: I think there has been quite a strong willingness on the part of industry and consumer groups to work together on consumer engagement. Each energy supplier is involved in their own rollout plans, in terms of their own commercial plans, and there are areas of their work that are commercially sensitive, but as far as we are concerned, we have been working with suppliers and others to say, "Let us look at this all from the consumers' point of view" and I think that is perhaps something that we need a little bit more of in the energy industry as a whole. Let us start with the consumer and think about the consumer's life, the consumer's journey, all of the constituents of the people in this room.

When we have talked to the consumer, they said to us, "We expect this to be a national rollout, a national programme. We want to understand what is happening, because I have one energy company, but my neighbour, my mother, my friend may have a different one. We want to see consistency across that". We explained that to energy suppliers and others and mapped out what does that mean for how we engage the nation during the rollout and make sure that people understand that they should have the same expectations, regardless of who their supplier is, and be able to assist their friends, their neighbours, other people in the local community as the rollout happens. I think suppliers have been very co-operative by and large working with us on that.

Q99 Chair: The NEA suggested that during the foundation stage, smart meter suppliers were finding that older people were more receptive to the process than younger people, who may simply be too busy to devote any time to it. How do you think communication could be improved so there is a more consistent take-up?

Sacha Deshmukh: I think the Committee did some important work on this in your report in July 2013 and we were able to pick up some of the thinking and the recommendations that you put into that report about what could engage the nation. We took that into dialogue with many consumers around the country, so over the last six months or so, we have talked to over 10,000 consumers from right across the country. What we found is that consumers can be very engaged when they understand what the Smart Meter Programme is really delivering. This is a vital programme for finally digitising the last great analogue industry in this country, giving consumers control over buying gas and electricity, changing the experience in an enormously important way for those consumers who are currently on prepay and will become pay as you go customers, shaking up the market and making it a market where you genuinely can shop around rather than

switch in this sort of epic process that when you have done it once, you are pretty reluctant to do it again.

We have found as we talked to consumers about that that there is lots of engagement from all sorts of different consumers, older consumers, absolutely, yes, that is right. They are sometimes some of the consumers who are most needing to manage their household budget carefully and so they see a smart meter as key to that, but we have also found equal if not greater amounts of engagement from young families, from younger people who are renting increasingly and want to share homes and are interested in smart as a way to pay as you go. So we found interest across all sorts of different demographics, but there definitely is great interest among older people as well and I would say primarily because of the need and the driver to manage the household budget very carefully.

Q100 Sir Robert Smith: Mr Simcock, how much difference does it make to your task whether the meters are interoperable between suppliers?

Jonathan Simcock: The interoperability of meters is essential for the service to provide the value for consumers that is needed. We will provide an agnostic service so that every supplier will be able to match their meters to our service. There will be no need for suppliers to change meters when the consumer changes supplier, for example, so it is fundamental to our role that we are there to make sure that irrespective of which supplier it is, the service will work.

Q101 Sir Robert Smith: The current meters that are going in, are they interoperable?

Jonathan Simcock: You are talking about the famous SMETS1 meters in the foundation stage?

Sir Robert Smith: Yes.

Jonathan Simcock: The foundation stage is really important. It is the opportunity for the energy companies to get going. It is the opportunity for consumers to begin to engage with smart meters. DCC is putting in place the infrastructure for SMETS2 meters, the next generation of smart meters, but it is important that we are able to bring into DCC the current SMETS1 meters over time so that the energy company that has invested in foundation and is ahead with consumers is not disadvantaged by having these stranded assets out in their portfolio. We will do that. We will bring them into—

Q102 Sir Robert Smith: So someone with a SMETS1 can change supplier and still get all the benefits?

Jonathan Simcock: You heard from people who are more expert in that SMETS1 subject than I am last week, about how they try to work together to make sure that a smart meter does not revert to a dumb meter when their supplier changes. That is the SMETS1 world. My world is to put in place the infrastructure that makes that a historic problem, because we will have complete interoperability between the meters. I think what is important is that where the suppliers have invested in those new SMETS1 meters that in time we are able to bring them into DCC so that they are not disadvantaged. I am not completely sure I am answering your question. There are interoperability issues with SMETS1. It is one of the good reasons for having a DCC for the future in the SMETS2 world, and so our main focus is on the SMETS2 world now. We need to focus and make sure we deliver it—it is not an easy task—but then we will bring in the SMETS1 meters under DCC so that they are as interoperable as the SMETS2 meters.

Q103 Sir Robert Smith: Will the solution be that it is the data that is interoperable rather than the meter itself?

Jonathan Simcock: I have heard people try to describe it that way before. It does not particularly work for me. I think it is a matter of the next generation of smart meters, SMETS2, designed to work with the DCC infrastructure based on these technical specifications that are now complete and stable and we will have work to do to work out how to bring the SMETS1 meters into the DCC. We have not done that work yet. The department will fire the starting gun on that at a certain point and we will begin to work out how to manage that from a security point of view and from a commercial point of view and all the other areas that will need to be addressed.

Q104 Sir Robert Smith: From a smart energy point of view, how much damage will this do to the rollout, the people having been early adopters finding it more difficult?

Sacha Deshmukh: I think the point that you raise about interoperability is extremely important for consumers. If we want this to be a transformation of the gas and electricity market, which I think it can be, then consumers have to be able to shop around. Smart has to be able to make it much easier to shop around, it has to be able to make it possible for consumers to share their data with price comparison sites, get real recommendations as to what is the best price for them and increasingly see new people enter the market and sell you gas and electricity as part of a much bigger service. That is what we expect in all the other areas of our lives. For that to happen, we need to have interoperable meters. I think it is absolutely key that it is delivered

As far as those people who have the earlier generation of meters go, I think an important thing to remember is that at worst, they are no worse off than the rest of us who are still having to live with the old technology. That is an important starting point to remember. I do think it is very, very important that those customers, about 400,000 or so meters—so that is not quite half, but about that in terms of numbers of households because most people have two meters, but not all—that those early adopters do have their meters enrolled into the national infrastructure and are able to shop around as quickly as possible. They have, our surveying has told us when we have talked to them, found the experience of having this earliest generation of smart meters to be a significant step up from what it was like buying gas and electricity before. I am glad about that, but we absolutely want them to be able to benefit from the full range of benefits, in particular the ability to shop around, which I think could be a huge step forward for the entire marketplace, as quickly as possible.

Q105 Sir Robert Smith: The other thing that is put to us is the ability to interact with the meter through other devices rather than just the in-home display. Is that going to be a standard? How crucial is it?

Sacha Deshmukh: I myself do not come from a public sector background, so I am about to say something I do not often say and have not in my career, but I think that Government had the aims very right when it came to the devices, but there are an awful lot of people who muddle what the policy says and what the requirements are. Just to bring my own clarity to that, it is really important to remember that what the policy says is that your energy supplier has to offer you a certain functionality that you can use through a device in your home. They can offer you, if they wanted—and I am sure that if newer people enter the marketplace or if some of the existing energy companies increasingly have to compete because smart is driving them to compete harder—devices like Kindles, like smartphones and wanting your phone contract as well, or like the kind of devices that we have seen that manage the heating and other things in your home like Nest and Hive, they will be offering those devices and also the smart meter display for you.

I think it is incredibly important that there is a display in the home. What we have seen from every study and from talking to consumers ourselves is that using the display in the home and being able to use that so everyone in the home can see what they are spending, people can use it as a family and plan their energy use in a bit more of a co-ordinated way within the family. It helps them to both control their energy spend and have it more front of mind than simply were it on a phone app that you may or may not bother to check. If you are a pay as go customer and in a shared household, it makes it incredibly important and easy for different people within the household to manage that spend and also it means that as a group, you are able to use that device if you are giving other services through it as well in a way that puts gas and electricity at the centre of what you are buying.

I think that the aim of the Government policy is absolutely right. What we are going to see and need to see is increasing imagination from energy suppliers to give us those devices in the way that we want to use them. That is what we see in every other market we are in. If you look at telephony, if you look at digital television, those companies want the devices that they put in our homes to be the centre of our lives. The anomaly is that for so many years gas and electricity has not had to think in that way with the consumer at its heart. Smart will drive that and then they can give you any kind of device that is valuable for your life, it means that you value them as the person selling it to you, so long as it also lets you control your gas and electricity with the smart meter functionality, which it can.

Q106 Sir Robert Smith: The technical side of the smart meters, there is no barrier to that?

Sacha Deshmukh: No. There is not, and I know some energy companies are already thinking about it and some of those companies that you will know from other areas of retail that are considering whether to come into gas and electricity, an absolutely centre piece for them is saying, "Let us make sure that we are giving customers the kind of device to interact with us as the person who is selling them all sorts of different things and gas and electricity as part of that". So it is part of the smart meter system as well, but you will be using it pretty much as the centre of your household for everything that you want to do to control your household. That is those companies that are showing real imagination. Some of the existing players in the market are showing that level of imagination and some of the new ones as well.

Q107 Sir Robert Smith: From the DCC's point of view, if lots of people get really into interacting in that way put extra load on your data management?

Jonathan Simcock: I do not think it would. The infrastructure will carry the messages around meter usage and so on, but it is designed to do that and it has lots of capacity to do that. If there is more innovation, which I completely agree with Sacha is what is going to happen, innovation driven by consumer value within the home, that will not necessarily put any extra load on to the DCC.

Q108 Albert Owen: You are very clear in your view, but are you saying this, that some of these installations, early ones, will be made redundant very quickly because the centre of attention for most people is their mobile phone, an iPhone, these days? I am Mr Betamax and I have the early videos, and also most people have CDs and they are now redundant, they are doing everything through their iPads. Are you suggesting that the early rollouts will not have this ability or will not

offer it and that these innovative companies are going to come along? What is the incentive to go for the first rollout?

Sacha Deshmukh: That is not what I was suggesting. What is important to remember is it is very easy to think, "Oh, I want to use a phone or I want to use another device to control my gas and electricity". You can only do that if you have a smart meter fitted. There needs to be something at the end of the high pressure gas, the high voltage electricity that is a meter, that is knowing what you are buying, knowing what the pricing is and is able to communicate that to anybody.

Q109 Albert Owen: I fully understand that and I am with you up to that point, but what is going to be new in the future that is going to excite people to go to these new companies, more innovative companies?

Sacha Deshmukh: I think in the future what you are going to see is people offering the display in your home, that someone who is selling you gas and electricity is not merely going to offer the minimum functionality that the Government mandates if you are selling gas and electricity. It is going to be something that those companies, some of the existing ones have shown real imagination, but also some of the new ones who are considering entering the market, they will want it to be the absolute centre of how your household runs itself as a household, so it will be controlling devices that will be controlling your heating around the household, but also the centre of you retailing as a household, so buying your supermarket shop, buying those other things.

Some people have speculated that some of the supermarkets, the companies like Amazon and so on, are going to enter this market in a strong way, and I find it very, very hard to believe that a company like Amazon would not be offering you something like a Kindle as the device, which is connected to your smart meter, so it is your smart meter display, but it also offers you all the other things that you would expect from an Amazon Kindle. Vital that you have your smart meter, vital that you have the requirements for functionality so that if you are selling gas and electricity, we guarantee that everyone can control their gas and electricity, can use their smart meter and pay as you go or credit mode, all the other things that the functionality requires, but I think we will see the market increasingly provide over and above that as people start to compete. Smart finally means that gas and electricity is part of the bigger retail area where we expect people to compete for our business rather than one where we are used to just sticking with who we are with because we do not really know how to go out and get a better deal or get someone to compete for us as a customer.

Q110 John Robertson: In terms of Amazon, what surprises me about you mentioning them and them wanting to come into the system is that they are much more consumer-orientated than your companies. What kind of box do you offer, what are the colours that you offer for your boxes?

Jonathan Simcock: I do not think either of us are selling boxes.

Q111 John Robertson: You see, the problem when you are talking about smart meters and things like that, you have to offer the customer something that they want and they want it in the house. My wife mentioned it to me about who wants to buy a great box sitting on my desk or sitting somewhere else? You employ engineers but you do not employ designers to look at these things. It is something you should be looking at, particularly if I could say imagination is needed.

Jonathan Simcock: This is not my specialist subject, but I think what we are creating here is the environment for that consumer value driven innovation, which will not be Sacha and it will not be me and it will not be engineers in big companies. Some products will fly and catch the public's

imagination and others will not. It is creating that environment for customer-driven innovation and that is what we are trying to achieve here.

Q112 John Robertson: That reminds me of something that was said to Mr Yeo about the big difference is for the consumers who understand what they are getting, which I think it was you that said that, but I still have a problem of trying to work out what is in it for the consumer at the end of the day, because you also said they will not be worse off than they are now. That is not true, is it? They are going to be worse off, because they are going to have to pay for whatever there is that comes along, so they are paying for this innovation, the imagination and all these things you talked about. At the end of the day, the consumer will have to pay, so they do have to pay for it.

Sacha Deshmukh: There is a lot in your question, so I will try to certainly answer all of the different parts of it. First off, I think this is absolutely vital for consumers. Energy is the last great analogue industry and it does not work for consumers as a result of that. We need to have smart meters so that consumers can finally be in the same place that they are in in all the other areas of our lives that we are used to, where you are in control of what you are buying and people are able to sell you things in a way that puts the consumer at the heart of that; they are trying to offer you the best deal and they know that if they do not offer you the best deal, you will shop around and go to get another deal. In particular also, we believe that smart meters will be used by up to half the country in pay as you go mode. That is what consumers have told us that they want to do.

