



Energy and Climate Change Committee

Oral evidence: [Network costs](#), HC 386 Tuesday 1 July 2014

Ordered by the House of Commons to be published on 1 July 2014.

Written evidence from witnesses:

- [British Gas](#)
- [Citizens Advice Bureau](#)
- [UK Power Networks](#)
- [First Utility](#)
- [Haven Power](#)
- [Renewable Energy Systems Limited \(RES\)](#)

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

Questions 1-123

Witnesses: **Andy Manning**, Head of Network Regulation, British Gas, **Richard Hall**, Consumer Futures Business Unit, Citizens Advice Bureau, **Basil Scarsella**, CEO, UK Power Networks; **Jonathan Smith**, Head of Trading & Pricing, First Utility, **Peter Bennell**, CEO, Haven Power, **Patrick Smart**, UK & Ireland Grid Manager, RES, gave evidence.

Examination of Witnesses

Witnesses: **Andy Manning**, Head of Network Regulation, British Gas, **Richard Hall**, Consumer Futures Business Unit, Citizens Advice Bureau, and **Basil Scarsella**, CEO, UK Power Networks, gave evidence.

Q1 Chair: Good morning and welcome. Thank you very much for coming in. I think we know who you are—in fact, we have seen at least one of you before; welcome back—so we

will crack straight on. Could I start with a general question? What do you think the main drivers are of network costs?

Basil Scarsella: Good morning all, and thank you for the invitation. We respect the fact that, as a monopoly, we should be scrutinised; so we welcome the invitation.

What makes up network costs? If we take, for example, an average domestic consumer in the UK network area, they pay about £87 per year and the costs are made up of a number of things. There are the normal operating costs, which are day-to-day expenses that we incur. There is also a return on the investment of the assets that are already in the ground and we have £5.5 billion invested, which gets depreciated and therefore that gets recovered. We earn a return on the capital invested, which is generally referred to as the weighted average cost of capital, and also there is contribution to pension costs. When you look at the split of the costs of what makes up the £87, as we set out in our submission, the operating costs is about £15 per annum; the capital returns on the £5.5 billion is about £30 per annum; pension costs is about £4; the cost of capital, the interest and the return on the assets, is about £16; pass through costs, which are largely transmission costs that are paid to us and we pass on, is £22; and the total cost is £87. That is one of the lowest costs for an individual consumer in the UK and we are very pleased with that, but that is basically a quick summary of what makes up typical domestic consumer distribution costs.

Andy Manning: Just to build on that, the key question to be taken from what Basil said is the question of whether that is value for money for consumers. As Basil said, we talk about return on investment made. The key area that we would like to look at, and hopefully the inquiry would like to look at, is whether those returns are providing good value for customers. What we see is particularly the networks are making higher returns than were allowed for when Ofgem set their allowances.

Richard Hall: I would concur with that point and perhaps try to build on it. Because these are monopoly utilities, effectively what we look to the regulator to do is to set a level of return that they can make that is sufficiently reasonable to encourage the necessary investment in the networks but that does not over-remunerate the networks for behaviour that is not exceptional. If you look at the equivalent investments or the alternatives that would be available to an investor, the long-run real rate of return on the UK stock market tends to be in the 5% to 6% bracket. The average annualised real rate of return on UK equities in the last 50 years is 6%—if you go back to the start of the last century it is 5.3%—somewhere around that bracket. You would then want to probably take a look at the characteristics of monopoly utilities and how they might differ from the average return that an investor can see from the equities market.

I would suggest there are a number of areas where a monopoly network is lower risk than your average basket of stocks. The first is clearly the fact that it is a monopoly; it is not at risk of predation of its market. Secondly, there are statutory safeguards that give some protection against bankruptcy for these networks. Here specifically I am thinking about the statutory duties on Ofgem through the Gas and Electricity Acts that require it to make sure that networks are able to finance their duties. Thirdly, there is a range of uncertainty mechanisms contained within the price control processes, and indeed mid-review points, which again allow for some of the uncertainty to be stripped out. Fourthly, because of the nature of the regulated settlement and because of the nature of the commodity, these are relatively inelastic returns. They tend to be fairly immune to economic boom and bust

cycles. For these four reasons, regulated networks are probably lower risk than your average stock and if risk and return are normally linked, or if you seek to link those, that might suggest that you would expect to see a discount against average returns available on alternative investments, so perhaps some kind of discount against about 6%.

In addition to the base return allowed for networks, there is a range of incentives and penalties in place for good or bad performance that can, in principle, materially increase or decrease the returns from that midpoint. As Andy alluded to, generally speaking the networks tend to outperform those midpoints. If you give me 30 seconds, I am about to disappear into statistics but if you can give me some leeway for that for a moment. If you look at the recent performance of the networks across the different segments, starting off with the transmission networks, for the last price control, the one that ran from April 2007 to March 2013, a baseline return on a regulated equity of 7% was set. All four transmission networks outperformed that baseline. The worst performing saw a 7.4% return, the best performing saw a 10.1% return, and the average return was 9.15%. If you then move on to the gas distribution networks, a baseline return on regulated equity of 7.25% was set. Again, every single network outperformed that baseline. The worst performing saw an 8.19% return; the best performing saw an 11.18% return.

Moving on to the electricity distribution networks, we are midway through a price control, referred to as DPCR5. We do not know the full details of returns across that period because it is at the midpoint, but for the only year that has thus far been reported on by Ofgem, which is April 2010 to March 2011, a baseline return of 6.7% was set. All 14 networks outperformed that baseline, with the worst performing seeing a 6.74% return and the best performing seeing a 14.64% return. Effectively, you are seeing everyone outperform.

Q2 Chair: What you described is that we have consumers being ripped off because we have a feeble regulator and a lot of greedy monopolies.

Andy Manning: I don't think that is quite what we are trying to say. We think the general framework of the regulation is correct to provide incentives for efficiency. It is the calibration that has gone slightly awry. The best performing networks should be able to receive higher returns. It is just we are seeing that all networks are able to enjoy those high returns.

Q3 Chair: The worst performing network is doing better than the regulator assumed?

Andy Manning: That is what the figures show.

Q4 Chair: That seems to me to put the regulator seriously at fault. We can call it calibration or we can call it feebleness.

Basil Scarsella: Can I comment on that? I do not disagree with too much that has been said by my colleagues on my right, but I think we need to put the regulatory regime in perspective as to how you measure the success or otherwise of a regulatory regime. We have been regulated post-privatisation now for close on 25 years. There are a number of ways we will measure the success or otherwise of a regulatory regime. The first is: have the costs to consumers decreased? In the last 25 years, distribution costs to consumers have decreased by something like 50% in real terms, so they are half the cost that they were 25 years ago. The reliability of the network, how often we, as domestic consumers, can expect to be cut off, has improved significantly. The length of any sort of outages has also reduced significantly. The level of service that we provide has improved significantly. Any customer that comes in contact with the network are surveyed by Ofgem weekly and the average score coming back is 84%—8.4 out of 10—of the customers are saying they are very happy with the service. Finally and importantly, in the case of UK Power Networks—and indeed for the other networks but I am here to talk about UK Power Networks—we invest approximately £600 million per year.

When you take all of that into account—the customers have benefited through a reduction in price, improved service, improved reliability and the investment has continued to take place—it tells me that the regulatory regime is fit for purpose. I have experience in other parts of the world, on the regulatory regime in Australia and I have reviewed the US and the European regulatory regimes, and it is important to point out that those other jurisdictions are following the UK regulatory regime. On balance, we should always be striving to improve but the regulatory regime has served the UK very well in the last 25 years.

Q5 Chair: I should think there are companies queuing up to have a regime. It is a mouth-watering prospect when the bottom quartile of performers gets rewarded for above average performance. In any kind of remotely competitive market, that could not happen. However, I am not blaming you for that. You have put the case for the defence very well, as I had a feeling you probably might.

I think one of the issues here is that, as you say, these are monopolies and the system of charging is quite complex. Therefore outsiders probably find it rather difficult to grapple with some of the detail, and indeed the Committee is learning quite a lot about this. Do you think that the current connection, use of system and balancing charges components are fair or do you think they should be altered?

Basil Scarsella: I am happy to have a go at that. If I understand the question, when I read some of the evidence that has been submitted from the suppliers, for example, there is clearly enough evidence to suggest that the way distribution prices have been set over the years requires further scrutiny and further review. I think British Gas has indicated that they are comfortable with some of the work that has been done between the various distribution networks and also Ofgem, but British Gas is a significantly larger supplier than some of the newcomers. From our perspective, we have been very active in trying to satisfy the suppliers so that they are not exposed to large variations in distribution prices, but I think it is fair to say that more work needs to be done for the smaller suppliers because they do not have the cash flow to be able to be exposed. Therefore, I tend to agree with some of the gripes that the smaller suppliers have. I stress again that British Gas

seems to be satisfied. The commitment that we make from a UK Power Networks perspective is to continue to work with the smaller suppliers, and indeed all the suppliers, to make sure that we remove the volatility, as far as we can, so that smaller suppliers are encouraged to enter the market at a lower risk.

Andy Manning: In terms of stability and predictability, we are broadly comfortable. We do accept that we may have more analytical resource than small players, but we do not believe that is the core issue. We think it is good that it gets addressed, but that is not the core issue at play. Mr Chairman, you asked whether the charges were fair and the important thing to note is that we do completely accept that charges have gone down in real terms since privatisation, noting that “real terms” clearly means excluding inflation. As soon as you add inflation in, those prices have still increased since privatisation. It is still a driver on bills, but we do not want to get confused between prices reducing in real terms and there being fair value or good value for customers. If we go back to the returns, there are still these high returns.

The improvements in service were referred to, the number of power cuts and so on. Again, we do not dispute that is definitely true, but all those improvements have come at a price to customers. They attract incentive payments. Since the year 2000, electricity distributors received well over £1.25 billion in incentive payments relating to things like the improvement in the number of power cuts and the reduction in losses. Those improvements in service do not come at nil cost to customers.

Q6 Sir Robert Smith: Can I clarify something? Is it a time-lag problem? If the companies are making a higher return than expected in that control period, that would feed through into the baseline for the next control period.

Andy Manning: Some of it is a time-lag problem in that it is a good thing for these companies to drive through efficiencies. Some of it is how long does that take to get through to customers, but if your allowance is too high to begin with then that is not a time-lag problem. That would be an outperformance against the target rather than a genuine efficiency improvement. We can't tell whether it is simply that the target was too high to begin with or these are genuine efficiencies. Some of it is. It just takes time for the efficiencies to come through to customers.

Basil Scarsella: In addressing the value for money, I repeat, we should always strive to become more efficient and to reduce the costs. From our perspective, we have £5.5 billion invested in the ground and customers, on average, pay about £7 per month for us to deliver the electricity to their meter, and that includes about £15 for transmission costs. All up, value for money needs to be put into perspective. There is a significant amount of investment. As I said earlier, we invest approximately £600 million per year to extend and upgrade the networks. I repeat, £7 a month is a lot. We should try to reduce that, but let us keep in mind the investment that we undertake in order to deliver the service to our 8 million customers.

Q7 Chair: How often do you do work at UKPN that is open to competition?

Basil Scarsella: That is open to competition?

Chair: Yes, in principle.

Basil Scarsella: In the case of connections, very often. Our market share in just about every market segment has decreased significantly because we have encouraged competitors, which is unusual but, like I say, we are a monopoly. Therefore, how do we provide the best value for the customers? To encourage competition and, as a monopoly, when a customer wants to connect to our network we provide them with a quote and at the same time we provide them with a list of our competitors so that the customer has the right, in some cases, to go and test our price with our competitors. That clearly is unusual in any competitive market, but that is what we do.

Q8 Graham Stringer: Can I follow up with Mr Scarsella on one point? Four years ago the Government introduced the connect and manage charges. They socialised those charges. Where would I find that charge in your £87?

Basil Scarsella: If I get it wrong I will chase it up and come back to the Committee. I would say it will be in two places: in the operating costs that are incurred daily and they might be, in some cases, in the cost of capital as part of the investment if they are capitalised, but I will check.

Andy Manning: I will check as well, but I think the connect and manage is to do with the transmission network. It is about connecting larger-scale infrastructure on to the transmission networks. Basil is running distribution networks, so it would not directly affect his charges, but it is what we pay for using the network.

Q9 Graham Stringer: If I wanted to find the amount of that cost in a consumer's bill, because it has been passed on to the consumer, how would I find it?

Andy Manning: We can tell you what we pay for use of the transmission network in general, but that is the level of granularity we have. I am not sure we would be able to but, again, I can take it away to check and see whether we can split it out. We would be able to tell you how much we pay for using the National Grid and the transmission network, but I will have to check whether they break out the individual elements for that.

