

# PARLIAMENTARY DEBATES

HOUSE OF COMMONS  
OFFICIAL REPORT  
GENERAL COMMITTEES

Public Bill Committee

## SMART METERS BILL

*First Sitting*

*Tuesday 21 November 2017*

*(Morning)*

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### CONTENTS

Programme motion agreed to.  
Written evidence (Reporting to the House) motion agreed to.  
Motion to sit in private agreed to.  
Examination of witnesses.  
Adjourned till this day at Two o'clock.

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**not later than**

**Saturday 25 November 2017**

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**The Committee consisted of the following Members:**

*Chairs:* †MIKE GAPES, MRS CHERYL GILLAN

- |  |   |
|--|---|
| † Carden, Dan ( <i>Liverpool, Walton</i> ) (Lab)   | † Pawsey, Mark ( <i>Rugby</i> ) (Con)                     |
| † Debonnaire, Thangam ( <i>Bristol West</i> ) (Lab)  | Quince, Will ( <i>Colchester</i> ) (Con)                  |
| † Freer, Mike ( <i>Finchley and Golders Green</i> ) (Con)  | † Ross, Douglas ( <i>Moray</i> ) (Con)                    |
| † Gibson, Patricia ( <i>North Ayrshire and Arran</i> ) (SNP)   | † Smith, Laura ( <i>Crewe and Nantwich</i> ) (Lab)        |
| † Grant, Bill ( <i>Ayr, Carrick and Cumnock</i> ) (Con)  | † Tolhurst, Kelly ( <i>Rochester and Strood</i> ) (Con)   |
| † Harrington, Richard ( <i>Parliamentary Under-Secretary of State for Business, Energy and Industrial Strategy</i> ) | Warman, Matt ( <i>Boston and Skegness</i> ) (Con)         |
| † Kerr, Stephen ( <i>Stirling</i> ) (Con)  | † Watling, Giles ( <i>Clacton</i> ) (Con)                 |
| † Lewis, Clive ( <i>Norwich South</i> ) (Lab)  | † Western, Matt ( <i>Warwick and Leamington</i> ) (Lab)   |
| † McCabe, Steve ( <i>Birmingham, Selly Oak</i> ) (Lab)   | † Whitehead, Dr Alan ( <i>Southampton, Test</i> ) (Lab)   |
| † Morris, Grahame ( <i>Easington</i> ) (Lab)   | Jyoti Chandola, Clementine Brown, <i>Committee Clerks</i> |
|  | † <b>attended the Committee</b>                           |

**Witnesses**

Audrey Gallacher, Director of Retail Energy, Energy UK

Bill Bullen, Managing Director, Utilita

Rob Salter-Church, Partner, Consumer and Competition, Ofgem

Angus Flett, Chief Executive Officer, Smart DCC Ltd

## Public Bill Committee

Tuesday 21 November 2017

(Morning)

[MIKE GAPES *in the Chair*]

### Smart Meters Bill

9.25 am

**The Chair:** Before we begin, I have a few announcements. Will hon. Members make sure they have switched all their electronic devices to silent? I do not need to remind the Committee, as everyone is complying, that tea and coffee are not allowed during sittings. If anyone wants to take off their jacket because it is too warm, please do so. If a Member has a declaration of interest to make, they need to do that in a public sitting, not a private one.

Today we will consider the programme motion, a motion for the reporting of written evidence for publication and a motion to allow us to deliberate in private about our questions before we take oral evidence. This morning's sitting is due to conclude by 10.40. In view of the time available, I hope that we can take the procedural matters formally, without debate, if that is agreeable.

*Ordered,*

That—

(1) the Committee shall (in addition to its first meeting at 9.25 am on Tuesday 21 November) meet—

- (a) at 2.00 pm on Tuesday 21 November;
- (b) at 11.30 am and 2.00 pm on Thursday 23 November;
- (c) at 9.25 am and 2.00 pm on Tuesday 28 November;
- (d) at 11.30 am and 2.00 pm on Thursday 30 November;

(2) the Committee shall hear oral evidence in accordance with the following table:

**TABLE**

<i>Date</i>	<i>Time</i>	<i>Witness</i>
Tuesday 21 November	Until no later than 10.10 am	Energy UK; Utilita
Tuesday 21 November	Until no later than 10.40 am	Ofgem; Data Communications Company
Tuesday 21 November	Until no later than 2.45 pm	Secure Meters; Trilliant
Tuesday 21 November	Until no later than 3.15 pm	Smart Energy GB; Citizens Advice Bureau
Tuesday 21 November	Until no later than 3.45 pm	Dr Richard Fitton, University of Salford; Dr Sarah Darby, Environmental Change Institute, University of Oxford

(3) proceedings on consideration of the Bill in Committee shall be taken in the following order: Clauses 1 to 11; new Clauses; new Schedules; remaining proceedings on the Bill;

(4) the proceedings shall (so far as not previously concluded) be brought to a conclusion at 5.00 pm on Thursday 30 November.—(*Richard Harrington.*)

**The Chair:** The deadline for amendments to be considered at the Committee's first sitting for line-by-line consideration of the Bill was the rise of the House yesterday. The next deadline will be the rise of the House on Thursday, for the Committee's sitting a week today.

**Steve McCabe** (Birmingham, Selly Oak) (Lab): On a point of order, Mr Gapes. I understand what you have just said, but what happens if something comes up in the evidence-taking sitting that would lend itself to an amendment, given that the sitting is happening after the deadline?

**The Chair:** That, unfortunately, is not a matter for the Chair. Tabling deadlines are set out in Standing Orders. If the hon. Gentleman would like to make a change to the tabling deadlines, I recommend that he writes to the Procedure Committee. It may be helpful if I make it clear that if oral evidence introduces a completely novel idea on the issues in the Bill—something that we did not expect to hear—and Members could not have had the foresight to enable them to table relevant amendments, I would take that into consideration in selection and grouping.

**Steve McCabe:** Thank you, Mr Gapes.

*Resolved,*

That, subject to the discretion of the Chair, any written evidence received by the Committee shall be reported to the House for publication.—(*Richard Harrington.*)

**The Chair:** Copies of written evidence that the Committee receives will be made available in the Committee Room.

*Resolved,*

That, at this and any subsequent meeting at which oral evidence is to be heard, the Committee shall sit in private until the witnesses are admitted.—(*Richard Harrington.*)

9.29 am

*The Committee deliberated in private.*

### Examination of Witnesses

*Bill Bullen and Audrey Gallacher give evidence.*

9.33 am

**Q1 The Chair:** We now resume the public sitting and hear evidence from Energy UK and Utilita. I remind all Members that questions should be limited to matters within the scope of the Bill and that we must stick to the timings in the programme motion agreed by the Committee. For this sitting we have until 10.10 am, and then we will have our second panel of witnesses.