As well as working at Smart Energy GB, I am also the Vice-Chair of Citizens Advice, and I have seen a huge number of current prepayment customers in my time in different areas of work within Citizens Advice. The service that they are getting through the technology that they are forced to use today is terrible. It is a limitation of the technology primarily that drives that terrible experience, but one lady in Liverpool told me a story about going out to charge up her prepayment meter at night, charge up the key in a corner shop, coming back in the rain, kneeling down in the rain to put the key into her meter, she fell over and she broke her hip. The fact that is something that old technology forces people to do in 2014 I think is just disgraceful. We need smart meters to change that.

In terms of the cost question that you asked, the reality is the cost of an old-fashioned meter and a new meter, the new meter is slightly cheaper, so if you take the cost of the old-fashioned meter and all of the different systems that you need to service it over the life of a meter, you get about £22, £23 a year. The cost of a new meter and what you need to service it is a little bit less.

Q113 John Robertson: But I am not paying for my meter.

Sacha Deshmukh: I am afraid, Mr Robertson, you are paying for your meter today. I am paying for my meter, you are paying for your meter. All of the costs of those meters you are currently paying for today, it is about £22, £23. A new meter is about the same. What you have of course, you are absolutely right, when you have a programme of changing the infrastructure in the country is if you have that old meter cost and you have that new meter cost. For a period, because you are changing the infrastructure, you have an overlap between the two. That is why the Government estimate is that at its maximum, that overlap between the two adds about an extra £6 to people's bills, but that rapidly becomes a saving.

Q114 John Robertson: Just let me get this right. You are saying basically that the energy companies who supply the meters now are getting £22 to £23 a year from customers and they are not telling the customers? Is that what you are telling me?

Sacha Deshmukh: I am not sure it is a case of them not telling the customer. I think what they have to tell the customer on the bills is very heavily regulated by both Government and the regulator.

Q115 John Robertson: Nobody in all the evidence sessions we have taken has ever mentioned the cost of a meter.

Sacha Deshmukh: An existing meter?

John Robertson: Yes, nobody. You are the first person that has ever mentioned it.

Sacha Deshmukh: Right. I am not sure why that is, because it is certainly not something that I think is—

John Robertson: Believe me, we will find out, do not worry.

Sacha Deshmukh: But absolutely, today, you, me, Mr Simcock, the Chair, we are all, in our gas and electricity bills in all of our homes, paying for the existing meter system and the existing meter system costs, on average, about £23 or so a year. That is a little bit less with the new one, and that little bit less does not include the other savings that it is meant to generate as well. It just costs a little bit less to run, and then there is that period when we are fitting new meters, but old meters still exist.

Q116 John Robertson: But, let's be honest, the majority of people would not have a clue what the smart meter does. I have a feeling that in effect fitting these smart meters is a waste of time and not worth the money. The reason I say that is simply because the only people that appear to me that are winning out of this are the companies, because they get the information they want without having to supply a meter reader, they do not have to check the equipment because it is brand-new and somebody else has put it in and they will charge the customer for it anyway. I just think that to the majority of people—and somebody said it earlier to me—it is a novelty when they first get it and they look at it, and after a month or so they forget about it and they do not use it. That is the people who know to use the meters. I keep mentioning my little old lady in Leeds who will not have a clue in how these meters work, even though she will have been shown it and she will say she understands it, that is the last time she will ever look at the meter. What is in it for the customer at the end of the day? Convince me it is worthwhile doing this.

Sacha Deshmukh: I obviously would disagree with your characterisation of what is in it for the consumer. I think this is going to be enormously valuable for the consumer, because it is going to completely change the gas and electricity market. Digitisation: when you digitise—

Q117 John Robertson: But for whose benefit?

Sacha Deshmukh: For the benefit of the consumer.

Q118 John Robertson: I do not care about the big six or anybody else, I care about the customer and the consumer. Is it going to do much for them?

Sacha Deshmukh: It is going to be absolutely transformative for them and it is going to disrupt the market. You are not going to see a market where you have six or have a small number of players able to essentially hold on to their customers because it is too much of a hassle to work out what is the best deal for you or to let someone work that out for you, like a price comparison site, and it is too much of a hassle to try to come into the market and get customers from existing players. It is going to become much more like other markets that we are used to, where

technology finally breaks those old barriers between the person selling it to you and puts the customer in control. Absolutely, we have a responsibility as Smart Energy GB, and indeed everyone does, including suppliers and others and consumer groups, to work together to make sure that those consumers who are most vulnerable for whatever reason—that may be because of their language barriers, so they are less able to understand what is happening or their age and technology is harder for them to use or other barriers—to understand how to use this for their benefit.

The Committee in its last report talked about the importance of our organisation working with local community groups, charities, public sector bodies, housing associations and others. You are absolutely right to say that that is going to be incredibly important so we do not leave people behind, but I absolutely think this is vital. The prepayment customers, that is about 13% of people at the moment, are having to use technology that back in the 1950s and 1960s we would have been looking at and thinking, “I cannot believe that people are forced to use such old-fashioned technology, go down the corner shop to charge up a key just to buy the gas and electricity that supplies those homes”. Those 13% of people are still having to do the same thing in 2014.

Q119 John Robertson: The word “forced” is very apt, Mr Simcock. What do you think?

Jonathan Simcock: This is absolutely Sacha’s area of expertise and not mine. I am just a consumer, like everybody else, but I would—

John Robertson: All the more good reason for us to hear what you think.

Jonathan Simcock: I, like most consumers, find my energy bills a poor way of giving me information about how to use my energy and I think smart meters will put me in a better place.

Q120 Sir Robert Smith: There is one very baseline benefit, that there should be no excuse for not having an accurate bill, so you are being asked to pay for what you use rather than someone making it up.

Jonathan Simcock: Yes.

Sacha Deshmukh: Yes. That is an absolutely baseline benefit, but you are right, it is also baseline. Can you imagine going to a supermarket, getting to the till and they would say, “I think that looks £100, but I tell you what, in three months’ time I will send you a bill when I guess what you have bought this week, next week and the one afterwards”? The mind would boggle. Over £1,300 a year is the average household spend on dual fuel, so the fact that the mind would boggle on something much, much less if you were being given the service of inaccurate bills based on estimates, we have to change that, absolutely have to change it.

Chair: We need to speed up a bit. Peter.

Q121 Mr Lilley: I am getting more and more confused. You talk about this transforming the marketplace and you being able to shop through your smart meter. How on earth are you going to do that? Does it tell you get a better deal on E.ON if you are EDF or vice-versa?

Sacha Deshmukh: With your smart meter, when the DCC systems are enabled, you will be able to share that data with a price comparison site, so if you are entering—

Q122 Mr Lilley: Sharing the data? How do you do that?

Sacha Deshmukh: It would be very easy. You would go on the website and it would say essentially, “Can we access the data?”

Q123 Mr Lilley: Does the web communicate with this meter in my hand?

Sacha Deshmukh: It would be able to communicate through the DCC, yes.

Mr Lilley: Through the DCC?

Sacha Deshmukh: If you are like me, you may buy your car insurance through a price comparison site. I do that now, but 10 years ago, to be honest, I just went to my bank and bought it or I tried to look around in the newspaper and you sort of gave up trying to work out what was the best deal for you. Now you are able to go online, and the last time I—

Q124 Mr Lilley: Going online, say this is my smart meter in my kitchen here, can I look at it and use it to shop or do I have to go to the web? I can go to the web at the moment.

Sacha Deshmukh: I am afraid, Mr Lilley, if you went to the web at the moment, you would be trying to enter manually into the web what your energy consumption is.

Q125 Mr Lilley: So I can transmit from this to the web my actual consumption?

Sacha Deshmukh: Absolutely right, yes.

Q126 Mr Lilley: But we were told that these meters would not link up with our smartphones for some years. We have also been told that it will require an extra gizmo costing on average £120 to do it.

Sacha Deshmukh: You would not need to link your meter to your smartphone for it to do it. A lot of these services like uSwitch, moneysupermarket, comparethemarket, there are a whole range of price comparison sites that you will be familiar with. They are looking at signing up to the national infrastructure so that you can choose to share your data with them with the confidence and security—

Q127 Mr Lilley: But explain how you do it. I tap into what? I have this machine on my desk—I have already lost the machine, because I am one of the SMETS1 people, but forget about that. Supposing I had not lost it and I still have it. What would I have to tap into it to do one of these price comparisons?

Jonathan Simcock: You are not going to use your in-home display for this.

Mr Lilley: So that is completely useless?

Jonathan Simcock: You are going to decide, you are going to choose who you want to engage with, and it might be a moneysupermarket.com or comparethemarket.com and you are going to, if you choose to, give them permission to access your data.

Q128 Mr Lilley: So they go to you, go to DECC and get the data?

Jonathan Simcock: I am not DECC.

Mr Lilley: Whatever you are.

Jonathan Simcock: The Data Communication Company.

Mr Lilley: DCC, yes.

Jonathan Simcock: They would then be able to see in rich detail your total consumption.

Q129 Mr Lilley: So we do not need a meter on our desk to do that?

Jonathan Simcock: You do not need an in-home display to do that.

Mr Lilley: No, we do not need an in-home display. That is helpful to discover that.

Jonathan Simcock: But you do need an in-home display—

Q130 Mr Lilley: That was not at all obvious from the evidence so far. So we do not need it for that and it is not directly going to link with our iPhones. You are confident that people will want a separate piece of kit? I used to have an iPod for my music; I used to carry a portable Dictaphone for when I wanted to dictate things; I used to have a camera and I used to have various kinds of things. Now they are all on here. If you think I am going to want another bit of kit especially for my energy, you do not understand how people live nowadays.

Sacha Deshmukh: I am confident that it is right that people are offered one, and that is the requirement, people to be offered one. You do not have to take one.

Mr Lilley: But you have to pay for it though.

Sacha Deshmukh: The most recent 2014 Ofcom information says that 39% of people in this country do not have a smartphone, they do not have the device that you were just holding, so I do think—

Mr Lilley: But that means 61% do.

Sacha Deshmukh: Absolutely, but I do think that it is very important that in a market that has, let us face it, historically not had every energy company act in the best interests of their customers that it is right that the Government has said that they should offer their customers a display that they can use with their smart meter to be able to see what they are buying in pounds and pence, be able to plan their household data. If they do not want one because they would rather interact directly from the meter to their phone via the app of that energy company, absolutely it will be the choice of the consumer to do that and I think consumer choice is a great thing, but I would worry for those 39% of people who do not have a smartphone if there was not a requirement to at least offer them a display.

Q131 Mr Lilley: No, fair enough, I do not want to exclude, I am just saying that we should at least cater for the majority as well as the minority.

Sacha Deshmukh: Yes.

Mr Lilley: When will I be able to forgo that and do it through my iPhone?

Sacha Deshmukh: I think the kinds of things that we are talking about, shopping around and so on, are going to need—

Mr Lilley: It is to do whatever would be on that in-house display.

Sacha Deshmukh: I remember from the last evidence session that you are a SMETS1 meter-holder with E.ON, I think you said at the last evidence session, so already E.ON offer a range of

online services that you could be working with, but the system is going to be working at its best when the national infrastructure is up and running. That is the national infrastructure that Jonathan's company is delivering.

Q132 Mr Lilley: So when that happens, I will be able, on my iPhone, to see what I could see on my in-house display without paying for anything extra?

Sacha Deshmukh: It would be up to your energy supplier to offer you that, but I find it very, very difficult to imagine that any of the energy companies will not be offering you exactly what you have just described, yes.

Mr Lilley: When we had all the distribution companies, not one of them was able to answer that question.

Chair: That is why we have you and it is very helpful. Graham.

Q133 Graham Stringer: Can I just go back to what you were saying previously? How much did you say that the meters cost?

Sacha Deshmukh: So the annual cost of an old-fashioned meter is about £22 to £23.

Graham Stringer: No, the new meters, how much do they cost?

Sacha Deshmukh: The new meters are a little bit less than that, so they are about £22 or so per year.

Q134 Graham Stringer: Does that include the in-house display?

Sacha Deshmukh: It does, yes. It does.

Q135 Graham Stringer: Does it include the independent communications hub?

Sacha Deshmukh: Yes, it is the full cost of running a meter, an old-fashioned one or running a new one, about those costs, yes.

Q136 Graham Stringer: Is that the capital cost or is that an annualised cost?

Sacha Deshmukh: That is annual cost, so that cost—

Q137 Graham Stringer: What I am trying to get at is we have written evidence—I do not know if you have read the transcripts—that the meters that we are putting in are twice the cost of meters in other countries when you take into account the independent communications hub. Do you accept that?

Sacha Deshmukh: I think that you have to compare apples and apples, so lots of other countries have only decided to put smart meters in for electricity and ignored gas, even though it is the bigger thing, typically 60% or so of what most households spend. Lots of other countries have not had the same aims as we have had in this country to give consumers something that they can see what they are buying in pounds and pence, use the meter in pay as you go mode. Take a country like Italy, its only real aim was to give the energy supplier the ability to make sure someone paid their bill and get over a historic problem that people were not paying. They were aiming to do much more limited things and typically put in much more limited equipment. It is not just a case of ours being more complex or anything like that, it is aiming to deliver something that is much broader to the consumer than some of these other markets.

Q138 Graham Stringer: So we have a more complex system that is more expensive?

Sacha Deshmukh: I would say it is a much better system and it is doing more things.

Graham Stringer: Right, but it is a more complex system that is more expensive?

Sacha Deshmukh: As most better things are, yes.

Q139 Graham Stringer: Just to stay with this, you are doing a very good sales job on this. Are there enough engineers there when you have done that sales job to install these?

