RPI_X@20

Thank you for inviting me to give the closing lecture of this year's Beesley lectures. I have had the pleasure of chairing sessions on the energy industry on two previous occasions but have not been invited to deliver a Beesley lecture. I hope I prove up to this much bigger challenge.

And I am very pleased to have Regina as Chairwoman tonight. Having been involved in Ofwat's own review of their approach to the regulation of the water sector I know that she will bring an interesting perspective to the subject of tonight's lecture from a different sector.

As Alistair has explained in his introduction, I was, until recently the Senior Partner at Ofgem with responsibility for, amongst other things, Ofgem's RPI-X@20 review. In total I spent nearly 9 years at Ofgem in two shifts over a period of nearly 11 years.

During this time there were some profound changes in the gas and electricity systems in Britain. The UK energy industry went from being the Economist's poster child for successful energy market liberalisation to concerns on the front cover of the same magazine that the lights would go out in Britain. This was partly driven by the decline of the North Sea and our move to being a significant net importer (of gas). But also because of the growing realisation of the profound changes that we will have to make to the way we produce and use gas and electricity if we are serious about reducing our carbon emissions to tackle climate change. And these two issues have combined to give cause for concern about the security of our electricity and gas supplies later this decade. Of the two, I think by far the more significant is the impact that seeking to reduce our carbon emissions to tackle climate change would have on these industries. This will be a major theme of tonight's lecture.

I have now moved from the Energy Sector to a position at Lloyds Banking Group.

Those of you who attended Clare Spottiswoode's lecture earlier in this series will be aware, that is a sector with a few of its own issues to resolve. So if I pass the audition tonight and am invited back I suspect that the next time you hear from me it is likely to be on a very different subject but one where the issues are no simpler nor less important.

Introduction

What I wanted to do, in my lecture tonight, is to try to do more than simply explain to you what the new "RIIO" framework for regulation of the energy network monopolies is – although I will of course do that.

- I will try to give you more depth and more colour by explaining why Ofgem thought the old system – RPI-X – had run its course
- I will set out the journey I and the team went on over the course of the two year project that gave rise to the new regime and how our own understanding of the key challenges for the project evolved; and
- And I will conclude by mapping out some of my thoughts and observations on how we might assess whether the new regime is successful

I will also provide a commentary and explanation that comes from a practioner's perspective rooted in experience from working in and regulating these industries. It is ironic that Ofgem has been simultaneously criticised for being too academic by some investors and companies whilst at the same time being criticised for not being radical enough by some academics.

I hope I will be able to convince this audience that where Ofgem have been accused of being too timid it is because the proposals and ideas that were being advanced whilst looking good on paper suffer from real practical problems. And that the concerns expressed by some (but not all) investors and companies are not well founded.

Regular attendees at these lectures will know that the Beesley lecture series was always primarily about discussing and advancing knowledge about the regulation of utilities. So an obvious question to raise at the outset is whether Ofgem's new regulatory framework for network monopolies should be applied to other sectors with regulated monopoly network businesses? I do not pretend to have the necessary knowledge or experience to make that judgement but I hope that by setting out what Ofgem has done and why it has done it – it will allow those of you in the audience who work in the airport, water, railway, post and telecoms industries on either side of the fence to form your own views. I also hope that this will be a theme of the discussion session after the lecture as these are important questions and I would like to learn whether the audience does think some of the issues and themes extend beyond the energy sector. And whether some of

Ofgem's proposed solutions have wider application. Personally, I think it would be nice to think that some of them do but I will leave that for others to decide.

I am sure Regina will have, and I hope share, some of her thoughts on whether any of the problems – and Ofgem's proposed solutions – are applicable to the water sector in her comments.

And so, I will start by looking at the system that the new RIIO model will replace, RPI-X. Although I come, in some sense, to bury RPI-X, I shall start by praising it.

The successes and failures of RPI-X

The RPI-X framework was applied successfully in all of the major network price controls in energy networks for over twenty years. It was also applied to the energy supply businesses until price controls were lifted in April 2002.

One interesting aside at this point is to remember its genesis – in a seminal paper by Stephen Littlechild on how to regulate British Telecom. It has never been clear to me – and I have it on relatively good authority from someone who should know – that it was never designed with enduring, regulated monopolies in mind. Rather that it was designed as a relatively simple way to hold the fort in former, monopoly retail businesses until the cavalry of competition arrived. If this is true, the fact that it has survived and thrived so successfully for two decades is all the more remarkable.