Welcome. Please introduce yourselves for the record.

**Audrey Gallacher:** I am Audrey Gallacher, director of energy supply at Energy UK.

**Bill Bullen:** I am Bill Bullen, CEO of Utilita.

**The Chair:** Thank you. Let us begin our questions.

**Q2 Dr Alan Whitehead** (Southampton, Test) (Lab): One of the key clauses of the Bill concerns the extension of the time within which licensing of smart meters is tenable to 2023, although it is proposed that the roll-out should be completed by the end of 2020. Do you think there is any significance in that difference of years in the arrangements for licensing?

**Audrey Gallacher:** It is important that the Business, Energy and Industrial Strategy Committee and the Government maintain sufficient routine oversight over the programme. The extension is to allow that programme to be delivered so that consumers get the benefit. We know that the scheme is due to finish in 2020. There is clearly a question about whether that will happen fully, so it is important that that oversight is retained. We would be concerned about how any future powers are used and that due process is followed, and about all the other attendant requirements around any regulated area.

**Bill Bullen:** We do not think that the 2020 deadline is realistic, and I reiterate the need for continued administrative powers post 2020. The deadline will not be met, so it is essential that those powers are continued.

**Q3 Dr Whitehead:** Why do you think that the 2020 deadline is not realistic?

**Bill Bullen:** I just do not think that the programme is anywhere near the level of completion that it needs to be. The DCC was originally intended to be up and running in 2014, at which point 2020 was perhaps a realistic timeframe. We are now nearly at the end of 2017, and the DCC is clearly not up and running at anything like full capacity. It will just not be possible to deliver the remaining 40 million-plus meters in three years. It is logistically impossible.

**Q4 The Parliamentary Under-Secretary of State for Business, Energy and Industrial Strategy (Richard Harrington):** Good morning to both of you. Would you care to comment on how you feel that smart meters are transforming the experience for prepayment customers?

**Bill Bullen:** Business is completely focused on the prepay market. We have nearly 600,000 prepay customers now, and more than 85% of those already have smart meters installed. The prepay market in total is something like 20% of the market—5 million households in the UK use prepay, and about 20% of those already have smart meters installed. There is a very simple reason for that: it completely transforms that product and service for those customers. It has huge value benefits for prepay households, which is why they have adopted the technology more quickly. Until the price cap came in, there were also significant price reductions because prepay smart meters allow people to cut their cost to serve ratio, and therefore they deliver a better price as well as a better product. It is a bit of a no-brainer, to be honest.

**Audrey Gallacher:** I echo that. We know from a lot of early research done on the Government's smart meter programme that the customer service benefits go beyond improvements and engagement in reducing consumption. The sheer customer service benefits have been massive. Right now, people have to go outside the house to top up their meter, but with a smart meter they can do that in their home. As Bill says, that has proved massively popular.

**Q5 Grahame Morris** (Easington) (Lab): Good morning. Why has there been such slippage in the programme from the original scheduled roll-out date of 2020? I read in the brief that there is 74% satisfaction among customers when it comes to the existing meters. Is it public perception? Is it lack of advertising? Why has take-up not been as good as originally anticipated?

**Audrey Gallacher:** We currently have the foundation stage for the smart meter roll-out with first generation meters. That was always the intention, as it is important that a programme of this nature and size is properly trialled and tested, so that when we move on to the mass roll-out that can be done as cost effectively and efficiently as possible, and with the best possible customer experience.

It is probably fair to say that the foundation stage has continued longer than we originally envisaged because there have been some delays around the enduring infrastructure to support the second generation meters. While that was really important, and there are already 8 million of those meters already, a lot of learnings have been taken, which means that we have a delay in the real ramp up. Until we see that ramp up, it might be difficult to understand the consumer appetite and attitude to smart meters, because we have not yet really started in earnest.

**Bill Bullen:** Obviously I have some difference of opinion about that. Certainly, in the market where we operate there has been great engagement with smart meters. In terms of the roll-out, one of the big issues has been the delays around the central systems for the second generation of meters. Personally, I think it was possibly not the best decision to go down that route in the first place. We would not be where we are, with 8 million meters already installed, if we did not have the first generation going out there.

My key concern, without wanting to rake over the coals of the past, is what is going to happen in the next two or three years. That will clearly be critical to the continued roll-out of smart meters, and particularly to delivering benefits to low-income prepayment households. That will be to do with the rules around the cut-over between SMETS 1 and SMETS 2 and whether continued roll-out of smart meters is going to be financially viable, because of the pre-pay price cap and changes to environmental levies that are going to have an impact on that going forward.

**Q6 Stephen Kerr** (Stirling) (Con): I am interested to hear about the proposition to consumers. How do you package smart meters up? What are the benefits that you talk of when you talk to consumers about smart meters? In relation to your answer to that question, why are we where we are? Why are we only 7 million in?

**Bill Bullen:** You have to realise that there is a completely different benefits case for prepayment customers versus normal credit customers. We are completely focused on prepayment.

As I have said already, the benefits to prepay customers are huge—the convenience alone is worth a considerable amount to somebody who may otherwise suffer an interruption to their power supply at a critical moment. With a smart meter, they can get the supply back on immediately; with a dumb meter, they cannot. Frankly, that is the biggest selling point right now, not least because, with the price cap at the level it is, there is no

differential in price anymore. But customers are still buying smart prepay, so our growth rate has slowed down since 1 April, but it has not stopped. Customers do still get the benefits.

**Audrey Gallacher:** For consumers more generally, there are lots of benefits around an end to estimated balances. There should be improvements in the accuracy of bills and consumers should have more control over their energy because they can see it in pounds and pence in real time, so they can reduce consumption and save money. There is more information available to facilitate easier switching, so you can change to another supplier with more confidence.

Lots of the stats that Smart Energy GB, the communications and marketing company, is providing from its research show that this is starting to bear fruit. People are much more confident that their bill is accurate—83% compared with 61% of the non-smart population. There is a lot of satisfaction with the smart process. About 80% of people like their smart meter and thought it was a good process, 75% would recommend them to friends and family, and 80% have already taken action to reduce their energy consumption. There are lots of real benefits. We have also seen a reduction in complaints and an increase in satisfaction.