Sacha Deshmukh: I think this is a really important question and if you are looking at the number of installations that need to happen per day over the period once you get into the maths, we are going to need several thousand installers around the country. There is a huge skills opportunity here and I think this is one of the areas where suppliers could try to work together with a number of the different skills academies around the country and see us use this as an opportunity to train up many more thousands of engineers. This is something that could do with some really good planning, but it could be something that is both incredibly important for delivering the smart meter rollout also ends up with us having several thousand, if not tens of thousands, of new skilled individuals around the country who have a significant amount of NVQ level training as a result.

Q140 Graham Stringer: That is a very positive spin on it, but the fact is there is a chronic shortage of engineers, isn't there, and you are going to be selling this product? How do you deal with the consumer when you have convinced them this is a great product and there is no engineer there to fit it? Do you charge them more or do you just say, "You are going to have to wait"?

Sacha Deshmukh: What you are driving at is the need for energy suppliers to make sure that they do have the right number of installers, because they—

Q141 Graham Stringer: That would be the ideal situation, but the fact is there is a big shortage. What I am asking is a practical question. If that shortage continues, what is the consequence of that? Is it a higher price for a faster service or is it a big delay?

Sacha Deshmukh: Clearly my organisation exists to manage consumer engagement, so I am not in charge of planning installations or organising installations, but it is the Government's responsibility to make sure that this programme delivers. I look at this a little like saying if you, a few years back, had the Olympics people sitting here and they said to you, "We are not sure we are ready for a summer games. Maybe we will have a winter one and maybe we will have one in 2015". It just would not be acceptable, so the—

Q142 Graham Stringer: But what they said is, "This will cost £2.5 billion. Oh sorry, it will cost £9.5 billion" so there was a cost there and I am asking is there a similar cost for getting things installed quickly?

Sacha Deshmukh: I do not think there needs to be, with sufficient planning, and this is something that is incredibly important for the people who are running and managing and leading the Smart Meter Programme to make sure it is delivered. We have time at the moment to recruit and train those installers, but it is going to need strong action to make sure that that is happening. Ofgem has now said it is going to be looking more closely at individual suppliers' installation plans and the robustness of those plans and their ability to have the right number of

installers to do that is undoubtedly a key part of that. But that could become catching something after a horse has bolted.

At the moment we have the opportunity to plan for those installers, that installation capacity to be built, to train up those young people. I mentioned I come from a CAB background myself. I have seen a number of young potentially highly-skilled people in communities around the country who would be desperate to be part of programmes of training like this. Some of the Smart Meter Programmes have installers that have already begun and have started to work closely with local armed forces for those troops who are coming back from recently serving. That is great stuff, but I think it needs to happen on a more co-ordinated and larger-scale level so that we use this as an opportunity to get these 10,000 plus installers that we need and do not end up in the kind of situation that you are outlining.

Q143 Graham Stringer: Thanks. Mr Simcock, we are not going to make the 2020 target, are we? Do you think the target date should be extended or should we accept that it will not be 100%?

Jonathan Simcock: I think that the suppliers are concerned—you heard it last week from them—that if they are able to start with a mass rollout a little later, they might need a little longer to complete it. That is an important debate between them and the Government. From a DCC point of view, we need to have an infrastructure that is capable of supporting industry when it is rolling out very large numbers of meters, 250,000 meters a week. Whether it is 250,000 meters a week or 270,000 a week, because we still have to finish in 2020, is not a big difference for DCC, but clearly it does mean you need more installers and so on. So there is a debate to be had between Government and the suppliers about that.

Q144 Graham Stringer: As I understand the oral evidence we have, they were saying that part of the problem was that you were three years behind time in supplying your network. They said you should have been ready for 2013 and they were not sure you would be ready for 2016.

Jonathan Simcock: You heard a number of outlandish things from a few last week, if I may say so. I have only existed since September last year, so I cannot be three years behind my schedule. I mentioned it early on, we have been driving as fast as we possibly can until we get to the point where we can see what we have to deliver, what other technical requirements that we have to deliver. We are at that point now, so we are consulting with our stakeholders and indeed anybody who wants to help us with advice on the plan that we should have to get to go live. That consultation closes today and we will have interesting views to consider, but the three years late when DCC has only existed since September 2013—

Q145 Graham Stringer: That is very interesting, because it directly contradicts—again, it seems you have read the transcripts—the evidence we had a couple of weeks ago. Are you saying that your performance is not in any sense delaying the rollout of the Smart Meter Programme?

Jonathan Simcock: The plan when we were appointed was to have the beginning of the rollout in September 2015, the beginning of the rollout of SMETS2 meters beyond the foundation stage. We are now consulting with industry on a range of options around a new plan and none of them is that for that date, so indeed it is taking longer than we anticipated and that is because it has taken longer for the requirements to be developed, the requirements developed by the Government and enshrined in the Smart Energy Code, and it has taken longer to develop the technical specifications on which we are going to have to build. We are consulting on a number of options, as I said, and one of the key questions we want some input from industry on is about how much time contingency should we have in our programme. It is a legitimate choice and we

want some input from our stakeholders. Should we go for the absolutely fastest plan possible but with some risk that it might have to shift again or should we build in some time contingency that makes it a more resilient plan and one that the industry can plan on with more confidence? We will get some feedback on that question from the consultation that closes today.

Q146 Graham Stringer: I am not sure that answers the question I asked. Are you a barrier in the critical pathway to rolling out the Smart Meter Programme? Will your performance delay the programme in any way?

Jonathan Simcock: If we perform badly and DCC is not up and running to support the mass rollout, then the mass rollout will not be able to start. So we are charged with that accountability to deliver that infrastructure that will allow mass rollout to proceed.

Q147 Graham Stringer: Will you deliver it so that you are not a barrier or a delay?

Jonathan Simcock: I risk repeating myself. I apologise for that. We can plan on a number of bases. We can plan—

Graham Stringer: A yes or no would be helpful.

Jonathan Simcock: If we adopt a very tight plan with zero time contingency, yes, there is some chance that we will delay. This is complex major programme management. It is not easy, not very much about this programme is easy, and there are uncertainties and there are risks and some of those will become issues, so what we are engaging with our stakeholders on is would they rather have a slightly later planned go live date with a high level of resilience in the plan, unlikely to change, or would it be the right thing to continue to go as fast as possible with an earlier go live date, but at the risk that some of the risks, issues and uncertainties will mean that we have to revisit it again?

Q148 Graham Stringer: But the programme is already £90 million over budget. In the different scenarios you have giving, are you going to go even further over budget than that £90 million? How will you minimise the costs and will that have consequences for the programme?

Jonathan Simcock: Can I answer that in two parts? Some of the other rather odd things you heard last week were about costs, so DCC is 18% over budget or something. This is absolutely not the case, so three points if I may. The first is that when the Government let these procurements for the big service providers and for the DCC itself, they let the matter very substantially lower cost than they had anticipated in the business case. That is the first point.

The second point is that the contract value for something as complex as this when you let the contract, and these communication service provider contracts are 15-year contracts, that is never going to be the final word on cost. Big programmes like this have uncertainties, they have risks, they have issues. Resolving some of those brings cost. The total sum of the changes to the cost base since all of those contracts was awarded so far is about 3%, an understandable, an anticipatable and a normal kind of change in cost. The largest element of that cost increase is not for something that was part of the original contracts let. The largest element of it is we have been out and procured from BT the security infrastructure that will make sure that this infrastructure is secure, so that is not a new cost, it is not a cost escalation, it is not cost blowout. It is us going and procuring something that is required for the service.

The potential cost increases that you are referring to with our new plan, we do not know exactly what those cost increases will be yet, but there again at this sort of 3% or 4% level, just the kind of change in a cost base that you would expect in a complex programme like this. There are legitimate

things we have been discussing today about is DCC the right answer and what about SMETS1 versus SMETS2, but it is absolutely not true that this programme is out of control and the costs are mushrooming and so on. It is a bit of unhelpful disinformation.

Q149 Sir Robert Smith: We heard earlier all the upsides of what the smart meters could deliver for people. I just wanted to make sure that from the DCC's point of view, those living up rural Aberdeenshire in a granite house where the meter point is inside the building are going to see those benefits.

Jonathan Simcock: Yes, good question, if I may say so. We will at the point of starting this mass rollout have a coverage of around about 80% of the population. Over the course of that mass rollout, we will drive that up and our service providers are contracted to deliver that 98%, 99%¹. Then you have this tail, this tiny proportion of people indeed who live in very difficult positions from a communications point of view. We are obliged to continually work at whittling that down until it is zero in an annual development process that identifies what are the exempted properties and how can we, in a value for money way, eliminate them over time.

Q150 Sir Robert Smith: But 99% is a fairly early achievement?

Jonathan Simcock: That is the 2020 achievement.

Q151 Albert Owen: Just for clarity, if my constituents' dumb meter in the near future breaks down, when will they be automatically offered a smart meter?

Jonathan Simcock: The mass rollout of SMETS2 meters will start when we go live and that will be in 2016. Then the engagement with the consumer as to whether they are first or last, if you like, in a four or five-year rollout is a matter for the energy supplier, so it is a customer/supplier relationship.

Q152 Albert Owen: That is why I am asking it. If we have Scottish Power in my area and the meter breaks down in 2016, what sort of engagement will there be? Will they be told, "We are going to replace this with a dumb meter that is going to cost £23" or, "We are going to put a smart meter in that is going to cost £22" or, "You are going to have to shop around"?

Sacha Deshmukh: If I may, the timescale you are talking about is about right for when your constituent might reasonably expect that if their meter either reaches the end of its life normally or something has happened that their supplier, whoever it is, will be saying, "You can have a smart meter". They will not be talking to them about cost because we all pay for meters whatever type they are, and it is all just part of our bill, so it will just be about the equipment that they are going to get in their home and what would they like. What they will be saying to them is, "Now we are fitting smart meters. They can do an awful lot more. This is what they are all about" and hopefully that customer will have had some awareness and understanding because of the kind of work you asked Smart Energy GB to be doing as well, but their supplier would also be saying to them, "If you want to independently understand what a smart meter is about, also look at Smart Energy GB" and the consumer then would be able to take their choice, your constituent would take their choice.

But as far as your question, which I think was, "When would my constituent reasonably expect that their company will talk to them about a smart meter just because their meter has come to

¹ This sentence was later corrected to 'Over the course of that mass rollout, we will drive that up and our service providers are contracted to deliver 99.25% in central and south and 99.5% in the north region'

the end of its life?” so they have not tried to in any other way find out about it or get one. The kind of timetable that you are talking about, 2016, from then on it is really going to be the norm, just like you described.

Q153 Albert Owen: There will be a very simple menu of choice for the constituents at that point when, through no fault of their own, they have to replace their meter?

Sacha Deshmukh: Absolutely. I think the key thing in relation to the menu of choice is for us, suppliers and others to already help your constituents to understand that there was a world that they were buying gas and electricity in that was pretty much the dark ages and there is something much more modern. That is the choice, but it is still a consumer’s choice, which I think is the right thing. Good things in life do not tend to have to be compulsory, but it is my job and others to help consumers to understand that this can be a much, much different experience, not the frustrating, if not worse, experience that many people have had to have in the past buying gas and electricity, a much more modern one, just like things were when your phone exchange was digitised and other things like that.

Q154 Albert Owen: I understand all that. I am just asking a very practical question: these people, they are not planning it but something has happened to them—because you are saying it is 250,000 plus a year—are they going to be at the end of some queue or is there going to be an ability by these companies to adjust pretty quickly to get these people on to electricity or gas?

Sacha Deshmukh: Yes. I think in the scenario that you outlined, which is that customer’s old meter was at the end of its life or in some other way broke, undoubtedly whichever their supplier is, that supplier will be keen to get that person a smart meter rather than some old bit of equipment that would then have to be offered to be changed. So, undoubtedly, that example constituent of yours, in about the timetable that you outlined, 2016 onwards, their supplier would be wanting to get them a smart meter, yes.

Q155 Dan Byles: I would just like to explore time of use pricing and demand side response, which are not quite the same, but I think they are linked. The Committee heard mixed feelings about time of use tariffs and whether it should be mandatory. Ovo Energy and Skanska are very supportive of combining time of use tariffs with smart meters. British Gas, despite an apparently very successful trial in which 86% of customers on the time of use tariff said that they supported it, do not feel it should be rolled out in a mandatory way, at least at this time. What are your views on the whole time of use thing?

Sacha Deshmukh: The first key point is smart meters are vital if we ever want to have time of use, so this country can never really have any meaningful form of time of use and certainly not use that to manage the grid without a smart meter.

Q156 Dan Byles: Isn’t it also true the other way around, that in order to fully utilise the benefits of smart meters in the long run, time of use tariffs have to be available, otherwise there is a major piece of potential functionality not being used?

Sacha Deshmukh: I would say in order for the country to get the benefit of a smarter grid, absolutely, then there would need to be a policy decision to use time of use. I think the caution that some of those people were expressing last week and others have expressed—and I know coming from a consumer background myself within Citizens Advice service—is that if you are going to introduce something that is a major change to the way that people expect and understand pricing, then do not do it suddenly, make sure that you explain what is happening

and you get people to understand what is happening and you get people to be able to plan that into their lives. Some of the other countries where time of use has worked and consumers have welcomed it, they have taken that approach, and some of the countries where it has not worked as well, it was almost introduced by stealth. Then rightly, if something is introduced by stealth and surprises people, they are angry if they did not realise that they should have done something differently if they wanted to get the right kind of price at the end of it.