But perhaps reflecting that original aim, it would be fair to point out that there isn't a simple or single model of RPI-X in use today in the UK. This is certainly the case across different industries but even also within a single regulator. And the approach has evolved significantly and is now applied in different ways by different regulators and in different sectors. But all that matters for the purpose of tonight's lecture is to note that it isn't a single, simple model.

But looking specifically at energy networks, there is no doubt that it has been a very successful approach that has served customers, companies and shareholders well. Over the last twenty years, it has delivered much lower network prices – with reductions in allowed revenues of on average close to 30%, much improved network reliability and improved customer service with, for example, a 30% reduction in the number and duration of power cuts on the distribution networks. And it has rewarded shareholders

and repaid debt holders. And, despite often repeated criticisms of the state of Britain's infrastructure – and its energy infrastructure – it has delivered substantial investment (and in the case of the gas networks) expansion in capacity of the networks.

So at this point you might reasonably ask, why did Ofgem feel the need to review the approach, let alone change it?

I'll deal with this question in more detail when discussing the objectives of the review and how they quickly evolved over the course of the review.

But for now, I think it is worth setting out some of the known weaknesses of the approach, viewed from a practioner's perspective 20 years on.

The most obvious relates to the process itself – nearly twenty years on a typical price control review still takes close to two years and involves an enormous amount of effort from both companies and regulators. Price controls are also ever more complicated.

Is this really necessary or efficient after nearly 20 years when many of the big gains in terms of improved operating and capital efficiency have been captured? Or when there are now network companies with excellent operating performance, customer service and reliability stretching over several years?

I should quickly deal with one issue here that is often raised that personally I see as a red herring. I am not sure complexity is the right way to look at this. I think the key issue for me here is proportionality. I have seen what I often consider relatively cheap shots that make simplistic comparisons between the lengths of consultation documents or licence drafting for a price control now vs 20 years ago. I don't think that's an important comparison. A typical price control represents a five year contract typically for several billion pounds of customers' money or revenue to a company. In the private sector, a contract covering such a complicated set of services and investments would be very long indeed. So I don't see any concern – and indeed I see some benefits – in decision documents and drafting that clearly set out the terms of the deal and reduces the risk of disagreements by either the regulator or company during the deal about what was agreed or the intent.

And as a practioner who has been on the receiving end of several judicial reviews (or threats of judicial review) mid price control I have found that good licence drafting and

clear decision documents serve regulators and customers well in preventing companies at times seeking to reinvent history when controls don't work out as they are expected. And to avoid antagonising members of the audience from the companies who might be offended by the previous remarks I would quickly add that it also protects them from opportunistic or poor regulation by affording them the same protections.

The more important question for me is whether the process to reach the agreement is proportionate to what is at stake and whether the deal can be described simply to the company's management, investors and to customers who fund it. And I think Ofgem has made great strides to do this in recent controls – so for example the last distribution price control could be set out and explained in a relatively short, and I hope readable 40 page document that would be accessible to any reader. There were then lengthier supporting documents and licence drafting that only needed to be read and understood by the lawyers and specialists in the regulator and companies.

The second relates to innovation. RPI did motivate innovation in the network companies but it would be fair to characterise it as innovation in some fairly narrow, albeit important respects. There was innovation on the operational side – with huge improvements in productivity, reliability and service through the adoption of new working practices and the deployment of information technology to network investment, operation and fault repair. And there was financial innovation as greater efficiency was brought to company balance sheets. This allowed Ofgem to set successively lower costs of capital reducing the cost of financing the businesses and the prices customers paid.

But there wasn't much innovation in many other areas. The two areas I would highlight are the way network capacity is sold and priced and the way that networks are designed, operated and built. And they are inter-related.

The costs of not innovating in these areas may have been relatively low over the last twenty years – but not zero – but I think there are good reasons to think that the costs of not innovating in the design and operation of the networks and the way capacity is sold and priced are very high now and will only rise in the future.

On the network design point, the concern relates to the bias amongst the network companies to solve problems with investment in physical assets. I think the reasons for this are partly economic and partly cultural. Despite complaints from companies about the cost of capital being set too low recent price controls suggest a big desire on the

companies' part to invest significantly in replacement assets and capacity expansion. And they are spending the money. So they and investors clearly see enough rewards. The cultural relates to a natural tendency amongst engineers to put more faith in physical assets than commercial arrangements and new contracting and pricing arrangements to manage capacity constraints or uncertainty.