Q10 Dan Byles: On this point, Mr Scarsella, you were talking about the cost to customers for connecting to your networks. What about the time? I have had companies in my constituency—and it is not your company they have been dealing with—who have been trying to develop a small distributed generation system. They have been told, “We are sorry. You will have to go away and come back in 2017 or 2018”. The timeline for connections are totally unrealistic.

Basil Scarsella: Distributed generation is a very quick developing market, as we all know. From a UK Power Networks perspective, over the last three or four years we have connected in excess of 50,000 customers, ranging from a very small domestic wind or solar generator to a very large solar farm or wind farm. What has happened in the market over the last three or four years is that there has been so much demand that the level of offers that are around in the market and not accepted is now getting to the stage where some of the networks, including ours, especially in the eastern network, are getting pretty much full to capacity.

I am guessing in your specific case but I can tell you it happens in UK Power Networks where a customer will come and would like to connect. If it is a reasonably large investment in terms of wind or solar, they will want to connect to our network but they are at the end of the queue and it will depend on what happens to the other investors that are before the customer that we are talking about as to how quickly they can connect. That is for reasonably large customers. For small customers, such as domestic consumers like all of us, it is very simple if you would like to connect to either wind or solar, but for large investors—

Q11 Dan Byles: For these larger projects, there is a real problem here. There is a pinch-point. If we are trying to get Greg Barker's big 60,000 and encourage widespread distributed power generation, there is a pinch-point in the system at the DNO level.

Basil Scarsella: There is a pinch-point, but let us not understate the performance of both the transmission and the distribution networks in connecting what is a very rapidly increasing market. It gets to a point where the capacity of the network is full and, therefore, in order to connect further you need to augment and reinforce the network all the way down to the transmission and even further back. That takes time and is very expensive. It is not a simple market to operate in, largely because of the increase in demand, but let us not understate the performance of both transmission and distribution networks in facilitating that market.

Q12 Albert Owen: You just said it is not a simple market. There is not much of a market there, is there? You contradicted yourself. You said there is a monopoly in most places. My question to Mr Hall, and to all three of you, is that people coming into Citizens Advice Bureaux over the last 12 months will have been coming in because they have problems paying their bills. What contribution is being made by network costs to that increase?

Richard Hall: We have seen about a 21% increase in consumers seeking support in relation to energy problems during the course of the last 12 months. That is up to a level of about 49,000 reporting problems per year. Many of those are in relation to debt issues, although many of them also relate to issues around sales standards or supplier behaviour. Of those that relate to debt issues, the end bill that a consumer sees will not set out what proportion of that bill relates to network costs as opposed to other costs.

Q13 Albert Owen: I am going to come on to the understanding of bills for individuals a little later, but I am asking you because you are here on the panel as one of three and in your opening remarks gave me the impression that we are getting a good deal. What I am suggesting to you is that at the coalface and in your bureaux throughout the country that is not the case. There are people who are struggling and their bills have gone up considerably. I want to know what is the contribution that network costs make to those increases that people are finding difficult.

Basil Scarsella: Mr Owen, I am happy to have a go at that. Our costs went up just under 10% last year. Therefore, the contribution to the customer's bill is about £8 for the year.

Andy Manning: I can give you the numbers, but the network charges have been going up by about 7% a year for about three or four years. I think it has gone up by about £70 since 2007. The figures are in our submission. It is 41% since 2007.

Q14 Albert Owen: The debate we have been having in Parliament and beyond about environmental and social costs, there has been a figure on there. Those increases are considerably less than the distribution networks and the network costs; so you have got away with it.

Andy Manning: I am British Gas. This is one of the costs we incur. That has been one of the drivers to increase supplier bills over the last few years.

Q15 Albert Owen: It is a serious question, because people have to pay their bills at the end of the day.

Andy Manning: Absolutely. We agree entirely. That is why we are here.

Basil Scarsella: It is a serious question, but I think it is important that we look at what has happened over the long period to the costs as it relates to distribution. Without taking up too much time, if you take the 25 years of regulation since privatisation, there are three phases of the bill in distribution. In the first 10 to 15 years prices went down significantly because there was a reduction in investment in the networks. There was a reduction in headcounts. People were made redundant for the first 15 years. For the last 10 years, which is 2005 to now, there has been significant increase in investment and it is the increase in investment that is driving the increase in prices. You had a decrease in the first 15 years, a significant increase as a result of investments, but importantly now, when you look forward over the next eight to 10 years, we are saying that distribution costs will not go up more than inflation. If I take Andy's comment in terms of nominal or real, they will go up just under inflation, certainly for UK Power Networks and the other distributors, but at the same time maintain the investment. We have now reached the stage where we are replacing assets that were put in the ground or above ground post-war. They now need to be replaced, but we have reached a level where the replacement is about right and, therefore, prices will remain about constant.

Q16 Albert Owen: To summarise what you are saying: last year was a difficult year, there were big increases that were reflected in household bills, but in the coming years you see that stabilising if not going down.

Basil Scarsella: Thank you. That is a lot shorter than mine.

Andy Manning: Just to clarify, you talk about going in line with inflation. There will continue to be an upward pressure on bills, but in line with inflation is about right.

Richard Hall: To clarify too, if you took the steer from my opening remarks that I was suggesting that consumers were getting the best value they could from the networks, that certainly was not the intention of my remarks and hopefully that comes across in the record of those comments.

In terms of the network cost changes we are foreseeing, in the settlements that have been reached for the gas distribution networks and the transmission networks for 2013 to 2021, Ofgem's estimates suggest those will cumulatively add about £12 per year to consumers' bills across that period. We don't yet entirely know for the distribution networks because not all of the price control settlements have been reached for the power networks. It is certainly true that the draft business plans suggest reductions below the rate of inflation for the remainder of the decade. I think that is playing into Ofgem's view that network costs will be broadly flat for the remainder of this decade.

One of the questions we would have is that there are some quite significant changes to things such as the treatment of depreciation of assets. Assets are now being depreciated over 45 years rather than 20, and it makes like-for-like comparison quite difficult. The point I am trying to draw out is it is hard to tell if those costs are going down because of genuine improvements in efficiency or whether it is effectively because of accountancy rules.

Q17 Albert Owen: Could I ask Mr Manning from British Gas what issues you consider when calculating how to pass on network charges to customers?

Andy Manning: Essentially we take what we know is forecast, what we think the charges we are going to receive are, and then that goes into how we work out our supply bill. We only intend to pass these through as accurately as we can.

Q18 Albert Owen: Again, Mr Hall, if you could lead on this as somebody who represents the consumer. On issues that have been raised in other responses, how do you feel the consumer's understanding is of bills and network costs?

Richard Hall: I think consumer recognition of the networks is very low. In many instances you see that in terms of low brand recognition feedback, that when there are power cuts, power outages, quite often consumers will contact their supplier rather than the networks to find out what is going on. Consumer awareness of the components of the bill or of the

existence of the networks at the moment is quite poor. Most of the interactions with the industry are via suppliers and, therefore, suppliers are the perceived public face of the networks even though that is not the role they are carrying out.

Q19 Albert Owen: Do you think that will change?

Richard Hall: I would hope so. The intention of things such as the RIIO process is to try to encourage networks to speak more directly to the communities they serve and to understand their needs better to serve them. As we start to see more distributed generation or community schemes, that will necessitate networks becoming more publicly visible to those communities to help them through those processes. As Mr Byles alluded to, it is often quite a complex process for people who have not been through it before to get schemes off the ground.

We also think that there are possibly opportunities for networks to think more innovatively about how they engage with their communities. To use one practical example of this, as networks come up against pinch-points for capacity on their systems it may be that they can get over those pinch-points either by reinforcing network assets, conventional transformers and the like, or it may be that by reducing demand they could buy themselves a bit of headroom. We have been trying to encourage networks, given how bad the fuel poverty situation is for many consumers, to look at whether there are instances where they can co-partner with housing associations or local authorities to try to find demand reduction schemes that both serve the network's needs, in terms of allowing it to meet its legal obligations, but also add some wider value to the communities that they serve. It is those kinds of areas where we hope the networks would become more publicly facing, more innovative and more engaging with the communities that they serve.

Q20 Albert Owen: From the companies, what can you do to improve people's understanding?

Basil Scarsella: First, let me comment on the visibility of the distribution costs. This is a supplier issue, but when I look at my electricity bill there is no reference to distribution costs. From a UK Power Networks' perspective, we would be delighted if the distribution cost of, as I said earlier, on average about £7 per month would be shown on the electricity bill so that when I get my bill there is the charge for the electricity and there is a charge for the distribution costs so I can see whether I am getting value for money.

The second comment that I would like to make is in relation to the fact that customers very often ring the supplier when their power is out. I agree that we could do more, we will do more and we are doing more to make sure that the consumers understand who their supplier is, but generally our market research with our consumers says that what we all tend to do as domestic consumers when your power is out is rush for your electricity bill to ring someone. In addition to the distribution charge being very clearly shown on the bill, we would also like shown very clearly on the bill, "If your power is off, please ring UK Power Networks," and eventually we will have one national number.

Q21 Albert Owen: We need clear tariffs and an understanding.

Basil Scarsella: Yes.

Andy Manning: To finish off. Of course, British Gas does not own any pipes and wires, but we are always very clear in producing a breakdown of what the bills are made up of in a fully audited way. On the question of the customer bills, something to be considered is we would be wary of making the bills more complicated. That is the only thing I would add to that.

Q22 Albert Owen: The Retail Market Review may result in a reduction of the no standing fee tariffs and thus more fixed network charges could be passed on to the consumer with low consumption levels. What are your views on that? Should people who use less pay less?

Basil Scarsella: Yes, in our view. From a distribution perspective, a domestic consumer pays about 20% as a fixed charge. That is for the assets that are in the ground or in the air. If I come back to the £87, about 80% is based on the unit charge. In other words, the less you use the less you would pay as an individual domestic customer.

Richard Hall: From our perspective, we have seen wholesale removal of tariffs with no standing charges as a result of the RMR. I think there is only one small supplier who has introduced them and one who has retained them at the moment. For consumers who have very low levels of consumption or perhaps who have dormant gas devices in their house and now principally use electricity, it may mean that they experience a degree of bill shock. We have been calling on suppliers to try to identify consumers who are in those circumstances and to communicate with them in a way that more fully expresses that, “This is going to have quite a significant impact on you”. We would like to see the ability for derogations such that suppliers can continue to offer no standing charge tariffs to these kinds of customers in order to mitigate the risk of bill distress for them and in the event that consumers do find themselves in a position where they are stranded with, say, a gas device that they no longer use or cannot use, for the charges related to that point to be nullified by suppliers. Clearly there is a cost associated for suppliers doing that, but we would consider that to be part of the social obligations on them as providing an essential service to try to cater for those people.

Q23 Albert Owen: I am conscious of time but I do want to ask this supplementary: do you think it is fair to the consumers in rural areas that they have to pay considerably more in their distribution charges when some of them do not get dual fuel? I am talking about electricity here.

Richard Hall: It does cost more to serve customers in some of the more rural parts of the UK. We have called for the equalisation of standing charges through a clearing house

approach such that we think that you could provide nationally flat network charges. That does venture into the zones of delivering cross-subsidies between certain parts of the nation and other parts of the nation, but I think there probably is a case for that in reflecting the wider costs of living in rural communities. There tends to be a bit of a premium compared to the costs in urban areas.

Q24 Albert Owen: A bit? It is a difference of between 6% and 10% of the network costs.

Richard Hall: Indeed, yes.

Albert Owen: Would anybody else like to comment on that? I will leave it at that.

Andy Manning: We don't have particularly strong views on it. The thing that makes me slightly nervous about the clearing house approach is that you do automatically bring in a layer of inefficiency. Someone would have to administer that, which we are loath to do in general purpose. There is a point about incentives, as we touched on. Networks are incentivised to improve things like power cuts and currently if you benefited from a reduction in the number of power cuts you will pay a little bit more on the bill and if you go over to a clearing house methodology that—

Q25 Albert Owen: I am talking about a customer who is off grid and is paying some 10% extra for their network costs for electricity. Do you think that is fair?

Andy Manning: I think it reflects the average cost facing them. I think it is a choice to make probably.

Albert Owen: It is not a choice, is it?

Andy Manning: If you choose to make that a national charge, I think that is perfectly fine. We have no objections to that. As Richard was saying, that brings in cross-subsidies, but we have no great problem with that.

Richard Hall: I think there is certainly a cause for challenging whether more consumers who are currently off grid can be put on grid, given that gas is generally cheaper,

Q26 Albert Owen: That might be another thing. Some of the profits may be invested directly into extending the gas mains.

Richard Hall: If you look at the targets, I think it is to get 80,000 consumers who are currently off grid on grid during the course of the GD1 price controls. If you look at what that looks like, 10,000 customers per year, that seems broadly consistent with the last price control. I guess the point of challenge there is, "You managed to do that quite easily during the last price control. Shouldn't a more challenging target than 80,000 homes have been set for this one?" It looks as though they received a very decent level of return for that target in the past. Surely they can do more.