I think the caution that people are saying is if this is something—and it is a policy question, it is over and above the technology; the technology can enable it, but it will take a policy to introduce it—that the Government and the regulator want to see introduced in some years' time, then make sure that we as a nation are talking about it, people understand it and that those people who are most vulnerable, who are most likely to be very worried about what the cost of energy might be at any time, understand how to use this to their benefit and if there is any support that is given to them to continue to be able to do things when energy is more expensive, use those years in advance of it being introduced so that when it is introduced it is something that we are all acting and living to already. I think that is a useful caution, but I do think that if this is going to be the beginning of not just transforming the consumers' experience, but transforming the nation's ability to manage its energy supply, then undoubtedly you are going to need to see this technology used in some way to help us to manage demand, just as you say, but I think we need everyone in the country to understand that before it is introduced.

Q157 Dan Byles: So the summary of your position is, “Yes, time of use pricing, very useful, must happen at some point, but do not rush it and communicate it effectively”?

Sacha Deshmukh: Absolutely. It is something that will change the way that we are used to buying gas and electricity, so if it is coming, we need to make sure that people fully understand it. There is a lot of work on smart grids that I think shows that if the country wants to get the full benefit of managing its energy supply, you need to introduce things like this, so I think the two would need to go hand in hand.

Q158 Dan Byles: Whose responsibility would it be to communicate this to consumers in the way you have described?

Sacha Deshmukh: The decision to introduce the policy would obviously rest with the Department of Energy and Climate Change, and were it to do so, it would need to decide who should communicate it. My organisation at the moment, our responsibilities and the restrictions on those responsibilities are set out in law and it is not to talk about time of use tariffs, but if time of use tariffs were introduced and smart meters were a key for people to be able to use them, then we would certainly be explaining that as part of our remit. Whether it was decided that something over and above that was needed, I think that would be something for consumer groups and Government to consider as the policy were developed.

Q159 Dan Byles: How long do you think that kind of communication programme would take? If you were being asked for advice on, “We do want to do it. What should the timetable be” what sort of timetable would you be looking at to make sure you had time to properly explain the benefits to people?

Sacha Deshmukh: The Committee rightly, I think, in its last report talked about the need for engaging people earlier that things happen. I would say that if there was a point when there was a clear understanding of what time of use structure were being introduced, then you would want to have at least 24 months before that to be able to talk to the country about that coming, but

that is when you would need to have a really clear structure of what that was going to be. As that is being developed now possibly for introduction sometime later in this decade, then maybe they should already start thinking about what consumer engagement might be needed to support it. At the time the policy and structure is decided, I would say let us have at least two years to then help the country to understand that in detail.

Q160 Dan Byles: Do you think ultimately it should be mandatory for all suppliers to bring in time of use pricing further down the line or do you think this should be something that consumers opt into?

Sacha Deshmukh: I think that if the country is going to want the benefits of a smart grid, then it is going to want the benefits of that supply being genuinely managed at times of peak demand and that does tend to mean that it needs to be something that is co-ordinated and managed on a national level. What I do think would also be important though are the kind of supporting policy interventions that mean that if that is something that happens at a national level, it does not just become something that it is very easy for the wealthiest in society to cope with because people can carry on cooking and eating and watching TV and doing all the things they want whenever they want and other people are the only ones who have to change their lifestyles. You would need to see a co-ordinated view of that policy so that if it is something that does need to happen everywhere, there are also the right protections built in for those people who may find it could otherwise restrict the way they are able to do things that we all expect people should be able to do, which is to heat and eat at the times of day that they need to heat and eat, and not with anything else forcing them to do it at different times of the day.

Q161 Dan Byles: Do you think there would be any value, notwithstanding what you said about the 24 months required perhaps to a mandatory rollout, but in allowing early adopters to opt in ahead of that if they felt that they were suitably informed?

Sacha Deshmukh: Yes, I think there could be value and you are already seeing some of that value. Admittedly, it is on a limited scale in relation to some of the offers like the British Gas weekend offer, but in the work that we have talking to consumers, there was an incredibly high awareness of the idea of time of use and a lot of consumers talked to us and were asking, "When is it that energy is going to be priced differently so that I can plan around that?" I think the idea of it has a lot of potential consumer engagement already, but I do believe that you would need to have, as I say, a lot more support and engagement before it was introduced on a mass scale.

Q162 Dan Byles: Mr Simcock, what about the technical issues here? Is this quite straightforward to manage from your point of view, a move to time of use?

Jonathan Simcock: From a DCC point of view, indeed it is very straightforward. We are just carrying messages backwards and forwards from meters to energy companies.

Q163 Dan Byles: So there are no real implications for the data-gathering side of it, basically it is factored in already, in effect, is it?

Jonathan Simcock: Yes.

Q164 Dan Byles: Moving from that on to demand side response in general, how close is the link in question here, do you think, between time of use tariffs and demand side response? Are we going to be able to get proper demand side response using smart meters to manage it in a sensible

way at a consumer level, rather than at the sort of industrial level, without time of use pricing, at least some sort of half-hourly pricing signals or something more granular than we have at the moment? I am not sure who is best to—

Jonathan Simcock: I have a personal opinion, it is not a DCC matter particularly. My view is that the real benefits come once the customer-driven innovation drives the internet of things, the machine world of the future, so that it is not a matter of relying on millions of people remembering to go and turn something off or turn something on, but that it is a more automated thing that you can buy as a service from a service provider.

Sacha Deshmukh: I think Jonathan is absolutely right. The need for the kind of choices in our homes that you outline is absolutely key. That is going to be enormously valuably assisted by the arrival in the market of increasing smart appliances. Even if we are going to move to a world where more of us are using electric cars, we are going to need to make sure that we do not all arrive home at 7.00 pm, plug in cars all around the country and all expect them to charge at once. You can go from car to iPhone to washing machine and each one of those. Cars are perhaps the bigger drawer of electricity out of the three examples I have used, but when you are talking about millions of them, they are all a significant issue, so I think the key is going to be an increasing number of appliances able to talk to the grid via the smart meter.

Q165 Dan Byles: For that, they require more granular pricing signals, do they not? A 24-hour smart meter is not—

Jonathan Simcock: You have to have an economic incentive to make the innovation.

Sacha Deshmukh: It clearly leads to the kind of benefit that you are talking about, if the granularity of the economics are as detailed as possible, yes.

Q166 Dan Byles: Some of our witnesses at the last session were sceptical as to how much demand reduction we are likely to see by 2020 as a result of the smart meter rollout. Given the challenges of fulfilling the smart meter rollout, there has been talk possibly of not getting 100% by 2020 and possible delays. Do you think that is going to have an impact on the rollout of effective demand side response between now and 2020?

Sacha Deshmukh: I think the witnesses last week were talking about some of the different studies that have come out to show what demand reduction there is just using a smart meter without smart appliances, without really there being any time of use. Some of the latest studies are showing that particularly when there is an in-home display that you are seeing an energy reduction to 8% to 10% or so simply just through the smart meter. Others, and I think these are ones that perhaps it is more realistic to plan on a more conservative basis, are showing 5%, 6% or so and the Government's own impact assessment is based on much less than that.

Q167 Dan Byles: You are saying that is purely the smart meter stuff, so that is the consumer changing their own behaviour, demand shifting within the home, no aggregation, no smart grid?

Sacha Deshmukh: Absolutely, so there is a study by an organisation called Vaasa that showed a 6% plus reduction just using the smart meter. I think one of your witnesses last week talked about the low-carbon network study that has tried to simulate the information you have from the smart meter and simulate time of use. Obviously there is not one that it could use, but simulate it, and that was showing a reduction of up to about 10%. If your question is might we reach a certain amount of reduction with smart meters alone, but if the country needs to have more reduction both for carbon targets and just to be managing our costs of energy and also better

management of when we are generating that energy, might you need in addition to just having smart meters to have other things driving that such as time of use? I think you are then absolutely right.

Q168 Dan Byles: It seems at the moment we have a situation where if it is really windy in Scotland at a time of low energy demand, we might be spilling that low marginal cost low carbon energy at the same time as someone is running a washing machine off a coal-fired power station somewhere in the south of England. We do not have the ability for people to price into low marginal cost renewable energy and low carbon energy, or even just to price shift their use other than the very blunt tools of the Economy 7 type things. Nobody has the ability at the moment to genuinely demand shift themselves internally within the home and then when you start to aggregate it out with millions of internet-enabled consumer devices, there is this barrier between the Utopian vision of the fully connected smart grid and smart world and it seems to me that smart meters are at the heart of that. I am not saying they are the barrier, but they are—

Jonathan Simcock: No, they are the enabler.

Dan Byles: They are the enabler. The CEO of Utilita, which I am sure you saw last week, said that they thought the key to demand side management is getting the DNOs involved more in the smart meter process and about getting customers to agree to share data between suppliers and DNOs. How much of a problem is there, do you think, and is there a role for DCC in helping perhaps smooth that?

Jonathan Simcock: I do not think there is a problem there at all.

Dan Byles: Oh, really?

Jonathan Simcock: The DNOs are heavily involved in the programme, but their role is different than that of the suppliers.

Q169 Dan Byles: So you disagree with the CEO of Utilita, who said they are not fully involved today?

Jonathan Simcock: I do. As I said earlier on, we are holding and have held dozens and dozens and dozens of design forums and the DNOs are absolutely at the table.

Chair: We are running a bit behind time. That has been a very useful session. Thank you very much to both of you for coming in.

Jonathan Simcock: Thank you.

Sacha Deshmukh: Thank you.

Examination of Witnesses

Witnesses: **Baroness Verma**, Parliamentary Under-Secretary of State, DECC, **Daron Walker**, Senior Responsible Officer, Smart Meters, DECC, **Alan Over**, Deputy Programme Director, Smart Metering Implementation Programme, DECC, **Rob Church**, Partner, Retail Markets, Ofgem, and **Rachel Fletcher**, Senior Partner, Markets Division, Ofgem, gave evidence

Q170 Chair: Good morning. Thank you very much for coming in and I am sorry you have had to wait, but this is a subject of great interest and complexity. I have no doubt with your help we are

about to shed some more light on it. Can I ask you first of all, Minister, are you satisfied with the way in which the foundation phase of the smart meter rollout is progressing?

Baroness Verma: Thank you, Mr Chairman, Mr Yeo, for inviting me here. To your question, I am really pleased to see progress being made. We have around 900,000 smart meters rolled out now and it of course enables those people to benefit early on in the foundation stage from having a smart meter. We have made some progress since we last came here and you have just had Sacha from Smart Energy GB. They are set up, have built their capability and are now commenced in engagement activity. You have also heard from Jonathan Simcock around the DCC and that is now up and running too. We are in a position where I think a lot of progress has been made. Going forward, we now are getting to the part of the programme where we will see much more going forward from 2015 as suppliers take on an even more proactive role in supporting the programme. In listening to your previous two speakers, the engagement has been extraordinarily good from all parties, so to your question, Mr Chairman, yes, I am extremely pleased.

Q171 Chair: We have had some criticisms, which I am sure you are aware of, that the DCC is not really up to the job of managing such a large data-gathering project. Are you concerned about those criticisms?

Baroness Verma: No. It is right that we have an honest debate about how the programme is rolling out. It is a very complex programme, and I think the awareness that was made just listening in on the previous speakers shows the complexities of the programme, but it is right that we review the programme, listen to all the stakeholders that are involved. I think the DCC has demonstrated very clearly that it is doing exactly what is being asked of it. Much of the technical and regulatory framework underpinning the rollout is now in place and the DCC is now in consultation mode and we will await what the outcomes of that consultation are.

Daron, would you like to add anything on to that?

Daron Walker: The nature of this exercise is that getting it right is really important. The DCC has mobilised very quickly. The contracts were put in place last September. They have mobilised and we are at the point where we have a stable technical and security design on which you can then build and test these systems. The nature of this exercise is that it is clear that it is going to take a bit longer to do the building and testing of the system and they are consulting on options around how much extra time that might need, but I think the DCC has made significant progress. The CSPs are rolling out the communications infrastructure at a pace, but as this Committee itself has said that if you think you need to review the timetable to take account of new issues emerging, then we should do that. Obviously the DCC is currently consulting on that.

Q172 Chair: They have said they cannot make a fully informed judgment about the programme timescales. That is what the DCC itself has said. Doesn't that confirm the PAC's criticism there should be more transparency and the Major Projects Authority should publish its own assessment of the Smart Meter Programme?

Baroness Verma: The DCC has been charged with delivering and the criticisms that are being placed at the DCC are misplaced, because it is very much what Daron has just said. It is your Committee's recommendation that we do take time and review and make sure that we are able to ensure that going forward that we are best placed to ensure that the experiences that the end user, the consumer, will have will be a good one. And the framework, the regulatory framework that we have put in place has been incredibly clear and transparent, in my view. We have tried to ensure that the information that is required to be out there publicly is available. I think the criticisms are slightly misplaced.

Q173 Chair: Turning to Ofgem, what incentives does the DCC have to keep their costs as low as possible?

Rachel Fletcher: Perhaps I could start off on that. We obviously have a key role in regulating the costs of the DCC and indeed we have just published the first price control review of that entity a couple of weeks ago. What we do is we look backwards at the costs that they have incurred in the previous year. We provide a thorough assessment of whether those costs were incurred in an efficient and economic way and we have the power to remove cost allowances from the DCC, remove costs they may well have already spent so that they cannot pass those costs on to suppliers and hence consumers, as well as on the basis of that assessment to adjust forward estimates of the DCC's costs. We have considerable powers in that regard and this is a role that we take very seriously indeed.

Q174 Chair: Other concerns that have been expressed include the issue about smart meter access in tower blocks and multi-occupied buildings. What are your thoughts on how to solve that problem?

Baroness Verma: I think the fact that we are looking for coverage to be as close to 100% as possible is my starting point on this. We know that 80% will be covered, but our estimations of wishing to go to 99% plus is what DCC has been charged with. Given the ongoing technologies that we have coming on board, that will at some point be achieved. Our ambition is to try to reach that 99.25% and we do know there will be some properties that will be difficult to reach, but suppliers have been challenged to ensure that they try their utmost to reach all consumers so that no consumers miss out on the benefits of having a smart meter. I will stand corrected if that is not correct, Daron.