And companies have traditionally been reluctant to innovate in the way they price and sell capacity on their networks preferring to invest to deal with any increase in demand. Typically they have focussed solely on the "size of the cake" and then tending to do very little on how the "cake is cut" between their customers. This is understandable as changing the way they price and sell capacity is costly (and they perceive it to have limited or no impact on their bottom line), complicated and controversial – as it usually involves some customers gaining and some losing.

In energy networks the track record is very poor – it has taken years to get the distribution companies to introduce new charging arrangements and there still isn't agreement on how best to do this leading to a messy compromise and the use of two different approaches for a period to avoid the distraction of a CC reference when there is so much to do.

In transmission there has been the saga – yet to be resolved – of transmission access – a subject that could take up a whole Beesley lecture and probably should at some point. But failure to properly tackle the way we price and sell capacity on the transmission network combined with the very long lead times – because of planning difficulties – for new capacity has lead to the situation where the costs of constraints now run to several hundred million pounds a year.

So the costs are significant now and are likely to rise even further. Tackling climate change, for reasons I will go on to explain, will lead to much greater uncertainty about the need for future investment and the type of investment. And it is unlikely, faced with greater uncertainty that the best solution will be to always invest in expensive, long lived assets.

The third problem relates to what I will use the technical term of "fudges". These primarily relate to the way the networks were financed and I will not bore you with all of the details. But to pick one or two obvious examples – on the electricity distribution networks assets were depreciated much faster than their economic, accounting or

physical lives despite the near certainty that the bulk of these assets would be used and useful for their entire working lives. And in the gas network replacement of local pipelines (on safety grounds) were 50% capitalised and 50% passed through in the year they were replaced with no obvious, compelling logic or principles other than expediency.

The aims of the review and how they evolved

Before going through the formal, published objectives, I wanted to give you some colour, about what was in my and Alistair's mind when we launched the review. I had been an Executive Member of Ofgem's board for several years and had watched the then Network's team complete the full suite of network price controls – covering successively electricity distribution, transmission, gas transmission and gas distribution.

As an executive member of the Board I had been able to observe and participate in the key decisions of these price controls without direct day to day responsibility. Having now had the pleasure of running a price control I can advise anyone in the audience that the former position is perhaps the better of the two.

And my observation at the time was that at each price control, the team would come to the Executive Committee and Board at the outset with a list of known concerns or problems from the previous control that needed to be solved. But within six months, the very real need to deliver a workable set of proposals and the effort involved in delivering this would mean that, inevitably, these problems would not be solved and as we moved from control to control the list of unresolved issues would become longer. Many of the difficult issues were simply "fudged" in a way that wasn't entirely satisfactory to Ofgem or the companies.

This is not, in any way, a criticism of the teams who did these reviews. Having run the fifth distribution price control I know of the pressures the team face and how difficult it can be to solve all of the issues and still deliver a price control in the time available.

But it did become apparent that only a review that was completed outside of the pressures of a review process would be likely to determine whether there were better solutions or whether these "fudges" represented the best that could be done in an imperfect world.

The second observation relates to the continuing dysfunctional behaviours – on both sides – that I observed. I will give two simple examples.

The first is that all the companies had to go through the same process irrespective of the quality of their bids and their track record in terms of service quality, efficiency etc. I always tell the same story to illustrate this point so apologies to members of the audience who have heard this before. But at the start of the DPCR having seen the companies' bids, if you had asked me to predict the outcome, write it down and seal it in an envelope – I would have said that we would have ended up giving the two frontier companies from the last review the allowances they had asked for. This is because they had put in sensible, well evidenced bids and were planning to maintain/or improve their service and reliability whilst staying at or moving beyond their current levels of efficiency And this is exactly what we did. But they had to go through all the same hoops and process as the other companies who did not fare as well.

This creates two problems. It meant that talented management teams running efficient companies with excellent customer service and reliability were taken away from their day job for extended periods with presumably high opportunity costs. And it does not create a sensible set of incentives for companies to behave from control to control and put in realistic bids and deliver on them. It wasn't clear to me that the companies that did this fared any better than those who made unrealistic bids or even, dare I say it, misbehaved during the process.