Basil Scarsella: I am not in gas networks. I used to be so, at the risk of being out of touch, gas networks are incentivised in connecting customers that are off grid and from memory, and I am going back four or five years, they have done a very good job in converting customers.

Albert Owen: The reason I raised this is that the examples that are given by yourselves in the industry and others is a dual fuel bill, and many people do not have the luxury of a dual fuel bill and the ability to switch their retailers.

Q27 Christopher Pincher: A quick question to Mr Hall, because you mentioned changes to accounting rules and the extension of the depreciation period from 20 years to 45 years. Presumably that is a rather helpful accounting rule to you in terms of cost of capital and capital return. Ultimately that should mean that you should be able to help your customers.

Richard Hall: It is like taking out a longer mortgage for the same capital value. It means your monthly repayments may be lower but the total amount that you will pay over the duration will be higher. We were not complaining about it being an issue that is disadvantageous to consumers in terms of their bills. However, it does result in a degree of difficulty in looking at the price control settlements to see whether the networks are becoming more efficient. Are the costs going down because their costs of conducting different activities are going down or are they simply going down because of this accountancy rule? You will hear from all of the electricity distribution networks a very good news story, in their view, that the costs are going down. The point I am trying to highlight here is that the bill impact is going down, but is the total cost to consumers going down over the life of those assets?

Basil Scarsella: It is interesting that both British Gas and Citizens Advice seem to have a different view on that issue. British Gas says we should lengthen the lives for 45 years and I think Citizens Advice argues that that is not a good thing.

Richard Hall: That is not what I am arguing. I think I was fairly clear that is not what I am arguing. I am not disputing the elongation of depreciation periods. I am simply highlighting that it makes it very difficult to tell, when we hear that the costs of the networks are going down, whether that is because you are getting more efficient. That is quite a clear point. I can reiterate that if you want me to.

Basil Scarsella: No, that is clear. If it 45 years, as Richard has already said, you are lengthening the mortgage and generally on a longer mortgage on a net present value basis you tend to pay more. Lengthening it, while it has a short-term impact on customers' bills, and Richard's point, in our case by converting from 20 to 45 years—and that is only for new assets—it has about a £35 million or £40 million impact, but let us put it into context as to what is driving the bills. That is efficiencies and the lengthening of the life of the asset is a contributor but it is a relatively—

Q28 Christopher Pincher: It means it will be more efficient over a longer period of time and, therefore, we can't value it.

Basil Scarsella: That is exactly right.

Andy Manning: Can I add that 45 years is good because that reflects more accurately what the actual asset life is, so it seems to make sense. We support that entirely for a new asset. Our issue is that it is not coming in immediately. The plans are that that does not come in fully for another eight years, so that positive impact on the bill will be delayed for eight years. Our issue with the application of that policy is that the benefits are not realised fast enough, in our view.

On Richard's point about comparing like to like, our analysis, which we are happy to share with the Committee, shows that the costs are about flat when comparing between price control periods. Those big decreases are, partially at least, due to financing arrangements.

Q29 Dr Whitehead: Can we distinguish between the replacement of assets and the improvement of assets? We have talked about efficiencies in the system generally but there are with the smartening of the grid, the introduction of smart meters and various other intelligent devices, for example, opportunities to improve how the system works quite substantially. What is your assessment of the relationship between the rewards and the incentives for doing that kind of improvement in the system as opposed to just going and replacing the stuff that is physically falling down?

Basil Scarsella: Replacement is capital and extension is also capital, as compared to operating expenses. We only replace assets when our assessment, based on the performance of the asset, suggests that it is best to replace rather than repair and we are incentivised to do it on an economic basis. Like I say, our assessment depends, when you look long term, on how often we expect the asset to fail, whether it is a cable, a substation or a transformer—what is the condition of the asset, how often do we expect it to fail and, therefore, incur costs to repair as compared to replacing? We always go for whatever is the most efficient, which is for our benefit but, importantly, for the benefit of consumers as well.

Andy Manning: I think the incentive properties of the incentive regime should encourage that fully. The way it works is that any overspends or underspends compared to allowances are shared between the network and the customer. There is no doubt that networks will be incentivised to look for the most efficient solutions. We completely agree with that.

Q30 Dr Whitehead: To what extent is Ofgem looking over your shoulder while you are doing this? Are they scrutinising?

Basil Scarsella: They are looking over our shoulder too much, in my view. Being serious for a minute, as a—

John Robertson: Is this the same Ofgem that we know or is it a different Ofgem?

Basil Scarsella: As a monopoly, we welcome scrutiny and we provide Ofgem a significant amount of information that is open to scrutiny. My comments on the regulatory framework

generally, as compared to Ofgem, stand because the regulatory regime has been followed by other parts of the world, not because it is not fit for purpose but because it is best in class and it has a track record of performance.

Richard Hall: I think certainly there are areas where there is the potential to use technology better. Coming at this as a non-engineer, it seems mystifying to me that there are opportunities to use the technology better. One of those I would highlight is something that the Committee asked about in its terms of reference around the approach to managing losses on the network. If you take the distribution losses on the system, which are about 5% to 8% of total power carried, and a not insubstantial amount of carbon emissions associated with that, about 1.5% of UK carbon emissions, the incentive scheme that was in place for the period from 2010 to 2015 has been abandoned due to alleged data quality issues.

For the forthcoming price control period from 2015 to 2023, the only obligations on networks will be around annual reporting of their performance in reducing distribution losses. There is a discretionary pot of funds, which is upside only, that the networks can potentially get if they are good at this. I think we would argue that, with over a million smart meters already rolled out to homes and with the expectation of full smart meter rollout by 2019, the networks should be in a position where they understand enough about what is going on on their networks to be able to make greater efforts to reduce the losses.

To be fair to UKPN, I think they received the cleanest bill of health from Ofgem in its assessment of the draft business plans. However, having said that, I think Ofgem made some fairly damning comments about how poor the quality of the draft business plans were in relation to their aspirations for reducing losses. It certainly appeared as though five out of the six groups did not have a particularly strong grasp of where losses were occurring on their networks. It feels to me as though you could use technology better to manage those things. There could be scope to have better incentives in place to ensure that you are driving efficiencies in those areas.

Q31 Dr Whitehead: I think the essential point there is perhaps the extent to which what might look like a rational incentive to improve the system is then pulled into the price control agreements and the extent to which they relate to what comes out in the agreements. I guess I know the answer to this from the point of view of the networks, but do you think that the relationship between those agreements and what rewards and incentives there are to improve what is going into those agreements are sufficiently robust?

Andy Manning: The evidence we talked through right at the start about networks being consistently able to outperform the targets set in the agreements would tend to indicate that the agreements are generally too generous. I think on 38 out of the last 40 occasions networks have been able to outperform the settlement they have been given, which would lead me to believe that the targets are not being set in a challenging enough fashion.

Richard Hall: I concur with that point. On innovation, if you look at some of the projects that are funded, I think the structure of the incentives could work better. For example, some of the low carbon network funds that are available have to be competed for between the networks to find which are the most effective projects or innovative projects but some

of them are effectively an allowance to individual networks. I think that is not necessarily conducive to encouraging the highest value for money projects to come forward. Looking at the kinds of projects that have been stimulated through things like the innovation funding incentive for National Grid, the kinds of exemplars that are used include some genuinely very innovative things, such as using robotics to try to identify leaks on gas pipelines, but they also include projects such as trying to find innovative ways to stop pylons from rusting from how they are painted. I would argue that trying to find ways to stop metal from rusting is not an area of innovation so much as an area of business-as-usual. As Andy highlights, these stimulus packages could be more stretching than arguably they are overall in the networks.

Basil Scarsella: I am happy to comment on incentives, because again it is an important part of the regulatory regime. What the regulatory regime tries to do, as far as possible, is replicate a competitive market. The reality is that when you look across the networks, but again for UK Power Networks, when your performance improves, whether it is better service, better reliability or reduced costs, in a competitive environment you are expected to get an increase in the market share, but in a regulated environment what happens is you get incentive payments, which is exactly the way it should work. The reality is, if you look at UK Power Networks, over the last five years in all of those areas the reliability of the network has improved by 40%. We have taken in excess of £200 million out of our total cost base. The customer service has improved. Therefore, would I expect to receive an incentive payment? Yes, I would because our performance has improved. I would be happy to hear other ways of improving the incentive regime, but has it worked? Absolutely it has worked because the customers have benefited as a result.

Q32 Dr Whitehead: Shouldn't an incentive regime be based on a baseline for performance in general?

Basil Scarsella: It is.

Dr Whitehead: But if everybody outperforms—

Andy Manning: I think that is exactly right. It should be the best performing networks that are rewarded. This is what Ofgem has stated as well. Ofgem has told us they expect the best performing networks to be able to make—

Basil Scarsella: The base performance is set for each network and each network's performance is different depending on the region, the quality of the assets and so on. The base performance is set and your expenditure allowance is given to improve the performance. If you perform better than the target set you need to invest to do that and then you should be entitled to an incentive.

Let me give you an example. For UK Power Networks, the reliability has increased by 40%. In other words, the time that a customer is expected to be out of power today, if it was, say, 50 minutes five years ago, is now 30 minutes, and we get an incentive for that because the customer benefits but we have invested in order to achieve that improvement. We have invested by making sure that when a customer is out of power we get a generator as quickly as we can. The other change that we have made is that rather than allow our

employees to knock off and go home at 10.00pm, if they can work during the night and the environment allows it, they work overnight, which means they get overtime. Therefore, we are investing to improve performance and at the same time we are earning an incentive. The customers are benefiting. We get an incentive, but we also incur costs to deliver the improved performance.

Q33 Dr Whitehead: Do you think the low carbon network fund is, therefore, rather redundant in providing an additional incentive for something you ought to be doing anyway?

Basil Scarsella: The low carbon network fund was introduced in 2010 and I think it was a good initiative because on a competitive basis it encouraged networks, UK Power Networks included obviously, to invest in R&D. In our case we not only received a significant amount of money, some £80 million over the last four years, from the low carbon network fund but we have also invested about £15 million ourselves in R&D that the whole industry will benefit from. When you look at our plan, and keep in mind that our networks account for about a third of the UK energy distributed, we are saying we invested about £80 million but our plan reflects a benefit for consumers of £141 million. It is clear that it is more than paying its way.

Q34 Dr Whitehead: Does the low carbon network fund exist for the public good as opposed to your good?

Basil Scarsella: It exists for the public good, no question. As I said, we have invested £90 million and consumers benefit because, over the ED1 period, 2015 to 2023, we will invest £140 million less than normally consumers would have had to pay.

Andy Manning: I think we will have to wait and see what the benefits are of these low carbon network funds. We have not seen the evidence that has convinced us at the moment, but we are not ruling that out as possible. There are other levels of funding where networks generally get an allowance just for innovation, around about 0.5% to 1% of their revenue on top for innovation. As Richard was alluding to, that can often lead to increased efficiency on their network, which sounds like business-as-usual to us. They are already incentivised to spend less. We struggle more, taking aside the low carbon network fund, with this general lower level fund for innovation that seems to be more business-as-usual, through which they will get rewarded for by being more efficient.

Q35 Dr Whitehead: Which bit of the programme has been hit by the recent announcement of a small reduction in distribution charges?

Andy Manning: Do you mean the £5 rebate or do you mean the—

Dr Whitehead: The recent Government announcement of the reduction in electricity distribution charges; the rebate in the unilateral declaration of reduction, as it were.

Andy Manning: My understanding, and perhaps Basil will help me out, is that that is effectively a timing thing. It is just a deferral of revenue, so it will not affect any investment plans. It is just a deferral of revenues for a year.

Richard Hall: It is a deferral. I think it is probably also worth highlighting that it varies from region to region. That £5 is not flat for the 14 regions in the UK. Off the cuff, I could not give you a list of what has been flowing through in each region. I am happy to take away an action to write to you separately on that, but I think it varies from nothing in some regions to about £8 or £9 in others. As Andy alluded to, it is not a reduction in consumer costs. Essentially it has been rolled over for a year. Consumers will pay it next year with interest, effectively.

Q36 Dr Whitehead: That is just a small hit on the revenue of companies? It is not a hit on the investment arrangements?

Basil Scarsella: No. As the guys have already said, it is just deferral of revenue from 2014 to 2015. It has no impact on investments.

Q37 Dr Whitehead: Was that something the distribution networks did not worry about?

Basil Scarsella: It was purely a choice for the distribution networks. Certainly it was a choice for UK Power Networks of whether we could do it and ultimately it benefited the customers. We talked about volatility in distribution prices earlier on. We expect distribution prices next year to decrease and, as I said earlier, increase in 2014. Moving some of the revenue from 2014 to 2015 provides better stability in distribution prices, which is beneficial for the suppliers and the customers.