Daron Walker: No, that is absolutely right. It is worth separating the issues of the wide area network reaching the meter point, which is what the DCC is responsible for and that the service providers are contracted to, and then the issue around the home area network, which is once you get to the meter point, whether you can get to the IHD and other devices in the home. I might suggest that Alan talks about the work that we are doing on MDUs to make sure that we hit those high 90% and eventually reach 100% for home area networks.

Alan Over: Once you have the signal to the home, there are challenges in making sure that the gas meter connects to the communications hub and that the in-home display is available where the consumer wants it. The survey work that we have done to date indicates that the technology that is already available will have that functionality working in 70% of premises. We have a technology development programme that will take that to 95% by using a different frequency but essentially the same technology, and then there will need to be some specific solutions to reach the 5%. That is mostly where the multi-dwelling unit challenges occur, for example, where you have a meter room at the bottom of a basement of flats and you want to get the consumption information to each consumer in their own flat. There is a variety of commercially available technologies to solve that, such as power lines and repeaters for radio signals and we are working with industry collectively to make sure that those solutions are put in place. Our ultimate objective is to have 99.25%, 99.5% of premises connected through the wide area network and 100% of those working with the home area network that allows the communication between all of the devices within the system.

Q175 Chair: But we are already aware of a specific problem that relates to, for example, tower blocks. Mr Simcock helpfully made clear to us it is nothing to do with him or the DCC, but it

was suggested that this is an area where DECC itself needs to have a hands-on leadership role. Is that envisaged?

Alan Over: We do have a leadership role in that area. We would like the home area network solutions to be delivered by energy suppliers and industry, but the programme definitely has a role in co-ordinating that and assuring that the delivery is coming to fruition. We have working groups with industry in place to do that and we are reviewing the progress of those. If we are not satisfied with sufficient progress, we will take further action, but the progress that we are seeing at the moment is appropriate and positive. It is important to recognise that there is both a technical and a logistical aspect to this, so I have described mainly the technology approach that we are working through, but there are also efficiencies to be gained, as Jonathan Simcock mentioned, around how energy suppliers engage with consumers in the installation process in multi-dwelling units and we are pushing industry to think those through too.

Q176 Chair: Pushing industry to do what, sorry?

Alan Over: To think through ways that they can co-ordinate effectively to provide a good consumer service in multi-dwelling units.

Chair: To think them through.

Q177 Albert Owen: Can I just come in on this? I understand the technical difficulties, but two sets of people I think are at the most vulnerable when it comes to energy prices and the impact that is having on their cost of living, are people in remote areas, which will be technically difficult to get to, and some that live in tower blocks, for example. Should there be some priority given to them so they can be ahead of the game, rather than getting the easy bit done? These difficult bits need to be looked at pretty early on because, as the Chair indicated, we had a very bland and dismissive response from the first panel with regards to people who are in these flats. There might be not just technical difficulties; there might be difficulties because of the nature of the market.

Baroness Verma: Mr Owen, if I could first of all respond to that before I pass it and the technical side over to my colleagues. I have always been of the view that this must, first of all, be a programme that reaches out to those consumers that would benefit the most from having a smart meter, and that has been where my focus has always remained. Looking at the research that has been carried out it is about ensuring, first of all, that vulnerable consumers know about the metering programme. A number of the suppliers have put vulnerable customers, prepayment customers up right at the front of their rollout. So I do not think there is a lack of will to reach out. There may be some technical difficulties that they are all working extremely hard to address, but on the technical side, which I will hand over to colleagues because they will have a better—

Q178 Albert Owen: Mr Simcock said there would be difficulties because there might be a block of, say, 40 to 100 people and there will be different companies going there. It might cause delays and various things. That is the issue I am talking about. I hear what you are saying about your ambition to reach out, but we have heard that with broadband. We have heard it with many other rollout and technologies and it just does not happen, with respect, because of the markets. So what I am saying is it is up to Governments to intervene and to set some standards for these companies early on, not two or three years down the line where they are second class customers.

Baroness Verma: No, I absolutely agree with you, Mr Owen. The Government has been very clear with the suppliers. When we do have our fora—and we have many of them—we are encouraging suppliers to work much closer together, particularly in the sort of situations that you highlight

about being able to co-ordinate better so that they are able to try to reach out to customers, particularly in tower blocks where there may be different suppliers.

Q179 Albert Owen: Yes. So wouldn't it be a good idea for the Government to say from day one that we have a pilot area in a rural area that is difficult to reach and we have a pilot area in an inner city or a large town where there are tower blocks, so that we can see this working?

Baroness Verma: The work that has been undertaken across the stakeholder groups has enabled us to be able to work very closely together because each supplier will roll out—

Q180 Albert Owen: Sure. I think we both have the same aims. But the practical reality is, if you look at mobile phone coverage, if you look at broadband, that is the aim of the Government and stakeholders to 98% but it is the 2% that is the most difficult to reach. Why don't we learn from previous rollouts and just concentrate on them first?

Baroness Verma: Mr Owen, why I am much more confident about this particular rollout is because we do continuously work and actually find that our reach will be even greater than the mobile telecommunications. Just on the technicality of it I would just like to—so that we are not left in any doubt that we are not focusing on all consumers—let Alan finish up on that one.

Alan Over: You are absolutely right, Mr Owen, that we need to be focusing on making sure that everybody can get the benefits of smart metering. There will always be ultimate limits to that but we want to get right up to those. I described the technical strategy that we are pushing industry to deliver against. That is our strategy, which is to put regulatory obligations on industry to achieve the all reasonable steps rollout by 2020. That means they cannot avoid having to deal with multi-dwelling units and remote rural areas.

We have put in place a technical and regulatory framework within which they operate and if they are failing to make progress in multi-dwelling units or on the reach, then we will intervene further. So our strategy is to work with them within that regulatory framework to assure their progress and if they are not making sufficient progress to intervene further.

Q181 Albert Owen: Do you think pilot areas are a good idea?

Alan Over: It has pros and it has cons. The cons are that we are trying to facilitate active competition in the energy market and allow energy suppliers to use their own commercial strategies and to bear the consequences in a competitive market. Smart meters will help doing that.

Q182 Albert Owen: You have social obligations as well.

Alan Over: Government does indeed, yes.

Q183 Sir Robert Smith: To just clarify, clearly the multiple occupancy blocks if it was the distribution company that was providing the meter rather than the supplier at least you would have one company managing the whole block and it would be clear cut that they would have a solution for the whole block.

Daron Walker: I think that is true to say around the installation of the meter. What we are talking about here is getting the information to the in-home display and it depends who has the responsibility for delivering that and engaging with the consumer.

Q184 Sir Robert Smith: You were suggesting earlier that somehow all the different suppliers in that block would co-operate together on an area network for the block.

Daron Walker: We have not stepped back from this whole process. We are leading working groups to look at how you might tackle these issues, both the technology but also the co-ordination of action. There might be a case for a stronger co-ordination within the MDUs for the very reason that you have raised, but I am not convinced that the networks rolling out the smart meters would overcome that issue. You would still have issues of who was supplying the individual flats and how you got the information to the in-home display.

Q185 Sir Robert Smith: Does Ofgem have any worries in a competitive market if suddenly all the suppliers have to co-operate within the block?

Rachel Fletcher: We have been very clear that we expect them to co-operate in exactly those circumstances. Despite the fact that they are competitors of each other and of course are bound by competition law, when there is a very clear policy objective, which there is here in groups that are facilitated by DECC, there is absolutely no reason why they should not be putting all their energies together to make sure absolutely that people in those multi-occupancy units are not disadvantaged through the programme. When we come to assess whether suppliers have taken all reasonable steps to meet the 2020 target, it will be very much on the clear assumption and expectation that they co-operate in this way, and we have written to them to make that absolutely clear.

Q186 John Robertson: I am going to ask some questions about the rollout and the monitoring of it. We have had evidence that the complexity of the programme means that the current matrix for monitoring are not as comprehensive as they should be, and that the consequences for those who fail to meet the plans are not clear. Minister, what is your view on this?

Baroness Verma: First of all, DECC continues—and will continue in the short and medium term—to play a role in ensuring that the suppliers are delivering as they should be delivering to meet the 2020 rollout. There are, of course, going to be implementations in place to be able to review that. Each of the big suppliers will have to, I think, submit to Ofgem an implementation programme in 2016 to be able to demonstrate what they are doing to reach out to achieve those aims. Of course, we do not have the same obligations on the much smaller suppliers, given the size of those suppliers. But I think it is in the interests of all suppliers to reach out and maximise how many homes they are able to reach out to.

Q187 John Robertson: Do you not accept that the criticisms in this case have some foundation?

Baroness Verma: No, I don't. I think this is a very large programme. It is a very complex programme, and—

John Robertson: That is part of the problem, isn't it?

Baroness Verma: As I think the previous witnesses laid out, this is an enabling programme for much easier, smarter living going forward, so we want to be able to realign the control of energy usage back to the consumer.

John Robertson: We are not clear about the consequences of not meeting targets made.

Baroness Verma: Sorry, if I could say Ofgem probably would—

Q188 John Robertson: I would like to know what they would get if they don't meet it.

Rob Church: There is a clear obligation on all suppliers to take all reasonable steps to fit smart meters in all of their customers' homes by 2020, and like any obligation we can take enforcement action against those suppliers. What we are doing, as the Minister said, is requiring from next year suppliers to submit annual rollout plans. We will review those plans, including the interim targets that they have set, check that they are duly justified and there will be a plan that will enable them to meet that 2020 target. So I think it is quite clear what the obligations are. One of the other things—

John Robertson: Part of the problem with Ofgem is they take so long to do things. They talk. They have meetings. They build people together, and then three or four years down the line they actually make a decision on it. We do not really want to wait that length of time, do we?

Rob Church: You are absolutely right that it would be wrong to wait until 2020 to take steps to tell suppliers whether they are not making good enough progress with their smart meter rollout. That is why we have introduced this policy, which is to require them every year to submit an annual plan with their master so we can give them clear information about whether they are complying with their obligations.

What we have also done is we put out a letter earlier on this year, in response to suppliers' rollouts of smart and advanced meters to larger non-domestic customers, to set out some of the key lessons that they should be learning now, so that they can build those into their plans. We think it is important to help suppliers comply with their obligations sooner rather than later.

Q189 John Robertson: Yes. It would appear that in the case of DECC the reductions to energy bills is the main driver, but for the Government itself other metrics, such as reduction in energy consumption and carbon emissions are also included. Would this not mean higher bills because of less usage and, at the end of the day, what is in it for the consumer because they are not going to win anything, are they?

Baroness Verma: Mr Robertson, I think the question sort of encapsulates exactly what we are trying to deliver. That is trying to deliver less energy usage, better efficient energy usage but also reduce the cost to the consumer. That is not just DECC's ambition but the Government's ambition. Broadly most people's ambition is to see lower bills so I cannot see why—

Q190 John Robertson: What about Treasury, they want their share of the taxes, if there is less consumption they do not get as much, do they?

Baroness Verma: No. But the fact that this programme enables you to reach out and do better, smarter things with other appliances increases economic drive and innovation in newer products. So I do not see the solution as reducing tax return or higher costs. I see it becoming a more efficient way of using the taxpayers' money.

Q191 John Robertson: Yes. In answer to Mr Owen, you talked about the benefit for groups who will gain the most. Who do you consider these groups to be?

Baroness Verma: By and large, the consumers that have not been able to benefit as much from the programmes that have been rolled out in the past because of the lack of real engagement with those consumers will be those consumers now who will be able to really understand how they can best use energy within their own homes, how they can best save energy within their

own homes. When we talk about vulnerable consumers it spreads across a wide range. In my view, people that stay at home—

John Robertson: Are we talking about vulnerable customers because up until then I could not get who you were talking about?

Baroness Verma: Mr Robertson, if I could just elaborate. The vulnerable customers are also people from ethnic minority communities who have not been able to engage or understand because of language barriers, people who have small families and do not go out of their homes a lot because of having caring responsibilities. So for me the definition of “vulnerable” is much more wide-reaching than often is demonstrated.

Q192 John Robertson: Absolutely. and I totally agree with you. Do you have the data that shows that and how many people fit into these slots? Do you know who they are? Where they are?

Baroness Verma: I am sure if the work was done we would—

John Robertson: You have the data now? Because the energy companies do not have it so I wonder how you got it.

Daron Walker: If I may just answer a number of different elements there. First of all, we have done quite a bit of research, for instance with National Energy Action, to investigate whether there are specific needs of vulnerable and low income householders. They have done work around the IHD and engagement with those types of consumers and have found that they do stand to benefit and have benefited from having access to the IHD information. We have also put in place, through the installation code of practice, a whole load of requirements to make sure that the energy companies explain how the IHD works, explain and give advice around energy efficiency. Again, that is key to driving behaviour change and helping people save money on their bills.

Some of the early trials we did before the full programme started in areas of high density and fuel poverty householders were found to save similar levels of energy and bills. So 2% to 4% was found from those trials. There is quite a lot of evidence to suggest that this programme will benefit all types of consumers, and then again specific requirements around people who are visually impaired or have hearing problems or low levels of literacy. There is a requirement on suppliers to make sure their comms materials are suitable for those types of consumers.