But the real prize is much longer term. Smart meters are an enabler for a much smarter and more flexible future. They are going to allow us to have much more control over the networks so that we can not only reduce demand and hopefully reduce the need for ever more energy generation, but use the networks more flexibly. They are an enabler for electric vehicles and storage, and all the other things that we anticipate for the future, so it is really critical that we get this done. To Bill's point, we want to do it as effectively as possible at the least possible cost to consumers and with minimal interruption, but it is an absolutely essential component of the energy system of the future.

**Q7 Stephen Kerr:** Do you think smart meters are encouraging the market to act more competitively?

**Audrey Gallacher:** At the moment, one of the things that we are looking at for the roll-out of smart meters is that they will enable a lot more innovative products. We have seen the obvious customer service benefits for prepayment meter customers, but there are longer-term issues around what kinds of products and innovations can come out there, such as time of use, free weekend use—there are lots and lots of things. We are just starting to see the beginnings of that. It is not yet in place, but that is one of the things that smart will hopefully deliver.

**Q8 Stephen Kerr:** Has the lack of interoperability in the SMETS 1 meter been a drag?

**Audrey Gallacher:** It has probably been a bigger issue in the newspapers than for customers. That is one thing that we should bear in mind. Last month, 572,000 smart meters were put in and about 200 people contacted Citizens Advice with complaints or questions, so thankfully the customer experience and research looks a lot better than if you are just reading the news clippings.

**Bill Bullen:** I would make the case even more strongly than that: I do not think there really is an interoperability problem. The companies out there rolling out SMETS 1

generation meters have gone to great lengths to ensure that that is not a problem. We certainly exchange customers with smart meters with other suppliers all the time, and there is not a problem with interoperability. I think the issue has been massively overplayed, frankly.

**Q9 Mark Pawsey (Rugby) (Con):** May I follow that up? I have a constituent—

**The Chair:** I would be grateful if people did not jump in. I will allow you to follow it up, but in future please indicate rather than just jump in.

**Mark Pawsey:** Sorry, Mr Gapes. I wanted to follow up the point from Mr Bullen. A constituent told me that they changed supplier and had a smart meter installed. Subsequently, when they wanted to make a further change, they discovered that their smart meter had become a dumb meter. Is that a rare occurrence or a regular one?

**Bill Bullen:** Unfortunately, not all suppliers have engaged with smart meters. Some suppliers do not offer a smart prepayment product, for example. So if your constituent switches to a company that is not offering a smart product, clearly that will be an issue, but that is not to say that they could not switch supplier to someone else who is offering a smart prepay product.

**Q10 Mark Pawsey:** They went to the supplier because they thought it would be particularly competitive on price, and they were very disappointed to find that they were not able to have the benefits of their smart meter. They feel let down by the sector as a whole as a consequence.

**Bill Bullen:** First, since the price cap came in, there has been very little difference in price between suppliers. Obviously, consumers do have to check that the new supplier will offer a smart prepaid product.

**Q11 Mark Pawsey:** They reasonably assumed that the new supplier would be able to provide such a product. At no stage did it ever cross their mind to ask whether the new supplier would be able to provide them with data through their smart meter.

**Bill Bullen:** I cannot answer on behalf of all suppliers, obviously, but clearly there are suppliers out there who are engaging in SMETS 1. We have interoperability in SMETS 1 and we exchange customers all the time. I guess there will always be suppliers who do not have or have not invested in the systems for their own strategic reasons or, for whatever reason, have decided not to support a particular product. That will always be the case. I would not want to make too much of one or two examples, but generally speaking there is interoperability between people engaged in the SMETS 1 meter market.

**Q12 Mark Pawsey:** You suggest that if people who have a SMETS 1 meter are thinking about switching, they should ask the new supplier whether it can provide to them on a smart basis.

**Bill Bullen:** It would be a very sensible thing to do right now, yes.

**Audrey Gallacher:** In the short term, that would certainly be the advice, because, as Bill said, some companies do not have full interoperability. Some companies are not even rolling out any smart meters at all at the

moment, and we have got 60 suppliers out there. So, yes in the short term, but there is an enduring solution coming down the line where all the SMETS 1 meters will be enrolled into the new central smart Data and Communications Company systems. Hopefully that will happen next year.

**The Chair:** Mr Kerr, you were in the middle of a string of questions. I will give you one more and then move on to someone else.

**Q13 Stephen Kerr:** I am not clear about the whole issue of interoperability. My personal experience is that when I switched supplier, my smart meter did not continue to be very smart. Frankly, I could not see the value of using the information to make a switch and then losing the meter. Are you saying that is not the case? Should I have asked my new supplier for another meter?

**Bill Bullen:** No, I am simply saying that I cannot govern all energy suppliers. If you switched to an energy supplier that decided for its own reasons not to support a smart service—

**Stephen Kerr:** No, it does.

**Bill Bullen:** As I said, there is interoperability between SMETS 1 meters. In fact, there are only two or three types of meter out there, so actually the same headings are operating all of those meters. The interoperability problems of SMETS 1 is an issue that has been massively overplayed. Frankly, it is also giving some suppliers an easy excuse not to support a SMETS 1 product, saying that interoperability is difficult. It is not difficult. At the end of the day, you are talking about very few electronic messages that you need to exchange with a smart meter system, and it is not difficult. It really is not.

**Q14 Patricia Gibson** (North Ayrshire and Arran) (SNP): Like probably most people in this room, I can see that there are benefits to smart meters, but I wonder whether I could put to you a number of concerns that have been raised specifically with me about the roll-out. Perhaps they might explain the difficulty in penetrating the market as quickly and deeply as we would like at this stage, and indeed by 2020.

Would you like to comment on concerns, raised by trading standards, that not enough of the energy companies are making it clear to consumers that they can refuse a smart meter if they wish? There are real concerns that some energy companies may be guilty of breaching the Consumer Protection from Unfair Trading Regulations 2008.

What do you think about the idea that consumers are being sold the meters—by “sold” I am talking about the idea—as free, when we all know that in fact they are not free? The other thing is that, as far as I am aware, some of the models rely quite heavily on a wi-fi signal, which may or may not be available to all consumers. I may have got that wrong, because I am not terribly technically minded.

One of my concerns is what we do with the information when we have it. If we imagine a future where everybody has a smart meter, will that be used to charge a higher rate for electricity usage during peak times, when families cannot avoid using it? Will the need to use electricity at specific times be used to increase the price in the market?