Q38 Dr Whitehead: But presumably if in this price regulation period Ofgem had made a rather more accurate relationship between rewards, incentives and performance then you would not have had £5 just to set aside without any worry to yourselves in order to provide a temporary price reduction.

Basil Scarsella: It is a 12-month deferral. In UK Power Networks, we are talking about £30 million on a total revenue of £1.3 billion; so it is relatively minor.

Q39 Dr Whitehead: Do you think the question of own generation and private wire local generation is in turn being incentivised by what is happening in terms of charges, networks and, we have heard, connections? Is that something you are noticing as far as the networks are concerned in terms of impact on your business in the likely future?

Basil Scarsella: From a network perspective, there is a Government incentive for small domestic generators to connect renewables, solar or wind, and from a distributor perspective they can connect at no cost. For the larger developers, the market is growing

significantly and that is putting a stress on networks in being able to respond, but when we talk to distributed generation customers our feedback is that in excess of 80% are satisfied with the service they are getting. There is a cost attached to it because, as the networks become fully utilised, in order for further connections to take place it means investment on the network. Under the regulatory regime, it is a user-pays policy. Therefore, if a developer comes in, in order to connect the generation we need to invest a significant amount of money. It is the developer that needs to contribute towards that cost.

Q40 Dr Whitehead: I was thinking of, among other things, for example in Southampton there are the beginnings of suggestions that direct supply initiatives from distributed generation to direct supply may start to emerge, indeed are emerging in some instances, without reference to the grid. Is that something that would worry you in terms of your future models?

Basil Scarsella: No, it doesn't. I think, as community generation starts developing, those community-type networks will also evolve. To a lesser degree they might rely on our network, for example, less than they do today, but I have to say we are not seeing a significant growth in that area.

Q41 Chair: You made a point, quite tellingly, about the high level of customer satisfaction. Do you think your customers would be quite so satisfied, given that most of them don't know who you are anyway, as you said earlier on, and what you charge is subsumed in bigger charges—many companies envy that; if you are buying a packet of teabags and it is subsumed in the price of eggs, you would probably get away with overcharging for your teabags—if the customers knew that, owing to the feebleness of the regulator, even the worst performing distribution companies are rewarded as though they had above average performance? If the customers knew that here is a group of monopolies—in your case an overseas-owned monopoly, although I am a great supporter of overseas investment into the UK and the infrastructure but it might be worth bringing to their attention as well—do you think they would still be so terrifically satisfied?

Basil Scarsella: You say the worst performers. Let me answer that from a customer's perspective. If my power had not gone off for two or three years, because on average that is what a domestic consumer can expect, and I get an electricity bill that says for "For us to deliver the electricity to you, you pay £7", and at other times you have made very good points in terms of the way we communicate to customers, and I knew as a customer that UK Power Networks had £5.5 billion invested in order to deliver that and I saw on my bill £7 per month, I think I would be very satisfied. Of course, if I was sitting there at Christmas when some of our customers unfortunately were off, and we apologise to those customers again, then clearly for that small period I would not have been very pleased.

Q42 John Robertson: I want to look at the charging principles in the regulatory framework. Ofgem's mechanism in the use of system charges was known as RPI-X and they have introduced the RIIO. What are the pros and cons of both and which is best?

Basil Scarsella: In RPI-X, which I mentioned earlier on, we went from privatisation to pretty much 2010, and arguably to 2015, where the focus was on reduction in costs. There was very little focus on level of service, investment in the network and, importantly, performance of each organisation's management, and very little engagement with stakeholders. RIIO has encouraged organisations to engage with stakeholders, put out a full plan in the marketplace rather than just an expenditure plan, set out the outputs that you expect to deliver by that plan, and put it out in the marketplace for consultation. In short, RIIO has put the onus back on managing organisations well, because they have increased the incentives, especially in the reliability of the network, in customer service and the way we handle complaints. With RIIO in the future, if you are managing the company well, you can earn above specified returns. If you manage it poorly, your returns will be significantly lower.

Q43 John Robertson: According to Ofgem, they have gone from the previous system of the RPI-X and all they have done is try to enhance it, concentrating on incentives and innovations—that is the two “I’s”—and outputs. What is the problem with that? That sounds quite sensible to me.

Andy Manning: In principle, we are absolutely with RIIO and think it all makes sense. One of the things that Ofgem have spoken about, referring back to earlier conversations, is the best performing networks being able to make double digit returns and the worst performing networks to make costs of debt, but unfortunately that is not what has happened in practice. It is one of those things that, in principle, is absolutely right. When we talk about delivering outputs for the right amount of revenues, you have to get those outputs correctly defined and sufficiently challenging and make the revenues sufficiently challenging. In principle you are absolutely right; there are no objections to RIIO whatsoever. It is about application.

Q44 John Robertson: What was the consultation between Ofgem and yourselves on this?

Andy Manning: There has been a lot more stakeholder engagement, which I think absolutely is to be welcomed, but I do think it has brought some challenges with it. If you rely on the networks to lead on stakeholder engagement, networks are, quite naturally and quite correctly, going to present themselves to stakeholders in the most positive light possible. It is up to Ofgem to challenge that stakeholder engagement, which I am not sure we have always seen. We have certainly seen some examples where what we would view to be the most contentious issues of price control settlements have not been brought clearly to the attention of stakeholders. You are almost in a place where the stakeholder engagement is potentially holding back the issues.

Q45 John Robertson: Mr Hall, what do CAB think of this?

Richard Hall: In practice, the differences between RPI-X and RIIO are quite overstated. The types of incentives and penalties that exist are broadly similar to those that existed in

the past. There is an increased level of engagement from the networks with their stakeholders to develop their business plans. That is welcome, although some of the challenges that we see on it, coming back to some of the early discussions about the distribution of returns you would expect, it is very difficult as a stakeholder to get a real sense of quite how challenging or not some targets are. It would be very useful to see more probabilistic analysis produced that could allow us to understand how likely it is that we are to end up in a situation like RIP-X where everyone outperforms all the time.

Q46 John Robertson: Mr Scarsella, how does that affect the performance of the companies? Does it have an effect on it?

Basil Scarsella: RIIO or stakeholder engagement?

John Robertson: Both.

Basil Scarsella: In the past, it was managing the networks and financial engineering to a very large degree. In the future, what RIIO has done is put the focus back on management. If you are managing an organisation that is efficient, provides good service and reliable networks, then the incentives are there to earn a return that is higher.

Q47 John Robertson: Isn't that what you are supposed to be doing anyway? I would expect management to do that.

Basil Scarsella: That is exactly right and in a regulated monopoly the regulatory regime is meant to do that and RIIO does it a lot better than RPI-X did, in my view. You might well say it is obvious, and I tend to agree, that we now engage with customers regularly. Should we do more? Yes. At UK Power Networks we are always trying to do more but, importantly, the business plans have been out publicly for some two years and anybody can comment on them. Are they difficult to follow? I am afraid they are, but we have tried to simplify them as far as we can so that the public out there can input if they would like. That is an important initiative out of RIIO that I think should be recognised.

Q48 John Robertson: I always love it when managers say they should do more. The question is, will you? Mr Hall, you wanted to come back and then I will let you in, Mr Manning.

Richard Hall: I was simply going to say that ultimately the test for whether RIIO is an improvement on RPI-X is whether consumers get better quality services for lower costs. Basically, do they get better value for money? It is quite early in the process to make a judgment there but, again, noting we have had one year of the transmission price controls and the GD1 price controls. The first set of financial results from National Grid suggested they outperformed their base returns by 2.6%, so it looks as though we are still stuck in the cycle of people significantly outperforming their base returns. I don't know whether that

situation will persist for the remainder of the price control, but it does not look like a massive difference to me.

Q49 John Robertson: There would not be a Scotsman who did not complain about transmission charges. Why are we paying so much? When are you going to bring the prices down for Scotland?

Basil Scarsella: I don't run a transmission network, but it is because of the level of investment that has been undertaken on the transmission networks to be able to connect the renewables that are emerging all over the country and that requires both onshore and offshore investment in transmission. That is a superficial view, but I think it would be pretty correct.

Q50 John Robertson: I was being a bit facetious there, but I wouldn't be Scottish if I didn't say it. The network charges vary between the 14 electricity and 12 gas regions. What is your view on this? Why such a variation between regions? I know some places may be slightly further away, but it is not a big country.

Andy Manning: It generally reflects the average costs in each region but, as we talked about before, there is the possibility of having a national clearing house. That could be analysed.

Basil Scarsella: UK Power Networks' costs are one of the lowest so I am happy to— but no, seriously, costs vary in different parts of the country for reasons such as customer density. If you take London, for example, the number of customers per kilometre of line is significantly higher than in our eastern network and, therefore, costs vary because of that.

Q51 John Robertson: I appreciate the higher population areas always have a difference, but the fact of the matter is that, from Scotland to the south of the border, as it were—I know that may change over the years, but at this point in time that is the case and yet Scotland and other regions pay more. It does not seem fair.

Richard Hall: Certainly charges are higher in the far north Scotland region. They tend to be higher in areas with more difficult geography. There is a scheme in place, I think it is called the Hydro Benefit Replacement Scheme, that seeks to defray costs in far north Scotland through a levy that is applied on a GB-wide basis. Are there arguments that benefits should be higher? Yes, I can see how those arguments would be made. It is a difficult trade off as a national body because effectively you face the situation potentially of taking some consumers out of fuel poverty at the cost of putting others into it. I think there is legitimate trade-off there as to whether you need to provide additional support to consumers in areas that are particularly high-cost to serve. If so, is it appropriate to provide that through bill-based cross-subsidy or should that be done through tax?

Q52 John Robertson: Mr Manning, British Gas has stated that we need improved transparency in network costs and it would be welcome to see that. Transparency has always been a problem in this industry. What do you mean by improving transparency and how would you do that?

Andy Manning: Essentially where I come from is that we can see the evidence, as we discovered at some length, that the networks are making higher returns than Ofgem envisaged. I can certainly point to individual examples of why that is, but overall we cannot comment too much on how their allowances are set. We would suggest there needs to be some detailed independent analysis of that. We would see the National Audit Office as an appropriate body to do that, but I think you obviously have much more familiarity with the workings of the National Audit Office.

Q53 John Robertson: Do you think a comparison to other companies, which we do not have, would be helpful rather than have what we have at the moment?

Basil Scarsella: Benchmarking is always a difficult area, but in every benchmarking exercise that I have seen on network costs, the UK network costs benchmark very well and I think Citizens Advice have commented on that.

Q54 John Robertson: How is benchmarking used to highlight efficiencies?

Basil Scarsella: Ofgem benchmarks each one of the 14 networks against each other and sets the efficiency frontier based on the most efficient company and the rest need to strive for that.

Andy Manning: I think whatever is happening in that process is not quite working. In a competitive market we should have seen the high-performing networks prospering and the poor-performing networks struggling, and that is not what we are seeing. Whatever that process is, and we cannot comment because we are not involved in that detail, it is not delivering the results that Ofgem are looking for. Ofgem has specifically said they want high-performing networks to make double-digit returns; the worse-performing networks to get the cost of debt to around 2%. That is their aspiration. It is not what we are seeing. We feel they lack the expertise to pull that apart. We would say it needs an independent third party.

Basil Scarsella: Mr Robertson, can I comment on that? It has been repeated a number of times that everyone is benefiting. I think that the regulatory regime allows for poor-performing networks to be penalised and good-performing networks to be rewarded. If you can point me to a network whose performance has gone backwards in customer service, reliability and costs and they have been rewarded, I think there is a reasonable argument for an independent review. However, when I look at our networks, and for that matter the rest of the networks because we keep a close eye on what the other networks are doing, overall reliability has improved, customer service has improved and costs have decreased. Therefore, it is only right that they are rewarded; they are not penalised.

Q55 John Robertson: I wonder if part of the problem is that the network companies, and I do not mean this in a bad way, hide behind the big six and the other small companies who sell retail lines and, therefore, you are obscure. Would it not be better if you were charging the customers separately from the big six and then people would know exactly what the network companies are doing and at how much it would cost and, therefore, might put you under a bit more scrutiny? Would that be a good thing or a bad thing?

Basil Scarsella: Sending the customers an additional bill, whether that is a good thing or not is debatable.

Q56 John Robertson: What we get complaints about is people do not understand their bills and the part they do not understand is this hidden charge for transmission costs and network costs and then the connection charge. They do not understand it.

Basil Scarsella: We keep on getting accused of distribution costs being hidden. In another part of the world that is close to my heart, or was anyway, distribution charges are shown separately and there is no reason why distribution charges should not be shown separately. The distribution charge for a UK power network “customer” is roughly £7 per month. We would be delighted for that to be highlighted in the electricity bill.