Q193 John Robertson: See my problem is that so far everything you have said there—which is factually correct and I cannot disagree with it—is based on money and revenue and whether a person can save electricity or not. I am looking for vulnerable people to be protected. I am not interested in whether they pay their bills or whatever. I just want to make sure that somebody who is on a prepayment meter does not cut themselves off because of no money. An elderly person who thinks their bills are too high does not put on the electricity or the fires or anything like that. I want them looked after. I see these smart meters as being a way of gathering information on these people, and I want to know why we are not giving them a priority of being put in first.

Rachel Fletcher: Perhaps I can add to what Daron has said here. The first thing is that with the smart meter rollout obviously there comes a visit to every home in the country. Now that is a very important data gathering opportunity, which is why when suppliers’ representatives go into the homes the code of practice requires them to assess whether there is anybody of vulnerable

status in that household, and to make sure that that is properly placed on to the priority service register.

So the installation visit in and of itself should be a powerful tool for the industry as a whole, suppliers and network companies, in terms of making sure that everything that they do is properly targeted and supportive of people who are vulnerable.

Q194 John Robertson: Are these visits going to happen prior to the rollout of the whole country, or are you going to pick areas and do that whole area in one go and then the rest will just follow as time goes on? Because that means, of course, the vulnerable person in the last area is the last person that gets looked after.

Rachel Fletcher: Where there is a home where it is already known that there is someone who is vulnerable, the suppliers will be required to make a previsit and to ensure, for example, that that person carer is there when the installation happens.

Q195 John Robertson: This is an important point. Where did you get that data? Where did you get the information from?

Rachel Fletcher: So the information that the suppliers already have, which as I said—

John Robertson: You mean they will have all this information?

Rachel Fletcher: —it is imperfect and one of the things that we are doing alongside DECC is trying to improve overall data and sharing of data, including between local authorities and energy suppliers on vulnerability in the homes. But at the very least, on the basis of the data that is already there, those homes will get special treatment. As I said, the rollout itself should vastly improve the overall understanding of the spread of vulnerability across each area.

Q196 John Robertson: Okay. Minister, why can't your department go to DWP and get information from them to help with this rollout so that we can identify these vulnerable people?

Baroness Verma: The work that is being done across Government departments is trying to ensure that we are able to match data. So that work, Mr Robertson, is being done—

John Robertson: Well, I do not think it is.

Baroness Verma: —with DWP and with the Department of Health.

Q197 John Robertson: With the people I have talked to and interviewed in the companies, nobody has got this information. There is a reluctance, particularly between departments, to give information over and the usual excuse is, "Oh, the Data Protection Act stops us" and yet, having talked to these people they tell me that if this is put on a life-threatening basis then that data can be transferred. I want to know why we are not transferring it.

Daron Walker: There is already quite a lot of work that has been done between DECC, DWP and the energy suppliers in the context of other energy programmes. For example, for the Warm Home Discount more than 1.8 million pieces of consumer data for people on the lowest form of pension credit, so information on some of the poorest pensioners in GB, is shared. As a result they get a rebate and the energy suppliers then have more information about people with those types of vulnerability on lower income. I think there is an ambition to broaden out those data matching powers. At the moment those are the only powers that exist for low income pensioners, but there is an ambition to create the legal gateways to broaden those data matching

powers out. Obviously that is subject to Parliament allowing those primary powers to be taken through.

Q198 John Robertson: Why haven't Ofgem and DECC come back to me to say they agree with the voluntary code of practice in dealing with vulnerable customers for which all the energy companies have agreed to? Why have you not come back and answered my letters and this Committee's letters?

Daron Walker: We would have to take that away, in the sense that—

Q199 John Robertson: With the best will in world, we are already in winter. You have had them for months. Everybody thinks it is a good idea. Everybody wants to protect the vulnerable customer and yet when it comes down to it the Government, the department and the regulator are, in effect, not doing their bit. I want you to go away and look it, come back and tell me you are willing to sign on to it.

Baroness Verma: Mr Robertson, the best thing would be for us to take it away and look at the detail of it before we—

Q200 John Robertson: Okay. Well, there are a couple of other questions. 40% of smart meter customers reckon after they have had it for a length of time, a year, they don't use it. Are you doing anything to find out why they don't use them or if they have just not understood; they thought they did but they don't? Is there anything in there to try to find out what is happening?

Baroness Verma: Is that the in-home display?

John Robertson: Yes.

Baroness Verma: I have had a smart meter installed earlier this year with an in-home display, and I have been amazed at how it enables you to demonstrate to others in your family the benefits.

Q201 John Robertson: Minister, I do not doubt you. I want to know: how do we get the 40% compared to what everyone else is doing?

Baroness Verma: Part of it is it is about making people much more aware that this ongoing information will help them in the longer term.

John Robertson: So how do you do that?

Baroness Verma: I think it was what Sacha was saying earlier. It is about awareness. It is about engagement. It is about making people understand that this is delivering, in the long term, a gateway to many more smart appliances.

John Robertson: I get the feeling Mr Walker is dying to say something.

Baroness Verma: Sorry, Daron.

Daron Walker: I am not quite sure where that stat came from: the six in 10. The department has been doing some research that is due to come to fruition and be published early next year. Indeed, that stat is not far away from what we found. What the data is suggesting is that just over 60% of people are still using their IHD a year or two after that was first installed. There are also a proportion of consumers that use it to understand their usage and make changes in the home before they are no longer using it, and then there are a very small proportion of people who are

not using it at all. One of the things we are looking at is to try to understand why that is happening, and that is part of what the research is looking at.

One thing that is interesting is those that are still using it two years later, they have moved from understanding their initial usage of it and then it takes them as a gateway into making other changes in the home and looking at other types of energy efficiency. They are much more likely to then go on and do other things to improve their position—

Q202 John Robertson: So you are going to keep looking at it?

Daron Walker: Yes.

John Robertson: We will never get to 100%, I appreciate that, but we have to do something. My last question. The Government is using a supplier-led rollout. But other countries have done different things. Did we look at other countries and we eventually came with this idea that the supplier-led one was best or was it just that it seemed like a good idea at the time?

Daron Walker: We have consulted widely on different ways of rolling this programme out. I think there is a very big difference between the UK and GB market than there are for many of the other member states, mainly because metering is the responsibility of the energy suppliers whereas in other countries it is the responsibility of the networks. So already you have a starting position that is very different.

The other thing is we very much put consumers at the heart of this rollout. So we want to drive learning about energy usage; get consumers to understand how much they use, how much it is costing, and make them more informed so they can engage with the market in a much more effective way. Who has the relationship with the consumers? It is the energy suppliers, not the network companies. Most of us do not know who our network company is, so all of those things have driven us towards a supply-led rollout. They are then competing between each other to deliver better service and deliver better cost, and that is why we have a supplier-led rollout in this country.

John Robertson: Okay. I look forward to hearing from you.

Q203 Mr Lilley: We are told we are moving towards the of Internet of Things, and very soon our fridges and washing machines and central heating and so on will be able to communicate through the web with us. That has potential for considerable energy savings. Will any of that operate through our smart meters or will it operate direct to our iPhones?

Baroness Verma: The smart meter is actually the platform for it, so—

Q204 Mr Lilley: My new fridge, which is equipped to deal direct with the Internet of Things, will have to go through the hub. It will not be able to communicate direct to my smart phone?

Baroness Verma: Alan, will you talk about it?

Alan Over: Yes. There is a direct and an indirect means of communication. So the smart metering system can give out a price signal that your fridge could read automatically and decide to go on a lower setting when energy prices were high, so that would be the direct mode, and through a consumer access device you can link the smart metering information to the internet so your energy supplier could provide energy advice services through that route as well. We are making sure that the smart metering system can give a direct signal, but also that it can link to the

internet so that wider Internet of Things innovations are available as well and we are not just using one system.

Q205 Mr Lilley: Most of these things—fridges and what not—will be developed for the world market. They won't be developed for the UK. It is rather an idiosyncratic system. So we will have unnecessarily duplicated what is happening anyway.

Alan Over: We are using open standards to make sure that we do not—

Mr Lilley: Is it “Yes” or “No”?

Alan Over: No.

Mr Lilley: It is no. We will not have to duplicate it?

Alan Over: Right.

Mr Lilley: Can you explain that?

Alan Over: Yes. So we are using open protocols to make sure that we can draw on the innovation that is taking place worldwide. There are some functions that it is best to take a direct pricing signal from the meter so that you can get real time information in terms of demand side response, for example, and not to have it going back through the internet into an energy supplier's business system back through the internet into your device. There are other forms of energy consumption information where you do want that historical analysis or that combination, where it is right to use the energy supplier's business system. Either which way that information can be made available to you as a consumer, either through the in-home display or through the PC or smart appliance or your smart phone if the consumer access device is used to do that. So we are trying to have both and we do not believe it is duplicative because the meter is storing that information and transmitting it any way.

Q206 Mr Lilley: Finally, our last two witnesses were very lucid and very positive, but even so—and it is probably due to my mental inadequacy—I was unable to work out quite when and how we will be able to communicate directly via our smart phones with what is being installed under SMETS2 or whatever it is called.

Alan Over: SMETS2 sends the information to the in-home display. Through a consumer access device it could also send it to your PC or to your smart phone or to your tablet.

Q207 Mr Lilley: How much does this consumer access device cost? That is separate so we have to ask for it and pay for it, do we?

Alan Over: If you wanted one at the moment you would have to get that. They are under development. There are some trials underway but the price is £20 to £30.

Mr Lilley: We received evidence they would cost £120.

Daron Walker: The latest data is that it is going to be broadly similar cost to an IHD, so in fact even lower than £20. It will depend on how much it can do, but you can get CADs now in the market around £15.

Mr Lilley: CADs?

Daron Walker: Consumer access device, sorry.

Q208 Sir Robert Smith: How confident are you that interoperability has been sorted out and going to deliver the function that is necessary to make this work smoothly?

Baroness Verma: Sorry, Sir Robert, I did not quite hear.

Sir Robert Smith: How confident are you that a system will be in place where the meters will be interoperable?

Baroness Verma: The basis of this rollout is that all of the meters are interoperable. I think all of the suppliers have been very clearly told that any meters they put in must be interoperable. Is that right?

Daron Walker: Interoperability is at the heart of our framework and it is a core role that the DCC is going to play because once a meter has been installed in someone's home the DCC will establish a communications link with it and then, if you switch to a different supplier, all that is happening is that the data that flows through the system to the DCC will go to a new supplier. So one of the key roles that the DCC is playing is to ensure that there is interoperability on change of supplier.

The other thing that we have done is we have worked closely with experts within industry, within the technology world, to ensure that the protocols that we have established for the communications within the home are based on open standards, and based on products that are being developed and are already in the market right now to make sure again interoperability happens in the home, whether it is directly from the smart metering system to smart appliances or through a consumer access device.

Q209 Sir Robert Smith: Is there an obligation if you change supplier on the new supplier just taking over the meter or would they install their own meter?

Daron Walker: This is all pre-DCC because once the DCC is in place all the commercial incentives will be aligned to say because it is practically costless for them to switch the whole process over in terms of where the comms are going. So I think at the moment pre-DCC there is a requirement, either you operate that smart meter that you have taken over and negotiate the commercial terms with the original installer or you have to install your own smart meter. What you cannot do is replace that smart meter with a dumb meter. So those are the obligations at the moment, and again the economics are such that to go to visit a home is around £70, so there is the right commercial incentive to negotiate with the original installer to work out a way to make sure you have access to that meter and the data available.

Q210 Sir Robert Smith: It is clear from our previous witnesses that when you install a smart meter in a domestic home, you have to offer an in-home display. The person is not forced to take it but you have to offer it. Given that we discovered with the Poll Tax that people move houses far more often—a lot of people do not have a permanent home—what happens about in-home displays for people that move into a property where the previous owners refused one? Or what happens to someone who moves in and does not want one anymore?

Baroness Verma: If they move into a home where they do not have one because the previous owners did not want one, they can request to have one. If they do not want one of course they request it be removed.

Daron Walker: Indeed, if they refuse one initially they have up to a year to request one from their supplier if they change their mind about that. What is clear from the international evidence

is that IHD is a key thing—it is not the smart meter, it is the IHD and the smart meter—that drives the consumer behaviour change.

Q211 Sir Robert Smith: As we have already discussed, for a lot of people they will leapfrog the in-home display and use their smart phone, if they are lucky enough to have a smart phone.

Daron Walker: My view of that is it is still early days to know whether that is really going to drive the same level of consumer behaviour change. The things that are key are: real time data, so at that moment, as opposed to aggregated and looked at at a different time; the fact that the in-home display is an ambient thing that is there available to all householders. So you can see it. It is a bit like a clock. You can wander through and see when you are using more or less energy; and then the energy efficiency advice. That combination is absolutely key to getting 6%, 8%, 9% of savings and, because we are looking at averages across the whole of the nation, we have put 2% and 2.8% in to our impact assessment. So it is very much at the prudent end but we see scope for much higher savings for that if you get all of those factors right.

Q212 Graham Stringer: I am sorry, can I reask Robert's question. I am still not sure if we have interoperability or whether it is work in process.

Daron Walker: So the DCC will ensure we have interoperability. That is a key function of the DCC.

Graham Stringer: Is it something that exists at the present time or is it an instruction or part of a contract?

Daron Walker: At the moment there are agreements between different energy suppliers, when they take over each other's kit to find ways to make it work. But to guarantee interoperability you need the DCC and its systems in place.

Graham Stringer: To put it simply the answer is, no, you do not have it?

Daron Walker: Not full interoperability at this point, but that is exactly what we are looking to achieve through the DCC.