I realise I am throwing a list at you, and I apologise for that. The idea that you pay for what you use is attractive to consumers, but the fact is that when a smart meter is installed on your property, as I know from my own experience, your direct debit bill stays exactly the same, because they spread it over the year. Yes, you are paying for what you use, but when you reduce your usage, your monthly or quarterly bill does not necessarily go down. What are your thoughts on that, given that it is sold comprehensively as, “You only pay for what you use”? You do, but not necessarily at the time when you use it. You will also know that there are concerns about the security of the data. I know that I have given you a long list, but I would be very interested to hear your thoughts.

**Audrey Gallacher:** I will run through it as quickly as possible. The questions you have raised are all legitimate ones, which are discussed on an ongoing basis through the programme. There is a lot of scrutiny and oversight of the programme, and everybody is working hard to get it right, so your questions are the right ones.

Loads of stuff has been done on security. This will not be happening over the internet, and GCHQ has been all over it. There are really strict security protocols; you will probably have experts in later today who will know more about it than I do, but if there is anything that we should be worried about in the programme, it is not security. A lot has been done there, for obvious reasons. It is a critical national infrastructure, not to mention the impact on individual consumers in their own home if something goes wrong. I would take some comfort that we have that.

The question of deemed appointments is a tricky one. This is an opt-in programme. The Government’s manifesto commitment is that customers should be offered a smart meter, but suppliers have an obligation to install them by 2020, so it is already quite a complex policy environment. Companies have to go out there and sell the benefits of smart meters and encourage consumers to take them. We are working hard to do that. We have also had some feedback from Ofgem, the regulator, that companies should be taking a much more assertive approach, because we have heard reports that they are really struggling to get people to take a day off work to stay in the house and get the smart meter installed.

We need to sell the benefits and we also have to try to encourage people. Clearly, there is a line there that should not be crossed, because it is not currently a mandatory programme. At some point in the future, we might want to think about the policy framework to ensure that we get as many meters out there as possible, and not just for the individual consumer benefits they would bring—a whole business case around the programme is predicated on as many people as possible having meters. We need to be really careful on communications: sell the benefits and encourage people to get meters, but do not cross that line. That is really important.

Thirdly, you currently pay for metering equipment. It is free at the point of installation, so there should be no charge. Let us be quite clear that nobody will be charged up front, but, like everything else in the energy system, there is an associated cost, whether it is the pipes and wires getting the gas and electricity to users or the metering equipment, right down to the customer service. The key is to make sure that it is done as efficiently as possible. It is a competitive market and it is really important that costs are kept down.

I have a lot of sympathy with the point about direct debits and budgets, but we know from research that people like to spread the cost of their energy over the year. They do not want to see big spikes on their bills—high bills in the winter when they are using loads and nothing in the summer when the gas central heating is off. Smart meters should allow customers to move to an option where they can pay monthly as they go, but for a lot of people direct debit is a budgeting tool and has been very popular.

As for the future, Bill spoke about what he is doing for prepayment meter customers. Some analysis suggests that when everybody has smart meters, up to 50% will not be paying by direct debit, but on a pay-as-you-go basis, as with mobile phones. You will probably see the market and how people engage with their energy supply and pay for it radically changing as we roll this out. That will be good, if there are innovations and benefits. Obviously, we need to make sure that people are adequately protected and know what they are doing from a trading standards perspective.

Finally, on data, a lot of protocols are in place to make sure that we are quite clear that it is customers' data coming out of the meters. People can opt out of more granular data collection. If you do not want information to be taken daily, you can opt out of that. Right now, it is taken monthly. If the supplier wants to take data from the smart meter every half hour, the customer has to provide consent. A lot of rules have been put in place to ensure that data use and privacy are at the forefront of the programme.

**Bill Bullen:** A couple of points are relevant to us. First, on customers accepting meters, until the prepay price cap came in we were typically saving customers something like £100 compared with the big six, if they switched to a prepay meter. Whether that counts as being free or not, I do not know, but they were clearly making significant financial savings from switching to smart prepay. That is one of the reasons customers do it, in addition to the other benefits.

Clearly, we are a competitive company. Customers could always refuse to take our product; if they want to stick with a dumb meter, they are entitled to. Something like 80% of the prepay market still has not switched to smart, but 20% has, so more and more are doing so.

Audrey has already answered the point about direct debits. People are going to switch more to pay-as-you-go and be totally in control of the balance. We think that is going to be much more important going forward. Basically, people can take total control over their budget.

**Q15 Steve McCabe:** I have three quick questions. If I have this right, the programme is behind schedule, the cost is escalating and the Minister now wants to increase the timescale and take extra powers. What needs to be done to ensure that this thing stays on track and within cost and does not become an albatross for the consumer?

**Bill Bullen:** That is difficult. We are already a long way down the track of delays and cost escalations. Consumers already pay a significant chunk of their bill towards the Government's smart meter programme.

**Q16 Steve McCabe:** Do you know how much?

**Bill Bullen:** It is going to go up to, I think, £13 per customer from 1 April. That is something like £8 higher than it was a year ago. Once you multiply that by 27 million households, it is a lot of money.

The Government have spent something like more than £1 billion—I think £1.3 billion—on the Data and Communications Company. To put that in perspective, I think the competitive suppliers providing similar services for SMETS 1 generation meters have not spent 10% of that money. They are already out there working, and have been since 2013, so I think there are some real issues.

Clearly, consumers have already seen massive delays and are being stopped from getting the benefits of smart meters because of the Government programme. One of my key concerns, as I said earlier on, is how we will be able to carry on in business over the next couple of years, because of some of the intricate rules about what type of meters we can install when.

We desperately need a lot more flexibility to carry on rolling out smart prepayment meters without any kind of significant hiatus. It is not in the consumer's interest to have a hiatus, and it is certainly not in the interest of the economy generally to have potentially a lot of qualified meter installers, vans, and warehouses, but no ability to install meters. That is a big problem.

Those problems are with us right now and we have to solve them very soon, because the sheer logistics of managing supply chains—not only ours, but the supply chain to the meter manufacturer, all the component purchases and so on, which stretch out a year in advance—mean that we are already right up against the buffers of maintaining a smooth roll-out programme, given that the SMETS 1 end date is currently stated to be in July next year. That is a really big issue. We are heading at the moment for a massive hiatus in the roll-out of smart meters.