Andy Manning: I think there are certainly areas where you can use external benchmarks more than we currently do. While network assets might be fairly unique in their characteristics, many of the things that networks do around answering calls, customer service, dealing with complaints and offering connections are generic customer service tasks that exist in quite a lot of different industries. For those I think there is probably quite a strong case for benchmarking the networks not simply against each other but against other parts of the economy that carry out those roles to get a better sense of how they compare.

In other areas, too, in terms of the kinds of cost allowances that are applied to different factors, I think you can benchmark against wage growth or wage deflation in the wider economy and aspects like that to try to get a better sense of how the networks are comparing.

Basil Scarsella: I agree with Richard. We benchmark, for example, call-centre costs, against other networks and also suppliers, but you need to take the differences into account. We are open 24/7. Not all supplier call centres, for example, are open 24/7. You need to be careful that you are comparing apples with apples, not apples with oranges.

John Robertson: You have already said you could do better and I know you will. Thank you.

Q57 Sir Robert Smith: Mr Hall already brought up the cost of paying for losses on the electricity system. I wonder, though, what the panel’s view was of losses on the electricity

system and leakages in the gas system. Are they acceptable? Are they being treated in the right way?

Andy Manning: Particularly in losses, I think it would be fair to say this has been a quite controversial issue across the industry. To give some background to it, in the period between the 2000 and 2010, under current arrangements, the electricity networks are going to receive back £500 million in incentive rewards for reducing losses and the level of losses has not been reduced over that period. There has been a big issue with how losses have been incentivised to be reduced. An individual Ofgem decision reached earlier this year granted networks an extra £400 million. That would have been about £100 million in rewards over that 10-year period and that has now increased to £500 million due to the recent Ofgem decision. I genuinely cannot explain that decision. A lot of money has been spent giving incentives to reduce losses without any clear evidence that losses have reduced. That is my biggest issue.

Basil Scarsella: I don't think that was your question. I thought the question was whether net operators take reduction in loss within the network seriously and the answer from our perspective is that we do. Network losses are due to two things, technical losses and theft or poor billing information. Over the last number of years UK Power Network has certainly invested in technical losses by making sure that the transformers and cables that we install reduce technical losses. We have also invested significant resources in making sure that we identify electricity theft and poor billing to make sure that those losses are reduced, which again is for the benefit of consumers.

In relation to the comments made by Andy on network losses, the incentive mechanism is now going back some 10 to 15 years. Ofgem engaged consultants to go through the process. They consulted publicly. Do we like the outcome? No, we don't, but ultimately it is a very difficult issue to get a handle on the exact level of loss. They have settled on an outcome that I dare say none of us likes, but, as I say, the incentive mechanism goes back 10 years. One of the benefits of the regulatory regime for the UK is it is a stable and predictable network and it is very dangerous to go back and change some decisions that were made 10 years ago or five years ago.

Andy Manning: Just to clarify, that is our issue. That is precisely what Ofgem has done. This £400 million is as a result of changing some numbers that were originally set. I will not go into the detail, but we would agree entirely that the scheme should have run as originally intended. That is not what has happened.

Q58 Sir Robert Smith: What is happening going forward?

Andy Manning: As Richard said earlier, this individual scheme was abandoned because of queries around the data and there is going to be a more discrete scheme from 2015 of smaller value.

Basil Scarsella: The UK Power Network plans include a losses plan that—I can't remember whether it was Richard or Andy said this—has been complemented by Ofgem.

Q59 Sir Robert Smith: How do you respond to the view that one of the next panel has raised, arguing that a 7% rate of losses in the electricity system is a good sign that the transmission system is being used and sweated? You could reduce transmission and distribution losses by over-engineering and, equally, put costs on—

Basil Scarsella: You could but there is no incentive in doing that obviously because that would increase costs to consumers even more, if you over-engineer. No one is incentivised to build spare capacity.

Q60 Sir Robert Smith: What is the optimal balance?

Basil Scarsella: In my view, the best way to determine whether the UK technical losses are adequate or not is benchmarking against other countries. No one can give you an exact number, but a range of 4% and 6% are due to what they term technical losses.

Richard Hall: In terms of how you work out what is value for money, difficult though it would be to do, it is a case of trying to construct a merit order of the relative cost of carbon abatement or keeping the lights on through different mechanisms. For example, if you take gas shrinkage, where about 3,200 gigawatt hours' worth of gas is lost in our distribution networks each year and targets are set to reduce that, for us the level at which those targets should be set should be informed by what the relative cost of carbon abatement is through reducing losses there compared to energy efficiency or stimulating low-carbon generation. If it is a cheap way of delivering carbon-emissions reduction it should be subject to very stringent targets. If it is a very expensive way, then alternative public policy mechanisms should be used to find different ways of dealing with those issues.

Q61 Sir Robert Smith: I think consumers would be a little perturbed to think that gas leaking is something that is just built into the system and not dealt with. The idea of gas leaking must be a bit of a concern.

Andy Manning: The gas networks are given incentives to reduce shrinkage. They are of far smaller value than we have seen in the past in electricity, but I think shrinkage levels are reducing over time I believe.

Sir Robert Smith: Thank you very much.

Chair: Thank you very much for your time this morning. Very illuminating. We have learned a great deal about Ofgem as well, even though they are not represented on the panel, but we will have a chance to discuss those issues with them in due course. I congratulate Mr Scarsella on getting away without any questions on FIFA as well. Thank you.

Examination of Witnesses

Witnesses: **Jonathan Smith**, Head of Trading & Pricing, First Utility, **Peter Bennell**, CEO, Haven Power, and **Patrick Smart**, UK & Ireland Grid Manager, RES, gave evidence.

Q62 Chair: We will start. We are not constrained by the temporary absence of Mr Smith. Welcome to the Committee. Thank you for coming in. I am sorry we are running slightly behind time, but there is a lot of interest obviously in this somewhat complex subject. Could I start by asking generally what you think the main drivers of network costs are?

Peter Bennell: That is a curious and pertinent question. The drivers of network costs are: what assets do you need; how often do they break; how often do they need to be replaced? Then you have to extend them and that tends to be dealt with separately. Those are things. What assets do we have to have? We might have more; we might have less. How often do they break down, and when they break down what does it cost to put them right? That is how I would deal with it in basic terms.

Peter Smart: The only thing I would add to that is the question of what value for money they deliver to the consumer. It is not just a question of the costs of the assets that are going into the ground. It is the extent to which they support efficiencies and effective competition; overall value to the consumer in the end in the bill.

Q63 Chair: Do you think these factors are changing significantly at all?

Peter Bennell: I would say they are. I have spent a lifetime in electricity, probably too long, and engineering practices and commercial practices have changed over that period of time. We have seen continued focus on reducing investment costs in some respects, but in other respects I look out of my office window and I can see about 10 substations. They all have transformers in them; they are all humming merrily away; they are all contributing to system losses even when customers are not using any power. I think there are some policies that are undoubtedly in the commercial interests of the distribution businesses but probably are leading to over-investment in some areas. I have to say there is a huge amount being done by the companies as well to improve reliability and reduce faults and that sort of thing, but I think we have some areas that probably are out of kilter.

Patrick Smart: I would just add to that. There are some areas where investment is being made now that may not look best value for the consumer right now but I think will lead to efficiencies and economies in the future. We have already talked about the low carbon network fund. I think we need to look at that in the context of what that will do in terms of drawing in third-party service providers in future. We are looking at lots of the demand-side response in storage initiatives that some of the DNOs are developing and I think we see ourselves having a role in supporting that. I know there are other companies out there introducing competition into what was previously a monopoly service. There are some longer-term investments going on here as part of the change in the way that electrical grid networks are being developed.

Q64 Chair: The question, Mr Smith, was: what do you think the main drivers of network costs are?

Jonathan Smith: I think there is obviously a lot of work going into owning and operating the networks and improving efficiency. I would point to Mr Hall's evidence earlier to say that it is important that we do set the incentives correctly so that the costs are reduced as much as possible for consumers. Energy costs are increasing all the time for consumers. There are many items in the bill that have been increasing. It is important to make sure that the investments are value for money for our consumers.

Q65 Chair: Is the implication of that answer that you think greater value could be squeezed out of it?

Jonathan Smith: The evidence is that the level of return in what might be a less risky investment seems higher than in other riskier investments.

Q66 Chair: That is presumably because Ofgem has not been sufficiently rigorous in the way they have tried to assess what the future costs are going to be.

Jonathan Smith: It is very hard to get it exactly right but I think you need continual monitoring of this to make sure that the right level of incentive is there, so a reasonable return is gained from network investments.

Q67 Chair: To an outsider approaching this for the first time the system does look quite complex. By way of example, you have connection charge, a use-of-system charge and a balancing charge. Is that the best way to do it, do you think? Are there any changes that could be made there?

Patrick Smart: It is a constant balance that the industry is trying to strike between simplicity to support effective competition and cost reflectivity. A lot of discussion this morning has been about how we can achieve more transparency. If you simplify things then arguably you dull investment signals. I am not quite sure what the right answer is. I know that we are constantly wrestling to try to make things like charging methodologies, charging statements, as clear as they can possibly be while also making them supportive of effective competition and encouraging effective investment. I guess it is just a constant battle that will always rage and the industry is set up for that.

Peter Bennell: I am very worried about this. I think we are making things far too complicated. Here, when we talk about distribution, we have a long-lived asset: 40 years, 50 years, 60 years and some of it has been in the ground 100 years. We have a very stable, predictable usage pattern among most customers, but from my perspective we have very volatile network charges. My company is only in the business market but we have

customers where, despite that stability, the network charges vary by tens of per cent from year to year.

Now, as a supplier in the business market, my profit margin is not even the skin on a rice pudding. You can go and look at our accounts if you don't believe me. We have been in business since 2006 and we have yet to make one and that is not because we are inefficient or anything. How do we deal with that, because my customers do not want to know that we cannot tell them what the costs of supplying them are going to be next year? We have to make estimates that take account of that volatility. As a consequence to that, you get yet more complexity layered into this.

My customers who say, "Forget all that; that is your job to manage it"—I am not complaining about that, I think that is my job to manage it—are going to pay more because I have to take the risk of that volatility. That is all I can do. I cannot do anything to manage that risk. I just have to accept it. You are going to pay 3% more if I manage that risk, and why is that risk there? It is not there because of a characteristic of the asset. It is there because the use-of-system prices come out of a very complicated spreadsheet model that is inordinately sensitive to the inputs that are put in and there is no scope for human intervention in terms of interpretation or applying common sense to those numbers.

If you look in my evidence, you will see how prices have gone up one year, down the next, and up again the year after and that is unnecessary. It is not reflective of the nature of the asset. It is not reflective of the costs that are there and it adds costs for business. If you are one of my customers who wants to know, your prices would be 3% cheaper if you were prepared to take a bit of risk. Some of them do take a bit of risk and some of them say, "I will take all the risk and you itemise it separately for me on the bill", and we will do that as well. However, lots of customers, quite rightly, do not want to know about that and it is costing them a lot more.

Jonathan Smith: I would add to that from a domestic point of view. Domestic customers want to see a good price for their electricity and gas. As Peter says, the network charging volatility does not make sense versus the nature of the asset that is being charged and that volatility means that suppliers have to put a risk premium on their tariffs. If you think about other costs in the electricity bill, the wholesale electricity is about half of the bill. It is a volatile number, but I can go into the market and I can buy a hedging product to lock in the cost of that for my customers. With network charges there is no equivalent hedging product you can go into the market and lock in. You are exposed to the price that is set sometimes only 40 days before it starts being charged. Then when you think about the retailer, I am selling to domestic customers who, under retail market reform, are moving increasingly to one-year, two-year, three-year fixed tariffs where there is no lever. If there is a cost shock on the distribution or transmission charges, I cannot pass that through to my customers. You have complexity you can't manage on one side and a revenue stream you can't adjust on the other side. It is very difficult to compete in that market.

Q68 Chair: Do you think there is enough competition? I know UK Power Networks were advertising the fact that they encourage their customer to see whether they can get a better deal elsewhere but my impression generally in this industry is there is not a huge amount of competition. Obviously part of it may be a natural monopoly, but by no means all of it.

Patrick Smart: I think, at Mr Scarsella's voltage, competition is coming and it has been useful to reveal what value for money is. I am going to chuck a number out there, but we are seeing, through competition and connections just going into the market, 10% to 15% off reasonably chunky connection charges. That can be found by going to the market. I think what we are very keen to see is that competition introduced into transmission, which for onshore at least—OFTO obviously exists for offshore—is still pretty much a closed shop. We would love to see competition introduced there to see if those savings can be revealed there as well.

Chair: You were saying you can get 10% to 15% reduction by going to competition.