Rob Church: You raise a very important point there about making sure that, while consumers who are early adopters of smart meters get to enjoy the early benefits of having them, the switching process remains smooth for them. So back in 2012 we put in place obligations on suppliers that where a large supplier installed a smart meter—a SMETS1 meter—they had to offer those services to a gaining supplier to make sure that their efforts were made for the customer to be able to retain smart services, and also for the gaining supplier to have to explain to the customer whether they would or wouldn't still continue to have smart services once they have changed. So, as Daron says, the ultimate solution is the DCC. We are keen to see SMETS1 meters enrolled into the DCC but, in the interim, we have taken steps to make sure that suppliers have obligations to try to ensure that there is a seamless switch for customers with smart meters.

Q213 Graham Stringer: But it is a contractual obligation not a physical reality at the present time?

Rob Church: It is a regulatory obligation, yes.

Q214 Graham Stringer: Thanks. Can I just go back to another point that was made about the difference between our system and other countries, that ours is based on the suppliers providing the smart meters as opposed to the distributors? Why?

Daron Walker: Would you like me to rehearse the—

Graham Stringer: Yes. It would obviously make it simpler if you didn't have to develop a completely new system that does not exist at the present time, if the operators just kept the meter and provided the information to the supplier. So why are we doing it that way?

Daron Walker: Because even in the current time energy suppliers are responsible for metering. So you would have to move metering back from the competitive part of the market into the distribution networks, so already that would take years of change. More importantly, the Government has taken the view that metering in the competitive part of the market to drive innovation and competition metering services is the preferred policy. The final part is that energy suppliers are the ones that have a relationship with you as a customer, and they are more likely to want to build that relationship. They have all the right incentives to compete with other suppliers to give you improved services, and if you are not happy with the new service you can switch to another supplier. The final thing is when you are looking at the gas and electricity rollout, which is what this is, there is no single party that has access to all of the different elements anyway. So people that say, "Oh it should be the distribution networks leading it" well that would work for electricity but then you have a whole load of other parties who are responsible for gas meters if you took that view. But we strongly believe that the rollout based on suppliers will deliver best value for consumers. That is at the heart of our model.

Q215 Graham Stringer: Can I come back to the point about houses and multiple occupation blocks of flats and expecting these highly competitive suppliers to co-operate with each other when it comes to swapping meters. Apart from any emergencies after extreme weather, is there any historical evidence that these companies like co-operating with each other when they are competing with each other and there is an incentive in them not to help the other party?

Daron Walker: Fundamentally, if it ends up reducing their costs to get in and serve and work with MDUs, they will co-operate. So where they do not need to co-operate and where they are dealing with individual consumers in regular households they will be competing. In this world co-operation might lead to lower costs for all of them, so there may very well be the incentive. Of course, as Alan was saying, if it is not working and they are not delivering then we may need to intervene further with regulation.

Q216 Graham Stringer: In the telephone market, it is quite difficult often changing your numbers because one operator is losing a customer. So their incentive is not to co-operate surely?

Rachel Fletcher: Perhaps I could say at the moment, as Daron said, the meter is already owned by the supplier. We already have obviously customer churn and over a decade of a situation where on losing or gaining a customer the supplier effectively loses and gains that meter, recognising—I think it has been mentioned earlier—that the alternative, which is sending somebody out to physically remove the meter, does not make sense for anyone, least of all the customer.

So we have already an industry practice, which as you say has this slightly interesting contradiction where we have competition for consumers, but also a degree of co-operation and what we call commercial interoperability at the metering end of the supply chain.

Q217 Graham Stringer: Thank you. Whether it is 100% or 99.25% we are not going to hit the target in 2020 for that figure, are we?

Baroness Verma: I think the key to all of this, Mr Stringer, is that we are charging suppliers to make a reasonable effort to reach as many people as possible. If the ambition is to reach 99.25% then that is an ambition that they have all been charged to deliver, and it is in their interests to deliver it. I think that those that have been early starters in this programme have seen where there are difficulties and they have ironed them out much earlier on in the programme and are all very confident to reach quite a large percentage of their customer base by 2020.

Q218 Graham Stringer: I know that is the aspiration but we are not going to reach either of those figures, are we, by 2020? Will it require actual resources to get there or should the target date be extended?

Baroness Verma: As I have done with this programme, I have looked at points during the programme to see how progress is being made. I constantly ask officials within the department to review all programmes as they are coming along, but I am confident, given the work that is being carried out, that we are on the road to being able to deliver to that date, but it would be prudent of me to also caveat with that that, as responsible people in Government, we need to make sure we are reviewing the programme at all times. It is a hugely complicated programme and there may be unexpected events that may impinge on the programme, but we need to remain quite focused and that is what I intend to do.

Q219 Graham Stringer: Do you recognise the £90 million extra costs of the delay that the *Telegraph* reported? Is that a figure that you are familiar with or you accept?

Baroness Verma: We need to recognise that in the scale of the programme there may be a cost if there is a delay. I don't know the exact cost of that delay, but we do need to measure it against the backdrop of the procurement process that took place for the DCC, which came in at around about—and if I am not corrected by Daron—£370 million or £375 million less than anticipated. It is a large figure, if that is what the cost of the delay will be. We will not know when the consultation is finished what are the outcomes of that, but I do think we need to put it into the context of the size of the programme and the benefits that this programme does deliver.

Q220 Graham Stringer: The other evidence we have had from Which? suggests you should be doing more to both reduce costs and to control costs. Are you taking any extra measures? Do you still believe that this programme will be delivered for £10.9 billion or is there another estimate?

Baroness Verma: No, I think the programme is on track to deliver the net benefits.

Graham Stringer: I am talking about costs not benefits.

Baroness Verma: Costs. Mr Stringer, we have to be financially aware that this is a hugely complex programme, but we do factor in even then that the benefits will still be very welcome. We are looking at over £6 billion now. I think we will still be seeing a large benefit but we will keep a very close watch on costs.

Q221 Graham Stringer: Do you still expect it to come in for £10.9 billion?

Daron Walker: There are two things. The figure you are quoting I think is the original estimate that DCC have suggested, which is between £60 million and £90 million of additional costs. On the other side of the equation there is £1.5 billion of costs optimism bias in that £10.9 billion figure. So there is already some flexibility in the system. From our perspective obviously we care a lot about costs as do Ofgem in their role in regulating this market. What we have done traditionally is, where there have been significant changes in costs or benefits, we have updated our impact

assessment. So we will continue to do that, including with the DCC numbers when they come out the other end of the consultation. But just to remind the Committee there is £1.5 billion of flex already in that £10.9 billion.

Q222 Graham Stringer: Given that optimism within the structures, what is your latest estimate?

Daron Walker: At this point the official impact assessment is January 2014 of £10.9 billion. Until the DCC's consultation is complete I think that would be imprudent for me to suggest a different number.

Q223 Graham Stringer: It would be interesting if you did. A final question. You heard the discussion we had with the previous panel about the availability of engineers and that there is a chronic shortage. What, if anything, can you do about that, Minister?

Baroness Verma: Of?

Graham Stringer: The fact that there are not enough engineers to carry out this programme.

Baroness Verma: The National Skills Academy are doing a lot of work around ensuring that we have enough people to be able to deliver this. I think the figure is around about 7,000 people are needed, and all the suppliers are very much aware of that. I know from my own conversations with industry that there is an awful lot of work going on with their local education facilities.

Q224 Graham Stringer: Are you intervening in any way to try to improve the situation?

Baroness Verma: We have regular conversations around capabilities and capacity and, knowing that there is a need and knowing the work that is being done, I am pretty confident that we will have enough people to be able to deliver the programme.

Daron Walker: It is also worth pointing out that energy suppliers are installing meters every day of dumb type. This is a core part of their business, so it is very much upon them to make sure they meet their regulatory obligations. So having enough installers to meet their obligation is a core part of their role. We are working with the Skills Academy to make sure that there are appropriate qualifications for the installers so that enabling facility is there. But, ultimately, suppliers need to make sure they are recruiting and training enough people to do the job and that is their responsibility.

Q225 Sir Robert Smith: Very crucial in that skillset, which will be different from the current, is the communication with the householders of how to make use of what has been installed.

Daron Walker: Absolutely.

Q226 Dan Byles: I want to explore a bit about the time of use pricing. We have had some mixed evidence to the Committee about time of use pricing. Ovo Energy and Skanska, for example, are very supportive of combining time of use tariffs with smart meters. British Gas have done experiments, which were apparently very successful: 96% of their customers who were put on the time of use tariffs said they felt the tariff enabled them to make changes to reduce their consumption. Yet British Gas and some others have expressed caution in mandating the time of use pricing, at least for the time being. What is your view?

Baroness Verma: Mr Byles, the technical part of it I will let Daron and Alan deal with, I think what SMETS2 will allow is of course the ability to be able to have the time of use tariffs. I agree with you, there is much to be said about putting that control into the hands of the consumer to be

able to make their own decisions as to when to use their energy at the cheapest cost to themselves and the most convenient times for themselves. But I do think that there is consumer engagement to be done to ensure people really understand that. On the technical side of it, of course, colleagues will be able to answer you.

Q227 Dan Byles: On consumer engagement, you have mirrored exactly what Smart Energy GB said, which was that they felt—when I asked him for a timeframe he suggested maybe 24 months or thereabouts. That might be the kind of timeframe needed for a proper consumer engagement programme, so that people understand it better. Is that something that you see being factored into the rollout as we go forward?

Baroness Verma: Smart Energy GB has been charged with that engagement, but I am very much of the mind that we need to be able to ensure that consumers do have the benefit of being able to have the smart meter, SMETS2, and be the enabler for that. So I am very keen that we try to make sure that that information is rolled out as soon as possible so that people get to benefit from it as early as possible. But the technical side of it of course may provide some limitations, and I think that is why it is better for Alan or Daron to be able to demonstrate the reason for that. I cannot.

Daron Walker: This is absolutely the future, and I think it is a very exciting part of what smart meters can enable. What we have done at this stage is build in all the capability to make this possible. So there are 48 half-hourly tariffs that are built in to all types of smart meters. There is the ability to send those pricing signals to smart appliances in the home. In effect, there is nothing to stop energy suppliers making use of time of use tariffs. So the example you gave of British Gas is just one example. We expect that to happen increasingly over time. Mandating is a very big step in the sense that, where other member states or other countries have done that before consumers really understand what they are getting there was massive pushback. People were not understanding what the time of use tariffs were offering and then using energy at the wrong time and suddenly bills were very different from what they are expecting. So I think it is all part of the consumer understanding. At the moment, most of us have no clue how much we are using or spending at any one point in time, so—

Q228 Dan Byles: Do you see mandating as being inevitable at some point?

Daron Walker: We need to watch how the market develops. The business case of the smart programme itself only has a very small percentage of people using time of use tariffs, around 20%. That is what the business case is predicated on. Within that there is about £1 billion of peak load shifting benefit based in there, and also better information for the network to do more efficient planning to make sure they capture losses more effectively. Obviously with that peak load shifting, not only the consumer who is on those tariffs benefits but when you are using less peak electricity the overall costs of electricity is lower, so everyone benefits from that. But I think tread with care, we need consumers understanding their energy use; understanding how much things are costing; understanding the tariffs that are available. Other companies are coming in offering advice around tariffs. All of those things will build over time.

Q229 Dan Byles: We have heard concerns from NEA about time of use pricing with regards to vulnerable people. They basically said that they do not think it could be the best thing for people who may not have the wherewithal or the opportunity to do the kind of demand shifting that would enable the benefit, and they could end up being locked into using energy at high pricing areas. What

pricing system do you think we could bring in to help support vulnerable people with smart meters, further down the line when time of use pricing becomes the norm?

Daron Walker: I think building on what the Government already does. For instance, there is a big energy saving network that goes on with just dealing with the market at the current time. Last winter that programme helped around 90,000 vulnerable consumers to engage with the market, understand what offers and tariffs were available and I think that kind of thing might be necessary. I know SEGB are tasked with the objective of making sure that all types of consumers, particularly vulnerable and low income, can benefit from smart metering. So they will be working with trusted parties, third parties, community groups, to make sure consumers can understand these things. But we will need to continue to look at that and develop our policies over time.

Rachel Fletcher: Can I just chip in here? Daron mentioned the distributional impact of time of use tariffs. That is something of very, very key importance in this debate, and certainly something one would—

Dan Byles: The impact on the smart grid and the wider—

Rachel Fletcher: Do we want more demand side response? Absolutely. There are some very, very high estimates of what using more demand side response could save us as a country.

Dan Byles: Please tell National Grid.

Rachel Fletcher: We do actually very, very frequently I assure you. Potentially up to £3 billion a year by 2030 in terms of saving. If we can shift our system around from load following demand to demand following load, that is a huge saving and something that within Ofgem we are absolutely determined to do everything we can—

Q230 Dan Byles: Does that require proper pricing signals and half-hourly pricing signals, the ability to actually price consumers into low cost, low marginal cost, low carbon energy at the right time? We are going to have to do this, aren't we? This is not a question of whether we do it; it is a question of when and how.

Rachel Fletcher: It is not even a question of when because it is happening right now, admittedly in very, very small amounts but we are already seeing—you mentioned British Gas, but there are some small suppliers, new suppliers on the block, marketing themselves on the back of being able to provide a demand side response service for their customers. This is really exciting and is another example of why the supplier-led programme makes a lot of sense if you are really trying to harness these new products for consumers. But I think the distributional effects of a mandatory time of use approach need careful thought. We have a study underway already looking at that. We are very aware that there are some people that just do not have flexibility over when they use energy, particularly if you are at home with small children and you need to keep your home warm the whole time, for example. So there is some important distributional work that needs to be done, which will inform the big policy question that you are asking.

Q231 Dan Byles: You said you are working on that piece of work, what is the timeframe for that?