**Audrey Gallacher:** It would be a huge mistake to underestimate the size of the challenge here with the smart meter roll-out. It is a massive logistical infrastructure programme—53 million meters—so it will be tough. As Bill said, we have already seen some issues around delays and costs overrunning. There is an impact assessment out there—a business case that says there is a net benefit to customers of nearly £6 billion. It is critical that we protect that business case, regardless of how difficult it becomes.

It may well be that the Department for Business, Energy and Industrial Strategy should look at a re-run of that against what we are seeing currently—a new impact assessment to ensure that the benefits case is still alive. There is also a lot of engagement with the Government and energy suppliers on the programme, because we are all working on it together to get it done. You could argue, though, that we might want to see a wee bit more of that. Is there more that we could do to understand what constitutes best practice, within competition rules obviously, and make sure that everybody is doing it as best they possibly can?

**Q17 Steve McCabe:** Are you suggesting a new cost-benefit analysis?

**Audrey Gallacher:** I am suggesting a re-run of what we have done. One analysis was done in 2014; the most recent one is from 2016. Going into next year, it is important that we understand that that benefits case remains intact. Also, we are here today to discuss whether we have to change the regulatory framework to make sure that those benefits are delivered, around the nature

of the programme being opt-in versus opt-out, the cost control over the DCC, and the transparency across the control on those costs. There are many things that we need to keep under tight scrutiny.

**Bill Bullen:** I do not think it is really feasible to re-run the cost-benefit analysis simply because of time. Everybody understands a lot more about smart meters now—the logistics, the costs and the benefits. I think that businesses are in a much better place to just get on and do the job, rather than have another round of consultations wondering what we are going to do. That would soak up most of the next 12 months if we were not careful—a critical time for delivering this benefit to consumers. I differ with Audrey on that point.

**Q18 Steve McCabe:** Thanks. May I ask about the interoperability issue again? If I understood correctly, Mr Bullen was saying that part of the problem was that some suppliers choose not to help people who switch have a functional smart meter. Is one of the other problems the role of the smart meter asset providers who, if I understood correctly, are a bit like the energy businesses' equivalent of a football manager? They are the middle people who provide the meters. It might not be in the interest of energy suppliers that get their meters from one asset provider to switch when a customer switches supplier. Is that how it works?

**Bill Bullen:** I would not agree with that.

**Q19 Steve McCabe:** Is that because you have an interest, Mr Bullen?

**Bill Bullen:** No. There is a set of commercial arrangements around rolling out smart meters. As I say, different suppliers have chosen to engage or not in that. All I can say is that we have built business from scratch that has now got—

**Q20 Steve McCabe:** Tell me what a smart meter asset provider is. What is the function and role?

**Bill Bullen:** They are merely providing a funding arrangement to provide the capital, so that suppliers can get meters installed without absorbing that massive hit on their cash flow, or having to charge customers for it. Nobody wants to charge the customer for it, so the meter asset provider will simply provide that capital and then rent that meter to whoever the supplier is over the course of that meter's life.

**Steve McCabe:** A middle man.

**The Chair:** We are short of time. I am going to take Bill Grant and then we are unlikely to have further time. This will probably be the last question.

**Q21 Bill Grant (Ayr, Carrick and Cumnock) (Con):** I have two brief questions. I sense that, despite the efforts, the public may not be fully aware of the roll-out of smart meters and the advantage available. If that assessment is correct, what more can be done?

Secondly, with the accent on rural areas throughout the UK, I take it that the installers and those who provide the meters are in constant contact with those who provide broadband, wi-fi or the signal to make the system work.

**Audrey Gallacher:** On the point about consumer awareness, the industry funds an independent communications and marketing campaign—Smart Energy GB—who I think are coming along later today to speak

to you. I do not want to steal their thunder. They will give you all sorts of information on what they are doing to ensure that consumers are aware of the smart meter programme and, more importantly, are interested and ready to take one.

My organisation, Energy UK, provides the secretariat, the governance around the performance management framework of that company, so we ensure that we set it sufficiently stretching targets so that it goes out and generates the interest. Over the past year we have done a lot of work with it to try to tighten up those targets to ensure that that messaging is aligned with what we need in terms of customers being ready to accept smart meters.

I think there is probably a role for everybody to play. I would argue that I would like to see more of the Minister promoting the smart meter programme. I think it is movement in this kind of mass roll-out stage, if we can get the Government and the regulator and everybody behind it to really sell the benefits of this. Because smart meters are a great thing for customers and for the future of the energy system.

Your other point was about the system. People coming later today will have much more information about this than I do. The Data Communications Company runs the contracts for the service providers who provide the communication around the smart meter infrastructure, so there are three areas. I think—you can put me right—that those are cellular in the central and south, and a mesh type of communication arrangement in the north of Scotland. There will be challenges getting full penetration there to get the wide area network, which is what the communications hub is called. So there is a lot of work going on to ensure that we do that.

**Bill Bullen:** I repeat what I said earlier. We are certainly not seeing any problem with engagement of consumers. Consumers are taking up this product. We are getting probably 5,000-plus sets of meters installed every week ourselves. So, we are definitely not seeing any push-back from consumers.

In terms of the technology and some of the difficulties that there will be, mobile phone networks are not 100%, unfortunately. I do again call for a bit of flexibility in terms of the actual technology that supply businesses are allowed to use, because there may just be local spots, whether rural or urban areas, where you simply cannot get a decent enough signal. There will be problems but, at the moment, I really do not think we have enough flexibility in the programme to address every particular case. It is going to be a problem.

**Bill Grant:** Thank you very much.

**The Chair:** We have about 20 seconds. Is there a last quick question? No, okay. In that case, we will now move to our next panel. Thank you to our witnesses for giving us evidence this morning.

#### Examination of Witnesses

*Angus Flett and Rob Salter-Church gave evidence.*

10.10 am

**The Chair:** We now hear oral evidence from Ofgem and the Data Communications Company. We have until 10.40 am for this session. Could the witnesses please introduce yourselves for the record?

**Rob Salter-Church:** Good morning. My name is Rob Salter-Church. I am a partner in the consumers and competition division at Ofgem, and I have responsibility for our work on smart metering.

**Angus Flett:** Good morning. My name is Angus Flett. I am the CEO of DCC.

**Q22 Richard Harrington:** Thanks to both of you for coming this morning. May I ask Ofgem, in particular, what you are doing to ensure energy suppliers deliver their obligations?