The second was that all of the companies focussed on Ofgem and paid limited attention to the views of their customers or others with legitimate interests in the process. Again I will illustrate this with an example. At the last distribution review, one of the most difficult issues was settling the cost of capital. This is always contentious but probably more so at this review. We were trying to set the cost of capital during the financial crisis when the empirical evidence was conflicting and could be used to support a hypothesis of a structural change requiring a significant re-set or a temporary hiatus in key variables used to set the cost of capital that would not require a significant re-set.

One of the most involved respondents throughout the process was British Gas. British Gas is a large customer of all the distribution companies. They probably pay between 25 and 35% of the total cost of running them. And in a retail market where multiple, fixed price contracts are more common for business and domestic customers, they can't simply pass the costs through to customers. So they have a clear and legitimate

interest. They spent considerable time, effort and money putting together submissions on an appropriate cost of capital. But nearly all of the regulated companies ignored it. The most disappointing response – when we challenged the companies on the 100bps difference between their estimates and British Gas' was to dismiss them with a wave of the hand as simply a "vested" interest. What a way to treat you largest customer. The slightly more sophisticated version was to suggest that British Gas don't represent customer's interests and that they have an interest in driving the network companies returns down to unsustainable levels. I don't think this passes any serious scrutiny. The networks, after all, represent an essential route to customers for British Gas' products and services. And if those networks fail or service deteriorates, this will have very direct and immediate consequences for British Gas.

The objectives

So having given you some of that colour, I can turn to the drivers of the review. These were, in no particular order:

Good housekeeping, simplification and dealing with new and emerging challenges.

The question we posed was whether the current framework would deliver the networks we need to maintain secure, reliable supplies in a low carbon economy.

I hope that my comments so far will have provided enough of a sense of what we had in mind in relation to simplification and good housekeeping – although I have made the point and would reiterate – that for simplification and good housekeeping are about proportionality and not simply the length of documents or licence drafting.

But I wanted now to expand a little on what, for me at least, quickly became the main driver of the review and the genesis of at least two of the major areas of reform we put in place as part of the new RIIO framework.

It would be crude but not an unrealistic simplification to say that the way energy networks are designed, built and operated has not changed significantly since they were built in the post war period. So the need for significant innovation has arguably been low. Innovation has largely been about new working practices, new financing arrangements and the adoption to new technologies (including IT) to a engineering

approach to the relevant network that hasn't changed significantly since they were first constructed.

For energy networks that was a relatively passive system that was able to transport sufficient energy from where it is produced (typically from large, flexible sources of generation or gas production) in bulk to where consumer want to use it.

But this looks likely to change radically. Measures to tackle climate change are likely to lead to substantial changes in the way we produce and consumer energy. And this is likely to lead to profound changes to the way we design, operate and price our energy networks.

Until recently, planning the networks was relatively simple. There were well understood and stable relationships between economic growth, energy use and the need for network capacity. Even if an unexpected recession reduced demand and there was over investment in network capacity, growth would soon return, demand would pick up and the costs of investing a few years too soon were relatively minor viewed over the long lives of network assets.

But the future looks very different and much more uncertain.

I will look at electricity networks first. In 2007 Ofgem commissioned a group of leading academics to produce some Long Term Electricity Networks Scenarios. This set out a range of plausible scenarios for future use of energy and the networks necessary to deliver them. What was most striking was the diversity between the different scenarios. At one end of the spectrum was a scenario labelled "big electricity networks" where we needed networks with more than double existing capacity that could deal with much larger demand for low and zero carbon electricity for transport and heating from much more remote and diversified sources including large offshore and onshore windfarms and greater interconnection with other countries. And on the operational side the need to be able to balance demand and supply not by simply turning up generation to match demand – but flexing both as some sources of supply were intermittent. At the other end of the spectrum were much smaller, local networks where energy efficiency and much more local production and use of electricity and much smarter integration of demand and supply allowed much better use of capacity.

For gas networks the issue is starker. Given the significant proportion of our CO2 emissions associated with domestic heating and power generation – is gas demand going to be moved into managed and possibly rapid decline – leaving excess network capacity? Or will the emergence of biogas and/or Carbon Capture and Storage maintain demand for existing capacity and/or find alternative uses for it such as using gas networks to transport CO2 from power stations back to depleted gas fields?