Patrick Smart: I will just clarify that. That is purely on connections, so a typical distribution connection.

Q69 Chair: It suggests that until competition is becoming more widespread there was, in effect, exploitation of the dominant position by the distribution companies.

Patrick Smart: I am not sure you could be that clear cut. I think the differences in costs could well have been linked to the way they were set up and their ways of working. Some of the companies that are entering the market are perhaps a bit smaller and a bit leaner. They do not maybe have the baggage of having operated as an electricity board for however many decades. I do not think it is necessarily the case that they were milking their position.

Q70 Chair: In the onshore transmission you mentioned, what are the parts of that that could easily be opened to competition?

Patrick Smart: I will dive in again. Some of the more strategic investments, maybe some of the investments that are linked to large concentrations of generation in more remote areas in the country, those are the sorts of projects that would lend themselves to competition.

Q71 Chair: Let me just cite one example with which I became almost over-familiar when there was a proposal by National Grid to build a new transmission line across my constituency because of the expectation of Sizewell C coming on stream, plus some offshore wind farms off the East Anglian coast. In the end that project has been deferred, but they are going to build a completely new transmission line and the argument of course was whether it was going to be pylons or underground or a mixture. Is that the sort of project you think could be put out for competition?

Patrick Smart: Yes.

Q72 Chair: Why have we not started to do that already?

Patrick Smart: That is a good question. The regulation of transmission relative to distribution has always been a lot tighter and I suspect that is because of the perception of its strategic importance. So lower-voltage-wise, you are not going to lose a whole country as a result of a loss of 33KV system, whereas if you lose a 400KV circuit that is connecting as part of the main spine that can have a very serious impact. I think the regulation around transmission has always been that bit tighter, but if we are talking about projects that are perhaps there to connect more strategic concentration of generation, then I think that is the sort of project that could be opened up to competition without particular risk to society.

Q73 Albert Owen: Same questions I have asked the previous panel, but I want to do them slightly differently. Mr Smith, you mentioned the assessment of the level of understanding of the network charges on household bills is pretty low and that people just want a good deal. What can be done to improve their understanding? Is it just clear tariffs?

Jonathan Smith: Yes, having clear tariffs that are well explained. I think the industry as a whole can improve its efforts to increase the understanding of customers on the different components that go into a retail tariff. I think revealing that complexity to some extent is a good thing because customers should have full transparency of what exactly they are paying for, how much of their energy is being paid for due to wholesale electricity or gas purchases and how much is going to transmission and distribution.

Q74 Albert Owen: They could compare and contrast with previous years. Last year there was a considerable increase in the price of dual fuel bills and whole bills. How much of that was contributed to network costs?

Jonathan Smith: Network costs have been pretty volatile in recent years. I would need to confirm and write back to the Committee if I am incorrect, but there been average increases in some of the years of up to 10% on things like GEOS distribution charges. Moreover, the variation between the regions can be very large. It can be from small single-digit percentages in some regions to some of the other 14 regions being 20% or 30% year-on-year increases. As I have said, these are signposted only one to three months ahead of time. It is very hard as a supplier, particularly as one of the suppliers coming in and trying to bring competition into the industry, to manage that volatility on behalf of our customers and to offer a good deal. We do offer a good deal. We try to give the lowest-priced deal we can to customers to try to save them money on their energy bills, but it is not a simple task.

Q75 Albert Owen: Are you as confident as the CEO of UK Power Networks that they are going to stabilise over future years?

Jonathan Smith: I would go back to the point that Peter made. The models that you use to try to work out the network charges are extremely complicated and small changes in the inputs make big changes in the outputs. As a small supplier, I do not have access to a big

team of people to monitor those models and calibrate them and understand which areas are most important. It is very hard for us to see with certainty where it is going. We try to do the best we can and we do a decent job, but it is a big challenge. Anything that can be done to improve, to simplify, the charging mechanism that is passed on to suppliers who are least able to forecast these costs and factor them into the prices they charge on to their consumers the better.

Peter Bennell: I cannot see the volatility changing because the model is not changing. We have brought forward some modifications. They are fairly dull things but they are designed to change the way that the industry works these things out. In fairness to them, some of the network companies have also brought forward modifications. At the moment what those are doing is giving us a bit more of a heads-up, but they are not clamping down on that unnecessary volatility. I think something else more fundamental needs to happen there.

It is not just network charges. There are volatilities in lots of other cost areas. We are in the middle of introducing the new supplier obligations on contracts for differences. There is going to be huge volatility in there and it is going to be very difficult to know what the cost was. Even if you are a large customer that says, “I will take that volatility; I don’t want you to manage it”, it is—

Q76 Albert Owen: I know you represent a business, but that would be pretty easy to find out on a consumer bill. If one year you pay X amount and the wholesale price has gone down and other costs have gone down and network charges have gone up, it would be quite easy to see. Is it not fair to say that in the first few years post-privatisation there was a lack of investment and now to bring the kit up to speed there needs to be investment and that is why there was a prediction that there would be stability over the next few years? I would argue that maybe prices have to increase because further maintenance and replacement is needed.

Peter Bennell: I think you have to separate the general trend of prices from prices for particular customers or groups of customers. I would not argue with the need for investment in networks and in generation and in smart metering and other things like that. That has to be paid for and that is likely to cost money. We are at the stage of evolution where further efficiencies are going to come, but they are unlikely to offset those extra costs. What we will see on distribution costs is they will step down in 2015 on average and they will then start to follow a slow upward path again as we continue to invest in the networks, basically.

Albert Owen: Mr Smart, would you like to comment on those issues?

Patrick Smart: I was just going to agree with your statement. I think that the investments are necessary. They are necessary in order to bring about the future generation background that we will be looking at. They will be far more dynamic and diverse. There is no way we can do that based on an electricity system that was designed for large centralised fossil-fuel power stations. I agree completely with your statement. The key thing to add is that when the grid companies consider replacement they do it in a way that brings about best value for the consumer. First, have a bit of competition; introduce some market forces to make sure that whatever is being done is done at the best possible price. Secondly,

consider the optimum solution. Is it possible to defer some investment if, for example, there is a network storage solution that could be used? Is there anything more dynamic? Is there anything more intelligent that would deliver better value for the consumer?

Q77 Albert Owen: My statement was based on previous evidence. It is not necessarily where I want to go or where I think it is going. You mentioned competition. What about not-for-profit organisations; rather than shareholders getting the profits, it is reinvested in the system?

Patrick Smart: I have not considered that.

Albert Owen: It works in Wales where water is concerned. We pay, on average, about the average the United Kingdom pays. We have a decent supply of water. It is old kit that has been maintained to a high standard and it has to meet regulations from the European Union. It does not make profits in the same way and there is competition within that model. You say you have not considered it. Do you think it should be considered in the future?

Patrick Smart: Anything that will deliver efficiencies to the consumer I think is worthy of consideration. I have to admit that what you have described is all new to me, so I cannot really comment on it. Provided there are drivers to drive efficiencies and economies, I do not see why it should not be considered.

Q78 Albert Owen: Mr Smith, you mentioned the notice period of charges. What are the pros and cons of extending the period from 40 days?

Jonathan Smith: To summarise the challenge it creates for the small supplier to domestic customers—and these are things that add up; distribution is 20% of the electricity bill; gas distribution is similar sorts of numbers in the gas bill—if it is only notified 40 days in advance and we are trying to sell one-year, two-year, three-year forward tariffs, we have to work out two or three price increases during that tariff period and make an estimate of where they might be. Because of the volatility, we have to factor some kind of risk premium into our tariffs to protect against the risk of price shocks on those cost increases. That is a big challenge and it means that the price of tariffs is higher than it might otherwise be if you were given more signposts of what those costs were going to be ahead of time.

I would argue that it is more efficient for a network operator who knows what investment is going in and understands those models much better than a supplier will to be able to predict and set the charges ahead of time and manage the cash flow of their business for those investments ahead of time. If there is a cost of financing that with the distribution and network operators, that should be factored into the future trajectory of costs for suppliers. It is reasonable to expect that to be factored in, but it should be in the place where it is best capable of being managed.

Q79 Albert Owen: Mr Smart, do you think the notice period should be extended?

Patrick Smart: As far as the impact on our business goes, it is something we can live with. Charge volatility is a problem for us. I know in light of how the charging methodology could have gone as it was set about a year or two ago, it could have been even worse, but it is still a problem for us. The DNOs are wrestling with a number of challenges, one of which is regulatory decision making. The onus is always on Ofgem to make sure they deliver decisions in the timeliest possible manner. Yes, if there is more time going that would be very welcome, but we understand that it is a very challenging environment for the DNOs to operate in.

Peter Bennell: I think there is much more upside to longer notice periods and more stable pricing for all the reasons that we have heard but also in these prices are price signals to individuals. We all remember Economy 7, news hit overnight. In these business prices there are three price bands, traffic-light price bands, and the bulk of the charges fall in a very short period of time but those costs move up and down. If you are a business and you want to reduce your costs you have to invest and before you invest you want to see some prospect of a return. By making those time bands more stable, businesses will be more confident to invest in the sorts of power-using kit that reduces their usage at peak and that will help the DNOs because that will have the results they are seeking through this complex pricing. It is not happening at the moment, by and large, because from one year to the next these prices are moving all over the place and customers cannot tell what they will save by making those investments. I think overwhelmingly positive. The impact on DNO cashflow—you are not just going to freeze this in part of the market—overall I do not think there would be a significant cashflow impact at all. What you would do is give customers more notice, give suppliers more notice, and then everyone can act on a sensible basis.

Q80 Albert Owen: Going back to household bills specifically and finally, the Retail Market Review resulting in reduction in the no-standing-fee tariffs and a move towards more fixed network charges that could be passed on to the customers with lower consumption. How to you think that will affect your customers, Mr Smith?

Jonathan Smith: We know that low standing charge tariffs benefit lower users, so anyone who is in that band, if low-standing-charge tariffs disappear, will face a sharp change in the cost of their annual bill. I think it is important that suppliers can design and supply all types of different tariffs. The reduction to four does reduce innovation. There are some derogations to innovate around tariffs. They have not been tried out very much yet under RMR because it has only recently been implemented, but I think there is a real risk that innovation around tariff design is limited under RMR and it will be interesting to see how the smart tariffs and the time-of-use tariffs that would encourage the demand response that Peter was referring to may play out in in RMR.

Q81 Albert Owen: This is an unintended consequence and, of course, on top of that you have the Government legislating different tariff bands. How is that going to impact on those with low consumption?

Jonathan Smith: Sorry, in terms of?

Albert Owen: The Government is talking about moving the number of tariff bands. How is that going to impact on your customers who are low users?

Jonathan Smith: It means that there will be fewer lower standing charge tariffs, so those low users will have a higher bill. That is going to be the case across all suppliers that have less ability to offer a lower standing charge tariff.

Q82 Sir Robert Smith: Can I just clarify? This is not a ban on having no standing charges. It is just that, given the limited number of products, companies have decided that the wider market would be supporting products that have a standing charge. Is that right?

Jonathan Smith: There is a challenge in tariff design. You need to make sure you are going to recover your fixed costs and variable costs and if you only have a few different tariffs you are unlikely to experiment so much with the way you do your cost recovery and your tariff design. It is very likely that suppliers will converge on a set of tariffs that will appeal to the broader market rather than perhaps work on the fringes where there are particular subsections where they might have otherwise been able to offer a good service for low users, for example. I think that is the challenge. The lack of ability to vary your tariffs affects your ability to innovate at the edges of the market.

Q83 Sir Robert Smith: Do you have gas prepayment customers?

Jonathan Smith: We have prepayment customers.

Q84 Sir Robert Smith: I think one of the important things for companies to do is to warn those that just use their gas in the winter that over the summer they are building up a standing charge lump sum and when they come to the traditional switching-on of the gas in the winter they are going to find that prepayment meter needs a lot of money putting in it before it will start paying for gas.

Jonathan Smith: I think the cash balance that a customer has with a supplier has been quite a big topic in recent times and I think it is very important that suppliers communicate the cash balance to customers so that they are aware and their payment plan does not give them price shocks on their energy bills, absolutely.

Q85 Dr Whitehead: As suppliers and generators looking in to the DNOs, do you observe them as a sort of lump in the middle that is immutable or are there signs or ways in which, particularly as far as improvement and innovation are concerned, those networks are beginning to talk outside the networks in terms of how collaboration improvement can be achieved?

Patrick Smart: There are signs. We are seeing some benefits arising from the RIIO funding arrangements. The improvement in stakeholder engagement is marked, from our experience. Different companies are engaging to different levels, but certainly some are listening and are taking on board what we are looking for and not following business-as-usual. An example would be dynamic non-firm connections. There are some grid companies who, rather than take a connection application and give you a bog-standard connection design, will talk to you and say, “Is this what you want? Do you want to pay all this money? For a lot less money you can have something that is a bit constrained and you can do something with it. You can put it into storage or there might be a far more economic and efficient outcome for you”. It is slow. Some are still behaving like electricity boards, but some are more engaged and looking to be more dynamic and basically trying to give a service that is fit for purpose and that is welcome.