**Rob Salter-Church:** I might first explain the role of Ofgem and the Government in the roll-out, because that sets out the context for answering that question. To be clear, the roll-out of smart metering is Government policy. The Government have powers, and one of the parts of the Bill we are considering today is to extend their power to put in place the licence arrangements around smart metering. Ofgem's role is to oversee suppliers and DCC compliance with the policy framework that the Government have put in place.

We are hugely supportive of smart metering, and we think it has real potential to improve consumers' outcomes. Through regular engagement with suppliers, we are overseeing their compliance with their licence obligations. We do that through regular bilateral engagements, gathering significant information from suppliers and working in partnership with Citizens Advice and the energy ombudsman to gather information about consumers' experience of smart metering.

We use the data we gather to hold suppliers to account, challenge them and make sure they are doing what they are required to do in terms of installing smart metering—adhering to their roll-out plans and, perhaps more importantly, delivering a good-quality installation, providing energy-efficiency advice to consumers when they do that and making sure consumers are aware of how they can realise the benefits of smart metering.

We have a range of tools in our toolkit that we can use to secure supplier compliance. Ultimately, if we feel that a supplier is not doing what they need to do to stick to the rules and make the programme a success, we can take enforcement action against them—a process that enables us to levy a fine against that organisation if it is failing to meet what is required of them.

**Q23 Steve McCabe:** I notice that it says in your written evidence that you see a significant benefit for consumers, and you have repeated that. How will the benefit be realised? What are the practicalities? How will it be realised for the most vulnerable customers—the elderly and the most disadvantaged? How will we see that, and what kind of timescale are we talking about?

**Rob Salter-Church:** There is a whole range of benefits that consumers—including vulnerable consumers and those on prepayment meters—can get. One of the key ways in which consumers can benefit from smart meters is through being in control and having access to real-time information about their energy usage and what it is costing them. Many people, including vulnerable people, are often worried about getting an unexpected bill—having a bill shock that they are unable to meet—and falling into debt. One of the great things about smart meters is that they give real-time information so people are in control and can manage their energy usage to prevent those kinds of issues from arising.

Another benefit that will accrue to all people, but may well have particular relevance for more vulnerable customers, is the end to estimated billing. They will know exactly what they are being billed and will be able to make sure they are not being over-billed by their supplier.

The last thing I will say is about prepayment meters. Smart metering has the potential to absolutely transform the realities of energy for prepayment customers. People will no longer have to go out in the rain to go down to the shop to put credit on their meter; they will be able to very simply and easily top up the meter when they need to. The functionality also enables suppliers to help customers manage their energy usage. For example, rather than running out of credit overnight, the smart meter technology allows the supplier to offer services to customers that enable them to have a small amount of energy to ensure that the heating and lights are still on in the morning. Those kind of quality of service benefits are huge, and they should accrue to customers through the point at which they get a meter installed.

**Q24 Steve McCabe:** Am I right in thinking that you are responsible for enforcing the code of practice?

**Rob Salter-Church:** Are you referring to the smart meter installation code of practice?

**Steve McCabe:** Yes.

**Rob Salter-Church:** That is correct. Suppliers have a licence obligation to have that code of practice.

**Q25 Steve McCabe:** So how is it that people can receive a cold call telling them that it is a legal obligation to have a smart meter?

**Rob Salter-Church:** It is very troubling when we hear things like that, because, as the Committee knows, that is not the case. We are clear to suppliers that they need to try very hard to explain the benefits of smart meters. I struggle to see why someone would not want a smart meter, given the benefits that they offer to consumers. Suppliers do need to be clear that if a customer does not want one, they do not have to have one.

**Q26 Steve McCabe:** But it is wrong for anyone to phone up and say, “You are legally obliged to have one.” That person is clearly breaching the code of practice.

**Rob Salter-Church:** That is right. We gather data on a regular basis on suppliers' compliance with the code of practice. If we saw a systematic problem, then we would take action against a supplier.

**Q27 Patricia Gibson:** I want to probe this a little further; I raised it with the previous witness and I would be interested in your thoughts, given that you are in charge of the code of practice. Trading standards have raised concerns that there are potential offences being committed under the misleading actions provision of the Consumer Protection from Unfair Trading Regulations Act 2008. They have said that these infractions may be being committed because some energy suppliers are giving the impression that smart meter installation is compulsory. What are your thoughts on that? Have you had any contact or dialogue with trading standards on their very serious concerns?

**Rob Salter-Church:** The first thing I would do is to reiterate what I said earlier: we expect suppliers to be very clear that there is no compulsion on consumers to have a smart meter. We are driving suppliers to be as clear as they can on what the benefits are, so that customers want to have a smart meter.

In answer to your point about trading standards, we engage with a range of organisations, including Citizen's Advice, and we do from time to time talk to trading standards to gather information about where there are potential licence breaches. We would take action. I do not believe that I have had a discussion with trading standards, but I can check whether there has been one between the organisations and write in, if that is helpful.

**Q28 Patricia Gibson:** I think, like you, that there are lots of benefits to smart meter installation. Can you, in your position, understand that people are naturally suspicious? Some consumers are aware that they do not in fact have to have smart meters, despite having been told that they must have them. Others, however, have been told that they need to have them, and they accept that at face value. Some consumers are concerned about what this collective energy information is going to be used for. Is it going to be used to hike prices up at certain times of the day of peak usage? Some people are concerned about the security of the data.

We can all appreciate that there are benefits to smart meters, but can you understand those real concerns of consumers? In addition, there is the fact that the idea of a smart meter has been sold as something free, when it is clearly not.

**Rob Salter-Church:** Absolutely. I understand that certain consumers would have concerns. What the Government have done in designing a regulatory framework—and what we do in enforcing that regulatory framework—is very important in making sure that the protections are in place and that suppliers adhere to them in order to protect consumers. You referred to data access and security: there is a framework in place, referred to earlier by Audrey, around protections for consumers to make sure that if they do not want to give their data to suppliers, they do not have to. Those rules are important, to give consumers confidence in having a smart meter to make sure that they are in control.

**Q29 Patricia Gibson:** Do you think that consumers are aware that they can protect their data in the way that you suggest?

**Rob Salter-Church:** Yes, I believe they are. Suppliers have clear obligations. What the smart metering installation code of practice does is require those to be explained. There is a quarterly survey that suppliers have to undertake to check compliance with the smart metering installation code of practice. That gathers data to check whether suppliers are indeed being clear to their customers in explaining what options they have got around giving access to data. I believe that that is happening in practice.