So the drive to decarbonise energy supply also looks likely to lead to profound changes in our networks and much greater uncertainty about the level of future demand. I think this is likely to require a level of innovation by the network companies that is unprecedented. Companies will need to experiment with network design, operation and pricing in response when connecting significant volumes of emerging and untested low and zero carbon technologies over relatively short timescales.

The key recommendations

So how does the RIIO framework seek to address all of these challenges? I am going to set out what I think are the main elements of the framework, explain what the problems they are seeking to solve is and where relevant, explain why we rejected alternatives.

But before doing that, I will set out what Ofgem is seeking to achieve with the new framework. This can be summarised fairly succinctly.

The energy networks should play a full role in the delivery of a sustainable energy sector and deliver long term value for money when providing network services for existing and future consumers.

To achieve this, network companies will need to focus on long term value for money, they will need to be innovative, seek to identify options and be flexible (to deal with uncertainty), work with suppliers, producers and customers to identify the best delivery solutions and understand and respond to the needs of their customers.

That, I hope, would be relatively uncontroversial. So how will Ofgem do this?

The branding is RIIO – standing for Revenue, Incentives, Innovation and Outputs

I am going to unpack the first two of these give a little more colour on the other two and talk about several more detailed elements and explain not just what the framework is but also why Ofgem came to these decisions.

Revenue is the most simple and this is where Ofgem have kept much of what was good in RPI-X – there will be an ex ante revenue allowance that is designed to reward timely and efficient delivery, ensure network companies are financeable and balance the costs appropriately between present and future consumers. This will continue to be based on the current building blocks including the use of the Regulatory Asset Value of RAV. The major difference here will be the length of the control where Ofgem want to move from the current 5 years to 8 years with a tightly specified mid-period review to look at whether the required outputs have changed.

And incentives are similarly simple but no less important. Ofgem want to maintain the incentives that RPI-X has created and provide appropriate reward and penalties for owners of the business for outperformance and underperformance respectively. But Ofgem want to make sure these incentives represent good value for customers. So top performing companies on the dimensions of efficiency, service and reliability should be able to earn higher returns but inefficient companies offering poor service and reliability should earn low returns and very poor companies should earn below the cost of debt to make sure that normal capital market disciplines to improve performance will kick in. One of the challenges here will be to calibrate the incentives correctly so that higher returns reward genuine outperformance that customers actually value.

So two of the bedrocks of RPI-X remain.

So where does it differ? – here I think it is worth breaking down the new framework into some of the key elements.

I will start with outputs – the regulatory settlement will be built around a clear and transparent “contract” – and before I get picked up by any lawyers in the audience this is not a legal contract and might be better describes as a “compact” - and I use it of what the networks are required to deliver in return for the right to collect allowed revenue from customers. These outputs will be informed by enhanced engagement with customers who use the network.

Again, those of you with long memories may say – so what's new? – the quest for outputs stretches all the way back to the second MMC report on British Gas which proposed this as the solution to the then emerging problems of dealing with capex under RPI-X. A cynic would say that the lack of progress over the last 15+ years reflects the companies' realisation that agreeing outputs would reduce a degree of freedom they currently enjoy to flex the settlement in their favour. A more generous view would say that it is very difficult in practice to determine a set of outputs. But I think the recent distribution control shows that it is possible to do this but some regulatory steel is necessary to achieve this and make sure all of the companies produce a credible set of outputs as part of their submission.

Enhanced engagement will require companies to engage more effectively with their customers and a wider range of interested parties. But GEMA will remain the decision maker. We have rejected the model advocated by some of constructive engagement – or the more radical alternative of allowing customers and the company to propose a deal and the regulator only stepping in if they can't. This is born of one concern and one practical reality. The concern is how you ensure that all customers are represented effectively. Business customers – especially large business customers – have well organised and resourced associations who could participate on their behalf. Smaller business customers and domestic customers do not. So how do you ensure that in any process these customers' interests are properly represented? This has been heightened by recent announcements of the demise of Consumer Focus. The energy industry has form in this area that would be a cause for concern. On both sets of networks there have been charging arrangements that have granted very cheap (or free) access to business customers on the grounds that they don't impose costs (for example because they are interruptible) that, when investigated, could not sustain (on the grounds of cost savings) the discounts being offered and were benefitting business customers at domestic customers' expense.