Q86 Dr Whitehead: The distinction I have already made between simply replacing the system—and arguably there is an investment requirement simply to replace the system as it falls down—and improving the system, either getting more from how the system is or indeed replacing the system in such a way that it works much smarter in terms of the linkage between, say, the rollout of smart meters and the smart grids and maximising what you are getting out of smart meters to make the whole thing work better, in your view is that something that inherently requires a better relationship between suppliers and generators or is it something that the district network operators can do entirely in their own world?

Patrick Smart: No, I think it does require the collaboration because they need to be aware of what we are capable of in order that they can best integrate. National Grid around the Hull area has come up with a section of dynamic system that has squeezed out an extra couple of hundred megawatts of capacity from the same stretch of overhead line. They need to know what new generation is coming along, how it is going to behave and whether or not we are up for participating in that sort of innovation. That has worked very well. We just need to see more of it. We just need to see more of the DNOs and more of the grid companies looking to depart from business-as-usual to make sure that we end up with the optimum design.

Q87 Dr Whitehead: Are there any incentives or rewards in the system to enable that to happen or is that just good luck that, say, a particular supplier or a particular generator connecting in a certain place might have; the lucky happenstance of a particular network operator in a particular area?

Patrick Smart: It can be good luck but then the grid companies are also open to a bottom-up discussion on what is the optimum design and there is no reason why they would not engage in that. If there are commercial implications for us in participating with them in something innovative, there may not be anything in it for them but they are still up for the discussion on occasion and we can make progress with that.

Q88 Dr Whitehead: What, in terms of sharing outcome?

Patrick Smart: Sharing risk. That is right.

Dr Whitehead: Is that something that Mr Smith and Mr Bennell would like to say something about?

Peter Bennell: It is an interesting area. I think for a long time the distribution companies have regarded Ofgem as their customer and have focused overly on Ofgem. Distribution and supply used to be together, until 2000, if my memory serves me properly, and they were forcibly separated. Historically, there was a very good dialogue in the 1990s and you saw lots of good initiatives like Economy 7. Switching times would be varied so that customers got what they wanted and the load on the network was managed carefully. We lost that following separation. I think we are starting to see some engagement. It takes two or three or four to engage, so RIIO has been a trigger for distribution companies to reach out to people and they have done that. They have been reaching out into a void, but I think if they continue to reach out suppliers will start to reach out. Customers will start to reach out and other interested parties will as well and we will see that.

Now, is there a mechanism for them to measure that and to benefit from it? I don't think there is a regulatory one. I think the regulatory business plan process looks at your customer engagement, gives you a tick in a box, a mark out of 10, and if you get over the bar you will get your thing set. What matters is how that process pans out over the coming months and years because that is what will drive out the efficiencies from things like smart meters. If we don't get that process right, then we will lose great big rafts of benefits that could be realised by people working together, talking to each other and understanding what we are all trying to do rather than trying to communicate through complicated price signals and tariffs and regulatory regimes and everything else. Yes, I think there is a start there. It needs suppliers to continue to engage. It needs other parties to engage and it needs people to learn how to talk to each other again to get what is best.

Q89 Dr Whitehead: There was a study just a little while ago sponsored by DECC looking at the extent to which networks would need to replace and strengthen if you did it on the present dumb basis, shall we say, as opposed to smarter protocols and perhaps arrangements in terms of switching and time-of-use and various other things. They suggested that the kilometres of replacement would be reduced by a factor of about 80% if you entered into those sorts of arrangements. The problem for me is where the benefit falls from that. Would you, as suppliers and generators, expect to participate in that benefit? If you did participate in that benefit, how might that be worked out?

Peter Bennell: Do you mean keep some?

Dr Whitehead: Yes.

Peter Bennell: As a supplier, no. I do not expect to make a turn or a margin on distribution costs. I am an energy supplier. Distribution is one of the things we need to have and, as far as I am concerned, the best thing I can do to promote a long-standing relationship with a customer is to give them what they want, help them minimise their costs and help them understand how they can do that. I do not see any need for that. Whether 80% is the right number or whether it is another number, those cost savings are very considerable. At the

moment the utilisation on a domestic supply is probably less than 10%, average compared to peak usage. All that capacity is sitting there doing nothing a lot of the time. That is a challenge. How do you use it best? I think the value of that ultimately will go back to customers through lower costs from reduced need to beef everything up.

Jonathan Smith: I think the smart meters have a big part to play in this from the domestic perspective as well. We have been rolling out smart meters and trying to be one of the leading suppliers offering them to customers. I would love that to unlock time-of-use tariffs to encourage consumers to be able to move their energy usage from those peak periods, which our networks have built the capacity to cope with, over to the off-peak periods where there is more flexibility. That will release capacity for other users. It can reduce the investment in the networks if we do it properly and it does need a big engagement between all participants in the market, but there is a lot of change in the industry that will have to happen to unlock that. We do not have a time-of-use signal so to speak in a lot of the network charges for domestic customers. You need to see a time-of-use benefit for moving all different aspects of the cost of supply in order to be able to encourage and design tariffs that will reward customers for moving their energy usage away from those peak periods.

Q90 Dr Whitehead: Ofgem's solution at the moment appears to be to have a low carbon network fund in order to provide money to incentivise networks to do these sorts of things. Is that not something that ought to be done anyway as a part of the process whereby, between you, you all get to gain?

Patrick Smart: Yes. To go back to your original question of whether we should benefit as a generator, I would say the same as Peter, probably not. However, if we are going to help bring about some of these efficiencies as a service provider in other areas, whether that is through demand-side response or provision of technology to support more efficient demand-side response, or aggregation of large amounts of demand that can respond to system-operator needs, then, yes, I think we would be benefiting from it because we would be participating and collaborating; adding value.

Peter Bennell: It is innovation that is going to drive this stuff forward. On the one hand we have innovation incentives and on the other hand we have a regulatory regime that increasingly is saying, "Do not innovate. Four tariffs are too confusing. It is too complicated; you will confuse customers". I think we have to be very careful with this. Personally, I would say innovation is nearly always a very good thing, but it is being squashed on the supply side now. As a supplier you cannot domestically go and talk to customers about lots of innovative ideas because you do not have room in your four baskets. The four baskets will go, we are told, when domestic competition takes off a bit more, but why is competition going to take off suddenly if you cannot innovate?

Q91 Dr Whitehead: Do you think that sort of point is sufficiently reflected in how price control agreements are brought about?

Peter Bennell: No, I do not. I think it is confused and they are done in separate baskets by separate teams of people and that big picture is lost. You are not going to get benefits from smart metering beyond better, more accurate bills, although that would be quite a big benefit. You are not going to get better benefits without this innovation and, in my view, it is a market that will create innovation. It is customers who want things and it is suppliers and other people who want to sell to them, and it will quite quickly drive out things that people will want to buy. They will either make life easier for them or cut their costs or do all sorts of other things, but at the moment the tap is turned off on that side of things and there is a great big “no entry” sign on it and that is keeping people out of the market. That is keeping potential entrants out of the market. They are not coming in because they are worried about investing money only to be cut off at the knees and told, “No, you cannot do it”.

Q92 Dr Whitehead: Was the £5 off we had just recently in terms of distribution networks charges to the detriment of that innovation or just a sweat from the additional process?

Peter Bennell: I think that is a nice gesture for customers who are finding it hard to make ends meet. I do not think it touches innovation. The way it has been done is it is £5 borrowed from next year brought forward, “The costs are expected to go down next year. We will have it a bit early, please. Thanks very much”. I think that is a nice gesture. I do not think it touches innovation. It is more deep-rooted. We are paying for innovation over here and we are saying do not innovate over here; in fact, unwind a lot of the innovation you have. We have seen suppliers cancel tariffs that customers like because they are only allowed four. Bonkers.

Q93 Chair: Just arising out of this, because we are also doing some work on demand-side responses, it seems to me that the potential, both through much more time-of-use pricing and also through the encouragement of interruptible supply where it appears technology now enables you to have very quick responses from a large portfolio of potential customers and, therefore, the potential for demand side response to address the problem of lack of capacity at peak moments is far greater than anyone has thought about until very recently. There is a 20th century mind-set inside National Grid and possibly the distribution companies as well that is, if you are National Grid, “How do I make money? I persuade Ofgem to approve a big new capital programme, build lots of transmission lines, lots of new power stations; I make more money, guaranteed return, lovely monopoly business”. That is not in the national interest. In terms of energy supply we could cut peak demand, improve security, reduce emissions and lower costs for customers by facilitating much greater flexibility with the latest technology on the demand side. Does that make any sense?

Peter Bennell: Yes.

Patrick Smart: I think we are just taking our first steps down the road of being able to deliver services along those lines now. The first step is smart meters, but there is broader technology around controllability of that level of demand. That is possibly where more work needs to be done, just giving the confidence to the system operator not just that they can communicate with demand but they have reassurance that changes in demand take

place. It is something we are very interested in and we see that as part of our future business for sure, but there is a fair bit of work to be done on the technology side.

Jonathan Smith: I agree demand side responses have a very big part to play potentially on reducing the cost of the overall UK investment in the energy infrastructure. On the domestic side, a huge amount needs to be done to unlock that piece of the demand side response puzzle. We have domestic customers settled against profile coefficients as opposed to being half-hourly settled. That is a key thing that needs to be addressed to be able to pass on the benefits to consumers when they change their behaviour. There are a number of other features in the market that need to follow on with that to properly unlock the full benefits of smart metering.

Peter Bennell: The sorts of things you are talking about are entirely possible. I would be pessimistic about them happening as long as we continue to be prescriptive about how we want people to work. As long we continue to divide things up and treat them in isolation and box people in and not allow people to work together to find natural solutions we will—a good example is the World Cup Final. Everyone is going to switch their kettles on at the end, aren't they? One of the most sensible things to do might be to take a big advert out, "Do not put your kettle on now or the lights will go out". That is not going to happen under the current regime. I think that sort of thing will happen if you allow people to innovate and it will come naturally. It will take some time because people are used to working within the constraints they have, but one or two people will come along and break the mould and very quickly everyone else will be doing it as well.

Q94 Chair: Going back to a point you made in an earlier answer to Dr Whitehead about the separation of distribution and supply, obviously one of the political discussions is about the possible ending of vertical integration, so you would not have generation and supply together. If that was the route that was taken, so we would go back to the post-privatisation model of generators there and suppliers there, you could at that point if you wanted re-unite distribution and supply, could you not?

Peter Bennell: You could, and I think you guys make the law.

Chair: Alas, we try.

Peter Bennell: The consequences of these things unfold over long periods of time. Another one is the Electricity Act originally put competition first and that was diluted. I think the Utilities Act diluted it, but I might be wrong. Again, you know better than me. You voted on it. That has been responsible for some of the things we have just been discussing about innovation. It has forced regulators to say, "I am not just looking for a competitive approach and if that is not quite happening at the speed I want I need to take some other action". I think that is forcing us down in these things.

When you come to talk about splitting generation and supply it is difficult to think some of these things through and if it needs to be done in order to improve transparency in wholesale markets or open the market up and get more competition that is great, but let us just make sure that we think it through properly and think through all of the consequences. I do not think anyone anticipated distributors and suppliers not talking to each other at all

as a consequence of separation. I do not think anyone anticipated that and undoubtedly the world is a poorer and more expensive place because that has happened over the last 10 years.

Patrick Smart: I will just generate a note of caution there. There is a certain amount of investor comfort we take from grid companies being separate from significant generation and supply interests. While I assume your question is trying to see if there any efficiencies that can be gained and I am all for effective communication with grid companies, closer links and collaboration, I think separation of ownership is a source of investor comfort to the likes of us.

Chair: The grid has not discussed this, but I do not see how trust on the part of consumers in the big six will ever be restored unless supply and generation are separated. That is a practical observation. It may not matter very much but if they want to get the trust back they have to volunteer to divest themselves.

Q95 John Robertson: You will have heard the questions I asked. I am going to ask the same questions. Obviously you had mentioned RIIO before. What are the pros and cons of RIIO as opposed to RPI-X?

Patrick Smart: I will dive in. It is the focus on service that I would commend. It was interesting to get Richard Hall's comments on the extent to which real benefit has been delivered. He may have a point, but I think it is a new funding regime that needs to be in. What I like about it is the fact that it is not just about grid companies owning big lumps of copper. It is about delivering consumers to users of their network and that is the fundamental difference. That is why I think it is important.

Q96 John Robertson: Do you think that the innovation part of it might be more important or other bits? It strikes me that it takes that a stage forward from the previous one.