Rachel Fletcher: We can get back to you on that, but we already have a contractor on board to help us with that. We also have within Ofgem a really big piece of work for us in the smart metering space. It is not just monitoring what the suppliers are doing but thinking, "What can we do to empower consumers and to protect consumers, as smart meters become the norm?" There are lots of questions here. We already know that with a reasonably simple market we have a number of consumers that struggle to compare tariffs to compare offerings, and that will just

grow exponentially if you move to time of use tariffs. So these are all important issues that need to be thought through and we have a plan of work in place to do that.

Q232 Dan Byles: Is there going to be a fundamental tension, though, between this and retail market reform, which is trying to simplify tariffs, trying to prevent people having multiple tariffs? Are we not going the wrong way with retail market reform compared to what we are going to end up doing with smart meters?

Rachel Fletcher: The logic of retail market reform is to get consumers engaging in the market right now, so that by the time everybody has got a smart meter they are over the hump of saying, "There is no point in me engaging in this market it is too complicated. I do not trust those suppliers. There is nothing for me to gain". That is the logic.

Q233 Dan Byles: So simplify it, get people engaged and then complicate it again.

Rachel Fletcher: Already within the simplified market each supplier is allowed to have four time of use tariffs. Particularly because we want to get the early learning from smart, and we know that we have a lot of savvy consumers out there who are open to these kinds of offerings already. So we don't want to lose out but for the majority of consumers and those who are put off from engaging in the market, simplification now and, yes, we—

Q234 Dan Byles: You do not see a tension then between time of use tariffs and retail market reform tariffs implications?

Rachel Fletcher: We absolutely recognise that as a regulator we need to consider the longevity and the design of our tariff simplification rules in the context of ensuring that people can get the benefit from smart metering.

Baroness Verma: It is also, Mr Byles, to build on the fact that currently most people do not understand their tariffs and, hopefully, through the smart metering programme, the enabling of understanding what they are using and when they are using it makes them feel that they are able to be much more in control. Currently they feel they have no control and I think it is shifting that relationship, which this programme will enable them to do.

Q235 Dan Byles: Thank you. Just moving on to the demand side response side of it, which of course is linked but it is not the same, do you think that a delay in the smart meter rollout would have an impact on the Government's ambition for encouraging demand side response? How essential is the smart meter rollout to the demand side response ambition?

Baroness Verma: From the Government's perspective, we do look at demand side. Outside of the smart meter programme we are looking at demand side anyway. We are taking it very much on board that this is going to be a key part of how we go forward with energy. The programme will be the enabler for many things, but I think that the Government has taken very much on board that, rather than keep building new power stations and the like, it is also right that we look at how we reduce and waste less anyway. So I do not think there is a tension there. I think if we—

Q236 Dan Byles: But if there is a delay in the rollout of smart meters, should it be a delay—

Daron Walker: The kind of delay we are talking about is in the realm of months rather than anything more.

Baroness Verma: I think Mr Byles is confusing the 2020 with the DCC delay.

Dan Byles: I am just talking about the potential for delay. I am not pointing at any delay. I said were there to be a delay in rolling out smart meters what impact, if any, would that have on demand side response targets?

Daron Walker: My understanding of when you really need a demand side response system is when you have greater penetration of electric vehicles, heat pumps, so it is kind of a 2020s time where that will need to come to the fore. I think the smart metering programme is very much on the right track to enable that, so I do not see a tension.

Dan Byles: I understand that.

Daron Walker: Clearly, multiple years of delay would take you into that but we are not there at all.

Q237 Dan Byles: In terms of the full benefits of smart meter and demand side response, we have alluded to several times, is when you get the Internet of Things, when you get fridges, appliances and so on connected. What role is there for Government in encouraging that and promoting that or do you see that as very much the private sector end of this?

Baroness Verma: It is important that the private end of it takes it forward. I have remained very interested in the products coming on board and I am very engaged with the suppliers that are looking at those products today because I want to see how it fits in with the smart meter programme. But I think we do need to make sure that competition is a driver for best value and for Government to be the enabler and facilitator rather than do anything more, because Governments tend to get in the way of innovation.

Q238 Dan Byles: Is there a role at an EU level for trying to make sure that the rollout of smart products and so on has some compatibility across Europe and that we are not reinventing the wheel here? Where are we with that, do you know?

Daron Walker: I might get Alan to answer the question on the market side of things. In terms of other parts of DECC, DECC recently inherited the responsibility from DEFRA for products policy, so very much working to harmonise wherever possible and have product standards that work across the piece. That is part of our work and of course we have a role to try to make things based on open standards, which allows people to come in and build products on that open source. So we are working with Europe.

Q239 Dan Byles: Do you see at some point the need to mandate putting in communication chips and these sorts of things into white goods? Whether that might be at a UK level or an EU level.

Daron Walker: I am not an expert on products policy—

Dan Byles: Every time a fridge or a washing machine goes into a kitchen now, how long is that going to be there as a dumb appliance and a wasted opportunity?

Daron Walker: I think that is definitely an issue at a European level. If you would like us to take advice from people that know more about that we would be very happy to do that.

Q240 Dan Byles: It does seem that there is an opportunity cost or a wasted opportunity every time a new good gets rolled out, and I am not naturally in favour of Governments mandating things to the private sector—I am a free marketer and a Conservative—but there is obviously a role

for regulation in Government in perhaps pushing this. I would be very interested to get something—perhaps outside the Committee—on what is happening.

Baroness Verma: We would be happy to write to the Committee for it to be shared.

Q241 Dan Byles: There is a degree of chicken and egg, isn't there? There is no incentive there to do it until this is happening, but it will not happen until the products exist. Finally, because I know, Mr Chairman, time pressing, the CO of Utilita has told us that the key to demand side management is getting DNOs involved in the smart meter process, and getting customers to agree to share their data between suppliers and DNOs. The CO of Utilita seemed to think that this was not happening well, yet we heard from the previous session that—a disagreement—they thought the DNOs were very involved. I am not sure who—

Baroness Verma: I would agree with the previous speaker. I think that all the stakeholders are very closely involved, including DNOs.

Q242 Dan Byles: What about getting customers to agree to share their data between suppliers and DNOs, how challenging is that going to be?

Daron Walker: Subject to consumers consenting, the system can enable data to go where consumers want it to go.

Dan Byles: It is not a technical problem?

Daron Walker: No, it is not a technical problem. At the heart of this is consumers wanting control of their data. There is a possibility of DNOs getting aggregated data to allow them to do investment planning for their networks and that kind of thing, but I think probably there is more work to do. But consumers need to consent to these things otherwise you get different types of problems.

Dan Byles: It comes back to the consumer engagement.

Rachel Fletcher: Can I say as well, I agree there are benefits to network companies from using demand side response, and indeed, as part of our most recent price control review for the electricity distribution companies, we have taken off £800 million in anticipation of the impact that smart can have on the efficient running and investment in the distribution systems.

Q243 Dan Byles: I understand, though, that in some parts of the system the benefits do not necessarily accrue to—

Rachel Fletcher: Absolutely.

Dan Byles: I know it is straying out into smart grids, but are you familiar with the Smart Grid GB report that came out yesterday?

Rachel Fletcher: Absolutely, £2.3 billion by 2030 estimates.

Q244 Dan Byles: But the real mismatch between where the benefits lie to where the costs lie potentially represents a market failure.

Rachel Fletcher: This is something that we have been aware of for many years. We have a smart grid forum in place, which Ofgem and DECC chair jointly, specifically to address the issues of what is called the disaggregated value chain, the fact that you have suppliers at one end of the chain giving the demand side response signal to the customer, where the real benefit might be not

having to reinforce a big part of your distribution network or delaying investment in a power generation plant.

So, as a regulator and as a department we are very focused on making sure that those benefits can flow throughout. Indeed, studies suggest that the biggest benefits are not in the networks. They are from delaying investment in generation and from reducing the amount of backup generation we need to support our increasing share of wind on the system. So I think the real Holy Grail is the market-based approach, which allows appropriate incentives and everybody to make most use of demand side response, and allows the benefits to properly flow through the system. That is something that we have, as I said, a big piece of work going on through the smart grid forum.

Q245 Dan Byles: I know this Committee and the Chairman in particular have expressed some concerns as to whether National Grid have the right incentives to incentivise demand side response.

Rachel Fletcher: They do have incentives to maximise demand side response. I think there is a big learning curve, however, for everybody when it comes to demand side response. As a system operator, National Grid are used to having contracts with generators to help them.

Dan Byles: No one in National Grid has ever been fired for having too much generating capacity on the system.

Rachel Fletcher: We are moving into different times and although having tighter margins is not always particularly comfortable either, it is forcing people to think differently. For example, I would note that a gigawatt of demand side response has prequalified for the capacity market auction, which is currently being run.

Q246 Dan Byles: In another inquiry last week, we had some strong concerns from the demand side response community as to the capacity market and they felt they were being excluded by a number of unintended barriers.

Rachel Fletcher: Yes. As I said, there is a lot learning to be done here, for policymakers as well as for system operators and, indeed, for the demand side community and aggregators themselves. We still have a number of big businesses who think that the opportunities for demand side response are not worth engaging with, and who effectively think that, at whatever price, they should be able to turn on power. So we have a cultural and a mindset shift to make in the business community as well as everything else we have been talking about.

Q247 Dan Byles: Last one I promise. I have had a few people in the demand side response community express deep concern that DECC appear to consider banks of diesel generators the same as the demand side response when it comes to incentivising.

Baroness Verma: I think that is an unfair comment. We have been working quite hard—

Dan Byles: I would look closely at that, Minister, because that came following a meeting between the demand side community and Matt Hancock. They came out saying that they were really concerned that, effectively, they were told that stored-type banks of diesel generators did count as demand side response.

Baroness Verma: I will take that away. My own experience is slightly different but I will leave it at that.

Daron Walker: On a positive note, the system is built to deal with and support all sorts of demand side response, so this system will enable that. We recognise that other things need to happen alongside that.

Q248 Chair: I am encouraged by your answer, Minister, on that last point raised by Dan Byles. I think that one of our concerns is that time is not on our side in this, that adopting demand side measures on a big site requires a culture change.

Baroness Verma: Absolutely.

Chair: Not only I think in your department but across the industry. The longer that culture change takes to occur—and culture changes by their nature tend to be very slow—the danger increases that we are locking ourselves into investment decisions taken in the next couple of years to building capacity that is not needed. Therefore, vastly increasing the cost to consumers and locking the UK into a 20th century model of answering every concern about capacity by building more generators, when the technology that has only become available in the 21st century, since the culture of the CEGB, which still pervades a lot of the generating industry. That transforms the opportunity, not to compel any consumer to cut their consumption but to incentivise consumers in a way that offers far better value for money and also, of course, a massive gain in terms of emissions reductions by using new technology to step up the demand side. So I am concerned that—although I understand the answer from Ofgem, this takes time to get through and there are a lot of things to be worked through—each month that goes by there is a danger that we lock the British economy into a model of high carbon technology, which will penalise us.

Because those are capital programmes that do not just go on for 10 years. The generators we build today may be operating 30 years time, in the middle of this century, when it is quite probable that there will be a very high carbon price and those countries whose economies have not moved more rapidly to a low carbon economy will suffer an enormous competitive disadvantage. So I cannot say too strongly to you, do not let us think, “Oh gosh, we have to worry about this”, just get on and do it. Make it easier. Instead of keeping the playing field loaded in favour of more generation capacity, we should not have a level playing field, we should tilt it the other way so there is an actual kick start to using new technology which is transformative and, of course, is worrying for people who spent their lives thinking, “We must build more generators”.

Baroness Verma: Mr Chairman, I am very much in favour of looking at demand side anyway, so I take on board very much what you have said, but I would like to reassure the Committee that we are looking at demand side, and particularly for people such as myself who believes the future is very much low carbon. It is something that I do take very seriously and I will take away your comments.

Chair: Do not spend too much time looking at it. Just get on and do it.

Q249 Sir Robert Smith: One of the very early products on the demand side was Total Heating with Total Control with dynamic teleswitching, but one of the downsides is those consumers are not able to shop around and are, therefore, not part of the market. The Holy Grail is that when smart meters come back it will be solved.

Given the internal wiring of people’s housing that are on that system, will they be able to wire up to a smart meter? Will the smart meter installer have to pay the cost of that or how is it going to work?

Rob Church: You are right to identify the issue of dynamic teleswitching customers today. What we did recently was publish some research that showed that, while the prices they faced are comparable with other parts of the market, there are some barriers around whether they have as

much choice as other people and whether they understand how to get the most out of their systems. We have called on the chief executives of the suppliers to write to us to explain what they will be doing to help these customers, in line with their obligations under the standards of conduct to treat customers fairly. Also we have asked them to set out how and when they will use smart meters to help improve the ability of these customers to participate in the market. Daron might add on some of the technical suspects but my understanding is that the enduring SMETS2 solution will have auxiliary load switches in it, which will allow for heating systems to be turned on and off remotely via messages. I don't know if there are any aspects that he wants to pick up on.

Daron Walker: So it is designed into the SMETS2 system. In fact, there will be a variant in the SMETS2 meter that will allow you to have more than one loop for different heat loads. It will meet the current set up and exceed it. You might have a situation where you have electric vehicles that you might want on a separate loop, or you might have a heat pump, so all of that is built into the system. Of course we built it by talking to experts, including the DNOs, to think about potential future scenarios. So that is another capability the system will include.

Q250 Chair: When do the chief executives have to reply to you by?

Rob Church: They are coming back to us this week. We are starting to review the letters now, so we can provide more information to the Committee in the New Year if that is helpful.

Sir Robert Smith: That will be very helpful, thanks very much.

Chair: Right. Thank you very much. I am sorry we kept you so over time but it has been a very useful session for us. I am grateful to you.