**Q30 Grahame Morris:** Just quickly, given that time is short—Rob, your opening remarks were really helpful about the terms of reference as the regulator. However, we are being asked, here, to extend the powers of the Secretary of State. Are any of the powers that we are proposing to change through the Bill related to smart

meters, and if so, which ones? Angus, the Bill proposes that costs should be recouped from customers in the event of an administration, rather than from the insolvent company. What is your view on that?

**Rob Salter-Church:** The powers are solely around smart metering. They are an extension of the Government's existing powers in relation to smart metering and, then, the special administration regime for the DCC.

**Q31 Grahame Morris:** Can they be used for any other purpose?

**Rob Salter-Church:** No. We are wholly supportive of the Government taking these powers to ensure an orderly conclusion to the programme.

**Angus Flett:** The financial governance I have makes it highly unlikely that the special administration will be required. The way I am structured is that I invoice my customers and they are required, under licence conditions, to pay me within five days. I also have the facility to take a month's worth of my invoicing as a credit balance, so I carry cash.

The way I invoice my suppliers is between 20 and 30 days. I also have a £5 million keep well deed from a shareholder and a guaranteed bond of £10 million that I can draw down on. The special administration is set up so that, in the highly unlikely event that we became insolvent, it could administrate and keep the lights on until another organisation could be found to take us over. The costs of that administration can be recovered back on my customer base. So it is a sensible measure, although highly unlikely to be required.

**Q32 Douglas Ross (Moray) (Con):** Our earlier witnesses were speaking about the ways to the roll out and, ultimately, not being able to meet original timeframes. In the report earlier this year, you were looking at roll out and some potential problems with it. The number of installers was highlighted as an issue. Is that still an issue? If we as a Committee agree to a number of things about extending the timescale, will there still be a problem with there not physically being enough people able to do the job?

**Rob Salter-Church:** The 2020 target for completing the roll-out as set by Government was always going to be a challenge, and it remains a challenge, as was said earlier. One of the things Ofgem has done is put in place a framework where we require suppliers to submit to us a plan for the roll-out, setting themselves annual targets that we can enforce against if they do not meet those targets.

We scrutinise the plans that we see from suppliers; if they say, "We will install x number of meters per year", we do not just take it for granted that that is going to happen. We require them to show us what that will mean for the installer capacity that you might need. What does that mean in terms of the contracts that you are going to have to sign to buy meters, and so on? We scrutinise that to give confidence that the suppliers have got arrangements in place to make their plans deliverable.

The information you are referring to that we publish is our conclusions, having looked across the piece at some of the biggest risks to the programme, which suppliers must remain focused, laser-like, on managing. Indeed, getting hold of enough installers is one of those issues.

Suppliers' plans for 2017 are broadly on track for meeting their installation targets at the end of this year. A couple of suppliers are slightly behind, but not significantly so. What that tells me is that, yes, there is a real challenge to get to '20, but suppliers are pretty much on track with the plans that they have set themselves for how they will meet their obligations.

**Q33 Douglas Ross:** So the 2016 problems that you reported in June are no longer an issue. Somehow we have been able to attract people to become installers. How has that been done?

**Rob Salter-Church:** I would describe them as risks that need to be managed as opposed to problems. On the specifics of installers, some of the tactics of suppliers are to think about their recruitment pipelines, and the Government are involved in work with the relevant national skills academy to ensure that training programmes are in place to develop more installers. The reason why we highlighted that as a risk is that we are expecting suppliers to take more and more action to keep managing it. It will be an ongoing risk throughout the whole programme.

**Q34 Douglas Ross:** When you spoke about the frameworks that these suppliers entered into and the targets that you can judge them against, how are the targets set for the installations in more remote and rural areas? Clearly, in terms of a numbers game, you can do far more installations in an urban area than you can in constituencies like mine in the north of Scotland. Such constituencies and the more remote and rural areas actually have the biggest potential to benefit from smart meters, yet we seem to be at the very tail end of the installation process because we are harder to reach and you can do far less in the same amount of time. What are you doing to ensure that the more remote and rural areas do not fall further behind the urban areas?

**Rob Salter-Church:** There are challenges to installing smart meters both in rural areas and in urban areas—equal but different sets of challenges that the suppliers may face. It is not necessarily a given that suppliers would automatically choose to prioritise urban areas for installations ahead of more rural areas.

**Q35 Douglas Ross:** Are you saying that is wrong? It is a complaint that is coming from rural communities. They can see that in the bigger communities—the bigger towns and cities—there does not seem to be a problem getting an appointment to install a smart meter, yet in the more rural areas there is. But you are saying that that is wrong.

**Rob Salter-Church:** I am not saying it is wrong; I am saying that it is not necessarily the case that rural areas will always be delayed because they are more difficult and challenging. There will be a range of challenges that suppliers encounter. The way that the Government have designed the roll-out policy is supplier-driven or supplier-led, and if certain constraints were imposed on suppliers to install smart meters in certain populations ahead of others, that might add cost and complexity and, overall, become a worse deal for GB consumers.

One of the things that we are doing to ensure that rural communities are not left behind is in relation to DCC's communication networks. DCC is already required

to deliver a network that will cover 99.75% of the GB population. It is also required to look continually at how it can extend the reach of its network to get ever closer to 100%, to minimise the chances that anyone is left behind. DCC periodically has to report to us on the progress it is making to ensure that its network is as comprehensive as possible. I would like to think that over time, as technology develops and costs come down, there will be more and more efficient ways for DCC to extend its network to ensure that all consumers can have the benefits of smart metering.

**Q36 Douglas Ross:** The 99.75% is a great ambition, but is it still the case that the more remote and rural areas will be at the end of the programme, when the suppliers must get to the 99.75%, because—I am told—it is more difficult to install the meters there than in those areas that will experience the benefits earlier on?

**Rob Salter-Church:** That might be a question for Angus, in terms of the roll-out and build-out of the network, and where and when it will be reaching different communities in the country.

**Angus Flett:** We use two technologies, north and south. In the south it is a cellular technology, and that is an established network. In the north it is a radio technology, which gives a higher percentage coverage, particularly for the geographical aspects of Scotland and some aspects of rural areas. You are correct in that the high percentage coverage does not get rolled out until the last part of the programme. However, we have been working with our customers to see if we could speed that up for particular geographic areas. We are also working with Alt HAN, an alternative organisation set up by the Government, to look at that last 1% or 2% and the technologies we could deploy to resolve that. One of the technologies we use is called meshing, which effectively picks up the signal from one house where it is strong and allows that to repeat. So we are reasonably comfortable and confident that we can deliver the coverage footage.