The practical concern is that we asked the various consumer representatives covering both domestic and industrial whether they would want this sort of process and they told us no.

But there is an important twist here and one that may mean, over time, we move to a process more akin to constructive engagement. Ofgem has published guidance on how we would consider a request to make a price control reference to the Competition Commission (or whatever replaces it) from a third party. By clarifying the role and

ability of third parties to make requests for a reference we hope this will encourage more active participation and more effective engagement by the companies with parties who do engage.

This has been one of the more contentious parts of the framework that has prompted much debate inside and outside of Ofgem. So why have Ofgem decided to do this? It comes back to the earlier comments I made and the example of dysfunctional behaviour in the current process. Ofgem want to continue to encourage informed parties to participate in the process – and making clear that they can ask us to refer should do this. And Ofgem hope it will force the companies to engage more effectively with others and not focus all of their attention on persuading us.

And it might, if it works, lead to better outcomes and lower the risks of costly references when agreement was possible. If you go back to my example from the last distribution review we had British Gas telling us that a cost of capital of 4.3-4.7% was appropriate. The companies were telling us that it could not be lower than 5.0% and should be higher. But the companies did not feel the need to engage with British Gas or their evidence. If the companies knew that even if they persuaded Ofgem, there was a real risk of a reference if British Gas was not convinced, I suspect that there would have been more constructive engagement and a position that was acceptable to all would have been reached. This would probably have lead to the same outcome and decision for Ofgem but it would have significantly reduced the risk that we would – faced with the conflicting views – opted for a cost of capital that was too low – triggering a reference that was unnecessary and had a high opportunity cost for Ofgem and the companies or too high – benefitting shareholders at customers' expense.

The next change is to introduce a process that has more proportionate assessment of business plan submissions from companies. So a company with a good track record on efficiency, service and deliver that submits a well-evidence business plan with a clear set of outputs and demonstrate good engagement and ongoing efficiency and deliver could be "fast tracked". Fast track might mean concluding the control in 6 months rather than the current 18 months. That creates a carrot by rewarding good management and good behaviour by giving talented management an extra 12 months to focus on the business and customers and not the regulator relative to their peers. And it provides a stick by making the process more onerous for companies with poor track records and poor business plans.

One substantial new element – some would say that is long overdue – is to allow a greater role for third parties in the delivery of new capacity on the networks. This includes the option for Ofgem to involve third parties in the delivery and ownership of large and separable projects. Given the scale of investment required over the next few years [£32bn relative to £48bn existing RAV] it is vital that Ofgem has this option – as the scale and speed of investment – as well as the new technologies being considered - could overwhelm the existing companies and even the most talented management teams.

But there are important safeguards – it will only be used on projects where there is strong evidence that it could deliver better value for money without threatening delivery – as much of the new capacity is needed quickly. This part of the new framework has drawn some fire from some of the companies. They have suggested that it won't save money, will delay vital investment and will introduce unnecessary complexity

But my message to them is simple – it is an option and one that will only be deployed if Ofgem thinks that others may be able to do it faster and cheaper than the incumbents. I cite three recent examples as the case for the defence and for needing this option. First the huge cost overruns and delays seen on last major piece of new infrastructure on the gas network – the Milford Haven pipeline. Second the sharp reduction in forecast costs of connecting up a Scottish island to mainland grid by the incumbent in response to simply the threat of tendering. And third the fact that the incumbents have not fared very well in the recent offshore tendering process suggesting that there are other companies who can do this type of investment for less.

So the challenge for the incumbents is to raise their game so that Ofgem does not feel it necessary to exercise this option.

The penultimate part of the framework is innovation funding. Here we are proposing a time-limited, ex ante fund that will be designed to encourage and reward innovation in the way networks are designed and operated and they way network capacity is priced and sold. This will build on the £500m Low Carbon Network Fund introduced for the electricity network companies but will cover all of the networks and will be open to all parties – not just the network companies. So organisations and companies with good ideas on how to deliver innovative new ways to design and build networks and/or to price capacity on them will be rewarded. This fund will invite bids annually and award funding based on published criteria with a Panel of experts – comprising economists,

engineers, consumer representatives and commercial expertise – making recommendations to Ofgem on who to fund. It is designed to replicate the incentives that companies operating in competitive markets have – through the patent system and the rewards that being first to market brings – for companies that are regulated.