Patrick Smart: Yes. It is welcome. Could there be more incentive put on innovation? Possibly.

Q97 John Robertson: Do you think there is a will among companies to make it work?

Peter Bennell: Mixed.

John Robertson: Don't sit on the fence.

Peter Bennell: I think some regard it as an RPI-X type activity: this is something we have to get through. "We will get our new regulatory determination and then we will carry on until the next one". Others are starting to say, "We ought to be talking to people a bit more". Some of them have gone and done that quite well and some have started to wake suppliers up to the fact that you ought to talk to network companies more. It is allowed. It is okay. On balance I think it is a good thing.

Q98 John Robertson: What is the level of consultation between yourselves and Ofgem on this subject? Have you had any? Would you like input? Are they listening to you?

Patrick Smart: Certainly the good companies are listening to us because we turn up at their public forums. Ofgem attends and I would not say we bang our fist on the desk, but we certainly make some points pretty clearly and one thing RIIO has done is opened up those opportunities to make public our grievances and hold them to account. That has reaped rewards for our industry as a whole. Whether we engage directly with Ofgem so much, I am not quite sure. However, we certainly engage with public debate in a way that exposes grid companies to Ofgem and I think that has brought improvements.

Jonathan Smith: We certainly engage and make it clear that network charging volatility is unhelpful for domestic consumers. It is adding costs to their consumer bills so they are higher than they otherwise might be. We are making it clear that some of the changes in the industry we are doing at the moment are only increasing volatility of the cost charges, much like the contract for difference feed-in tariffs are going to increase volatility for consumers as they grow and become a component that is not that different potentially in the future to the cost of distribution. We are not learning the lessons on some of these things and that message needs to be made loud and clear.

Q99 John Robertson: Would it be fair to say you think the regulatory incentives are not enhancing the performance of the companies?

Jonathan Smith: I am not close enough to the specific regulatory incentives under the price control but they have not led to a decrease in the volatility of the costs in the way they are being passed through to the domestic customers.

Peter Bennell: I would say some of the regulatory incentives are working. Some of them have not worked. I do not think losses has worked. It is a very difficult, tough area. The scheme was not going anywhere. I think the regulator was probably right to cancel it. Other ones, it is nice to see some innovation but let us not put it in a box, as I have said. If it kick-starts it and it gets people thinking it is all right to innovate, then good. The same with the business plans. I would like to see Ofgem pushing that more just beyond this plan we have now set out for the RIIO period.

Q100 John Robertson: Innovation is supposed to help stimulate growth and everything else. It strikes me as if you are using it as if it is a step rather than something to be grasped to take forward. Surely innovation is your position. Ofgem can only put the circumstances that help there. It is for the companies then to take it on board.

Peter Bennell: That is what worries me. I think innovation is our responsibility. I think networks have very much been in a place where they have thought, “We do not innovate because it is not in our agreement with Ofgem”. Having the innovation eye is useful and

the challenge is to stop it being in the box that has been set at the moment. It is to keep it going and make it take off.

Q101 John Robertson: Should you not, along with companies in the same position, take control of these things and not so much be talking to Ofgem but advising them what they should do rather than the other way round.

Peter Bennell: We try to do some of that; small businesses with limited resources.

Q102 John Robertson: They do move slowly, I have to say. Network charges vary according to the 14 electricity and 12 gas regions. What is your view on this? You probably heard me mention that Scotland always seems to suffer in these things, but I would say that. Should there be a standardised charge across the country rather than different charges in different areas?

Patrick Smart: On the Scotland issue you are probably aware of Project Transmit and National Grid's review of transmission networking system charges.

Q103 John Robertson: I have been here for 14 years and they have been reviewing it for 14 years.

Patrick Smart: We might get a conclusion in the next couple of months, Mr Robertson. I will commend National Grid on the process they have run. It was very detailed and very well considered in very pressing timescales. I think it will deliver some transmission charges. Assuming Ofgem stick with their minded position, it will deliver some charges that are more cost-reflective and more supportive of effective competition. They will not establish a postage stamp as I think you were suggesting.

Q104 John Robertson: Which regions do you think pay more and why do you think it is okay?

Patrick Smart: Clearly it is the regions that are further away and more geographically removed from, say, the main centres.

Q105 John Robertson: Yet, as I said, we are an exporter of energy at this present moment. That may change, but should we be paying more?

Patrick Smart: As I say, it is a constant balancing act we are trying to find between—

Q106 John Robertson: Is it not to do with where the density of population is rather than where the energy is produced?

Peter Bennell: Distribution is cheaper in dense urban areas compared to—

John Robertson: I fed you that line.

Peter Bennell: It is. The variation in charges is a function of how the industry was nationalised in 1946. You have these company areas. They have mixes of rural and towns and you get a set of charges that reflects that. If you have a high cost area like South Wales where you have smaller centres of population and a small overall customer base to spread your fixed costs over your costs are going to be higher. It is the same in north of Scotland. The north of Scotland gets some special relief, as we heard earlier. The question is, what do you do about it?

Q107 John Robertson: It is for others. I know what I would do but, then again, that would not be very popular in these densely populated areas.

Patrick Smart: I will just say it is a very difficult one, but if National Grid were sat here I think they would say they cannot pick winners. Yes, we, along with a lot of the industry, would love to see lower charges in Scotland but we understand that we have to pay our fair share and we are not here to receive cross-subsidy. We are seeing now from National Grid a move away from charges that we thought were not cost-reflective and we are effectively penalising those who are putting renewables in.

Q108 John Robertson: It goes back to what my colleague was talking about earlier, about people who cannot get access to gas or electricity in the way other people do and they always pay through the nose for it. It is only because they are in a rural area and in a lot of ways it is very unfair. Costs can be well spread over in a densely-populated area but in these kinds of places it is not and sometimes we do forget about them.

Jonathan Smith: I think it is an interesting philosophical question. The costs in a different region are what the costs are for the geographies and the reasons that have been explained. How you then allocate that to domestic customers or different customer types is a different question and it seems like a sensible thing to look at. We need to make sure that in those remote places there are schemes in place to allow people access to the energy they require at reasonable prices.

Q109 John Robertson: The problem is there are no big power stations in the city centres and all these places that are paying through the nose are the same places that are giving you the energy.

Peter Bennell: But you see the reverse on transmission, so London has some of the highest transmission costs.

John Robertson: But that is only 4% of the bill.

Peter Bennell: It is, but that is physics, I am afraid.

Q110 John Robertson: Let us talk about benchmarks and lack of comparator companies. Comparators always make it easier to tell whether things are good or bad. Should we have the benchmarks set across the networks so that we can look at how we address these problems?

Patrick Smart: International comparison is difficult because of the differences in standards and the way networks are operated and have evolved in different markets. However, I think having comparators within given markets would be very helpful.

Q111 John Robertson: How does the benchmark work in your area, particularly for the smaller companies?

Peter Bennell: Customers do it. They look at the service we get. They look at the cost we ask for. They look at how we answer the phone, how we deal with them and they decide whether they are going to move their business elsewhere.

Q112 John Robertson: Do the comparison companies help you, things like uSwitch and whatnot?

Peter Bennell: Yes. We work with comparison companies. We work with brokers and consultants as well and that customer uses all those sources in forming an opinion. Translate that into networks, I quite like the idea we heard this morning. What about the call centre aspects of these businesses? Why cannot they be benchmarked against 24-hour insurance call centres? We have heard about connection competition. There is a benchmark there in its own right, is there not? Why cannot you benchmark DNO connections against all these other competition in connection businesses? If you are not careful you will squeeze them out of profits.

Q113 John Robertson: The problem is you get different regulators. That is your answer. Ofgem would have to deal with Ofcom.

Peter Bennell: DNOs could do it themselves, could they not? They could publish the results and say, "We have looked at this and this is how we compare".

Q114 John Robertson: You have made your point and it is on record and we may or may not use them, but it is a fair point. It is a fair point. As somebody who has spent most of his life in communications, I can see the point on it. My last question is basically do you believe the network companies would be more responsive to consumers if they billed them directly? If you remember I mentioned last time about if these companies billed their own part of the bill to the company they would be obviously then be in the spotlight for what they are paying,

albeit I know that people do not like all these bills and I can understand the theory behind not doing it. Do you think that would be quite useful? They do hide behind the other companies who are the whipping boys in some cases.

Peter Bennell: That could be far-reaching. Would they make them more customer-responsive? I think it would because you would find that customers would stop paying their bills if they were not happy with the service. Would it be good? You are put an extra cost in, aren't? You are putting in more bills, more contact, more payments. You are doubling all that.

Q115 John Robertson: Because they would come under the spotlight from each customer, would that not itself drive costs down?

Peter Bennell: It might do. You would have to get back £15 to £20 a year to pay for it in round numbers, so if you think you can do that then that would be a good thing. That is a quarter of the distribution costs based on the numbers we heard this morning. I do not know if there is that much cost left to take out but it would be a good challenge, would it not?

Q116 John Robertson: I cannot remember who it was that said it. I think it was Mr Scarsella who said that the bills should identify the network company and who pays that part of the bill. That would solve that problem and that would highlight there is X amount of money going to the network company.

Peter Bennell: You could put it on the bill, but whether people will read it is another thing.

Jonathan Smith: There is a question of transparency on this, of course. You are trying to demonstrate transparently to consumers where the different elements of their energy supply cost comes from. The question is where do you stop? Do you start itemising just the distribution costs or just the transmission costs? Do you look at just gas or gas and electricity? There are four costs there: balancing costs, renewables obligation, contracts for difference, feed-in tariffs. The list goes on.

Q117 John Robertson: The problem is, Mr Smith, I have heard all this before and the one thing that your business lacks is transparency.

Jonathan Smith: I agree completely.

Q118 John Robertson: That is for you to sort out and not for the customer to have to pay for it. When you get transparency then they will see what is happening and what they are doing and they will go to your company, you hope, to get their electricity or whatever.

Jonathan Smith: I agree entirely about—

John Robertson: It is for the companies to sort out, not the people.

Q119 Sir Robert Smith: One of the other things that goes into the bill is the cost of losses and leakage or shrinkage. What is the panel's view of how they should be handled and their impact?

Patrick Smart: I appreciate it is not my area but I ought to answer because you quoted my written response in questions earlier today, Sir Robert. My response suggested that we should not consider losses as being purely a negative thing. I think you suggested that we were inferring a certain amount of losses was good. I did not mean to suggest that. I probably should have unpacked that more in my initial written response. Obviously, where losses are excessive and there are costs to the consumer that is a bad thing. My point was that where there are losses it may well be the case there are losses because assets are being sweated and that is probably in the best interests of—

Sir Robert Smith: May be more cost-effective.

Patrick Smart: Indeed—in the best interests of the consumer. It is not in the best interests of the consumer to have assets being built and then just left there sitting cold, not being used. That was my broader point, but I take on board I probably could have unpacked that a little bit more.

Q120 Sir Robert Smith: Would that be something the other two share?

Peter Bennell: I think there has been insufficient focus on losses. We have had losses schemes, but they have been technical and it is trying to measure a small change in a small part of what you are moving around. Controversially, you could get DNOs to pay for the losses rather than customers. Money would come back through the DNO charge but they would have a much bigger incentive to minimise them and I think more focus could possibly be put on some of the technical aspects of the way that networks are designed and run in order to minimise or take more account of losses. As I said earlier, I look out of my window and I can see lots of substations. We are only on an office development but each of those has a transformer in it and each of those transformers hums away and is a source of loss even when there is no power being used. The balance for me seems wrong there and the old way of doing it would be to put fewer transformers in and a bit more wire in the ground.

Q121 Sir Robert Smith: Are these new transformers?

Peter Bennell: Yes.

Jonathan Smith: From a domestic perspective the average bill is around the £1,000 mark. About half is the wholesale element, about £500. We have heard that losses are about 7% or 8% on distribution, 1% or 2% on transmission. That is 10%, so that is £50 in my estimation. That is a big piece we can try to reduce on consumer bills if we can find ways to reduce losses so we absolutely need to ensure the right incentives are in place to encourage that to happen.

Q122 Sir Robert Smith: Do you have any thoughts on what those incentives would look like?

Jonathan Smith: I would need to have a good think and maybe I can write to the Committee on that.

Q123 Sir Robert Smith: Do you share the point that you could get rid of losses by over-engineering and therefore putting costs up?

Jonathan Smith: That is the challenge, that if you are investing to reduce losses but the cost of the investment is bigger than the saving that is clearly economically not the right answer. However, from a carbon efficiency point of view people might say that is a cost we are willing to bear. So, there are competing demands going on in this equation and it needs to be looked at quite carefully.

Sir Robert Smith: Would any of you have any view on the gas side of this? No? Okay, thank you very much.

Chair: We have covered a lot of ground there. Thank you very much for coming in, it is much appreciated.