**Q37 Matt Western (Warwick and Leamington) (Lab):** I have some quick questions. I am concerned about what I heard in the previous session about the transparency to consumers. I sense that there is no consistency—perhaps you can correct me—between the different suppliers, in terms of information provided to the consumer about the programme, what the customer's responsibilities are and what the provider's responsibilities are, such as frequently asked questions and that sort of thing. Can you confirm the situation?

**Rob Salter-Church:** Suppliers have clear obligations in terms of what they have to explain to their customers. It really, really matters to us that customers get clear information about smart metering—indeed about everything—from their suppliers. It is important that they treat their customers fairly.

In relation to smart metering, suppliers work with the Smart Energy GB organisation to produce common materials and FAQs to make sure that there is clear information for consumers. That information is produced and the suppliers are working to pass that out to individual consumers. There would be potential unintended consequences if either Ofgem or the Government decided that we knew exactly how to speak to customers

individually—every single one—and set out very prescriptive rules that suppliers had to follow to the letter. We place clear obligations on suppliers on what they explain to customers. They have clear licence obligations to ensure that they always treat their customers fairly. Suppliers have a programme of work going on, working through Smart Energy GB on common FAQs and information that can be shared with consumers, and they have to do that in a clear way that really engages customers and makes them understand the benefits of smart metering.

**Q38 Matt Western:** Have you withdrawn the licence from anyone so far on the basis of malpractice?

**Rob Salter-Church:** We have a range of tools if we see problems with licence compliance, including ultimately running an enforcement action and imposing fines. We have not had to use our enforcement powers in relation to smart metering as yet.

**Q39 Laura Smith (Crewe and Nantwich) (Lab):** Matt just asked my question, but I will add to it. I could possibly be the only person in this room who has had to survive on a pay-as-you-go meter, and I have also lived through then being targeted with high tariffs by energy companies—they come to the estate and sell those things, knowing that they are going to make money out of the poorest in society. I struggle with the transparency of this. Data protection and customers' privacy, in terms of information about how they are using their energy, is a real concern for me. I just do not personally buy the argument that it is all for the consumer, when there is money to be made out of people. So that is an issue.

The roll-out is also an issue. We have touched on the fact that it is obviously delayed. Is it going to happen or is it another initiative that is going to cost an awful lot of money? Who is going to end up paying for that? Will it ultimately be the consumer once again? Those are my two main points, before I get on my high horse.

**Rob Salter-Church:** You talked about having a traditional prepayment meter and some of the poor quality of service that results from that. One of the most important things that the smart meter roll-out will do is end the prepayment disadvantage, in terms of both cost and quality of service. That is absolutely key and there are real benefits for consumers.

You talked a little bit about privacy. There are very clear rules in place for suppliers; they must obtain customers' consent if they want to have any data from them.

**Q40 Laura Smith:** How easy and transparent is it? We sometimes say that we are making things easy, but how accessible is the information that is given to customers and how is it being rolled out?

**Rob Salter-Church:** That is a good challenge. We gather regular information by engaging with Citizens Advice, which is a good source of information if people are raising concerns or complaints about their smart metering installation. As I mentioned before, we also gather information from the smart metering installation code of practice survey. We gather information from a wide range of sources. If we thought there was a systematic problem and suppliers were not being clear to customers about information consent, we would absolutely do something about it and use all the powers that we have

to crack down on those suppliers and make sure that consumers are protected. I hope I can reassure you that we have both the practical arrangements in place to get the data and the will to do something if we see that there is a real problem.

**Q41 Dr Whitehead:** Mr Flett, we heard from previous witnesses that there may well be a hiatus in the roll-out and that vans may go out empty, with no meters. A number of people have suggested that that hiatus may be due to the fact that the DCC did not go live until the very edge of the penalty period in which it was supposed to be fully functional. Even when it went live, it was not fully live; there were a number of workarounds in the report that went out about it going live. What is your view of those severe delays, and what would you say about the DCC's state of liveness—if that word exists—in terms of the challenges that SMETS 2 will bring us in the near future, particularly with end-to-end testing?

**Angus Flett:** I can reassure the Committee that DCC is fully operational and ready to scale. If we look at the facts, DCC was born in 2013. Our first release was due in December 2015 and was actually delivered in October 2016—the following year. The latest release, which was due in November, we delivered bang on track. There are subsequent releases to unlock functionality such as prepaid and so on.

We run regular “ready to scale” forums with our suppliers and customers. The forecasts that are coming through from my main customers indicate that I will be doing well over 200,000 installs a week next year, and that number is growing. In fact, one of my main customers issued a press release saying that it was the first to go live with the installation of SMETS 2. We are also putting in place incremental measures to ensure that, as we cut over from SMETS 1 to SMETS 2, we carry a buffer stock of communications hubs so that my customers can ramp down their old stock and ramp up the new stock. We are confident that we can deliver against the scaling requirements.

**Q42 Dr Whitehead:** One of the issues that has been discussed recently is that getting proper end-to-end testing of SMETS 2 meters—that is, testing of real meters on real walls—over a period of time, which is necessary to ensure the integrity of those meters, has been severely compromised by those delays in going live. After all, a live DCC is the sine qua non of testing SMETS 2 meters. Do you consider that you have been a particular problem in that respect, or do you think the people who are concerned about end-to-end testing of SMETS 2 meters protest too much?

**Angus Flett:** Testing is essential. This is a UK national infrastructure project and we will not go live without full integrated testing. We use a range of emulators to simulate testing. As I said, the evidence I have from the main customers that are driving installations is that we are on track. The volumetric forecasts that they are delivering to me indicate well over 200,000 installs a week. I do not have concerns in that sense.

**Q43 Dr Whitehead:** How many SMETS 2 meters have actually been installed so far?

**Angus Flett:** There are just over 250 out there at the moment.

**Q44 Dr Whitehead:** Two hundred and fifty?

**Angus Flett:** Two hundred and fifty installs.

**Q45 Dr Whitehead:** That is a bit of a shocking number, is it not?

**Angus Flett:** At this stage it is an acceptable number, as each of my main customers gears up its volumetric installs. As I said, if the forecasts that come through—

**The Chair:** Order. I am afraid that that brings us to the end of the time allotted for the Committee to ask questions. I thank the witnesses on behalf of the Committee for their evidence.

10.40 am

*The Chair adjourned the Committee without Question put (Standing Order No. 88).*

*Adjourned till this day at Two o'clock.*