The final element I want to discuss is financeability. Here Ofgem have tried to provide much more clarity and predictability on how they will ensure that companies are financeable.

The guiding principles are that: companies should be able to secure equity and debt financing in a timely way at reasonable cost to deliver their obligations. That capital structure is the responsibility of the companies. And that companies will not be bailed out if financial distress is due to their own behaviour or failings.

Ofgem have set out a set of principles that companies can hold us to account for. These are:

Ofgem will take a longer term view with risks appropriately allocated between companies and consumers

Allowed returns will continue to be set by real, Weighted Average Cost of Capital (or WACC) based approach with the cost of debt based on a long term trailing average reset annually. The cost of equity will be informed by the Capital Asset Pricing Model and other models as it is now. And notional gearing will reflect the level of risk exposure a company faces and may vary between sectors. The capitalisation policy will equalise incentives. Depreciation will reflect expected economic lives of assets and potential uncertainty over future use. Financeability assessments will be informed but not dictated by rating agencies. And Ofgem will use Return on Regulated Equity analysis to calibrate returns and incentives.

That covers an awful lot of ground in a relatively short list of principles. In the interests of time I will expand on two of these.

RORE – or the rate of return on regulated equity – proved a very powerful tool at the last distribution price control review to help neutralise some of the more sterile debate about cost of capital. It provides a framework to have a more intelligent and informed, debate about the level of risk that companies face under a price control and about the

levels of returns that a top performing and poorly performing company could earn. This is one area where I would, tentatively suggest, that other regulated sectors should look to.

The other I will highlight here is perhaps one of the most contentious – the plan to align depreciation with assumed economic lives. This may lead to the lengthening of depreciation profiles in some areas – such as electricity distribution – and the shortening in others such as gas transmission where future use is less certain. Ofgem think this is important to strike a fair balance between the costs that present and future customers pay. But Ofgem acknowledged that implementing this in a single step could result in shocks to capital markets and set out how we would use transitional arrangements, if necessary, in the first set of controls.

So I hope that has given you a reasonable understanding of what the new framework is. And explained what has changed, what has stayed the same and why.

I want not to turn to how we might measure whether it has been successful by considering what success would look like and what successful companies under the new framework might look like.

What would it look like if it succeeded?

I think there are three broad areas where the success or failure of the new framework can be measured. They will, I hope, be fairly self-evident from what I have said so far.

The first would be to see successful companies achieving fast track status – with that becoming the norm for the majority over time. But we should be realistic in our expectations. I think achieving this in the next round of price controls would be a huge – but not impossible - achievement and I would only start to worry if no company was able to achieve this at the next set of electricity distribution controls.

The second would be a form of constructive engagement where companies engage seriously with their customers and other interested parties and do not focus exclusively on Ofgem as the regulator. And who knows, this might even lead to more realistic discussion on cost of capital and make this a less contentious part of the settlement.

The third is innovation. If the new framework works we should see real innovation in the way the networks are designed, operated and the commercial arrangements for buying capacity. And if we are serious about innovation on this scale we must also accept that there will be significant failures and that, as you see in competitive markets, you often learn as much by what fails – and doesn't work – as you do by what succeeds.

And finally, I would hope that you would see a much faster closing of the gap between the best and worst performing companies in each sector because the incentives will be sharper and capital market discipline will be brought to bear much faster on underperforming companies.

If all of this happens, then of course, the main beneficiaries will rightly be customers. They will have more responsive networks offering excellent service and being innovative in managing the huge uncertainty and challenges that tackling climate change will bring so that they manage the costs and uncertainties of how best to do this over the coming years.

But the companies and their shareholders also stand to gain – by being able earn the suitable rewards for delivering on their outputs and higher rewards for delivering higher efficiency, innovation and/or improved customer service.

Conclusion

So I will now bring this lecture to a close with one concluding observation. I think success will require culture change on both sides. Ofgem will need to be willing to commit to fast tracking those companies who deliver what has been asked of them through high quality business plans and this will, especially first time around, involve some risk taking and changes in behaviour. And companies will need to be honest and bold in putting together those business plans and to raise their game and focus more on their customers' needs and how to deal with the huge uncertainties they face.

Thank you for listening to me, I hope you now have a clear understanding of the new RIIO framework and I now look forward to Regina's comments and the discussion to follow.