1. Evidence from economic analysis, analyst reports and Bank of England assessment suggest a real cost of equity of 4.0-7.2%.
Transaction evidence seems to support this view, eg EDFE network sales.
Yet we are told that equity investors in utilities require returns of 10-15%.

How can these two apparently conflicting sources of information be reconciled?

I suspect that the differences are caused by the fact that investors tend to refer to nominal equity returns and regulators refer to real returns. With inflation running at 4.7% and expected (see recent Governor of the Bank of England Speech) to reach as high as 5%, the range of real return currently required by equity investors can be estimated at 4.8% (1.10/1.05) and 9.8% (1.15/1.047). If this simple calculation is accepted, it appears that the lower figure is 20% above the minimum of the Ofgem-suggested range and the upper figure is 36% higher than the upper edge of the Ofgem-suggested range. Without other information it is impossible to determine which sort of utilities are included in the range 10%-15% quoted to Ofgem, but I would note that the institutional private investors who are currently invested in the energy networks had an original equity return expectation of 12% - 15% (nominal), including a cash yield of c.7%-8%, to enable them to, for example, pay pensions.

2. Our primary statutory duty is to protect current and future consumers. One aspect of this is price. A further aspect is to ensure appropriate investment is made and therefore that we provide sufficient rewards to attract investment from providers of debt and equity finance.

Do our proposals provide an appropriate balance between protecting consumers and rewarding investors?

Presumably the statutory duty to protect current and future consumers includes protecting them from the consequences of not being able to renew/improve the infrastructure in a timely manner through not being able to attract enough capital to the industry. It remains to be seen whether the balance referred to above will be effective in all respects. The main area of my concern is the WACC. It is difficult to predict whether a variable cost of debt and a low cost of equity will attract equity investors into the long term. In the short term existing equity investors may have to sell at a loss and redeploy their capital into higher return investments if regulated returns continue to reduce.....but other investors will only buy at lower prices that imply that for a while at least, the returns they earn are consistent with their requirements, probably higher than the returns suggested by Ofgem. However, the lower prices achieved will be attributed to a regulator- driven change and this will adversely impact the UK's reputation for having a stable regulatory environment which encourages long term investment. It is difficult for any shareholder, old or new, to judge the impact of the mechanisms that Ofgem claim will enable efficient companies to out-perform; this further undermines the UK's reputation for having a stable regulatory environment. Ultimately the cost of capital may be driven up, so there is a significant risk to the National Infrastructure Plan 2010 (as published by the Treasury). It is noticeable that RBS, immediately following the 'City' seminar last Tuesday, issued a 'sell' recommendation on National Grid, valuing the shares at £5, a reduction of some 10%. This suggests that whatever was Ofgem's intention for the Tuesday seminar, the message received was one of regulatory uncertainty – hence the implied recommendation that National Grid's equity cost of capital should be higher. This may suggest that the balance is weighted too much towards the relatively short term consumer issue of controlling prices as much as possible in

an inflationary environment, rather than balancing this against the longer term need to replace ageing infrastructure.

3. The cost of debt is traditionally set based on a balance between the cost of embedded debt and the forward cost of debt, with allowance to protect against rises in debt costs over the price control period. A longer price control increases the reliance on forward costs and makes protection against rising debt costs through a fixed rate more difficult and more risky for companies.
Does cost of debt indexation provide reasonable protection for investors against a fixed cost of debt for a longer period?
Does it allow companies to benefit from a longer period in which to outperform the regulatory settlement?

(a) The answer to the first question depends on the nature of the index. I understand that the current, Ofgem-preferred index does not even include the debt of some of the regulated network companies. Practical ways of improving the index could include: ensuring that the index includes the debt of all of the regulated network companies (given that there are not that many of them) and ensuring that each network company includes a re-financing plan for the regulatory control period in its 'well developed business plan', including the cost of refinancing (e.g. credit rating agency fees, lawyers' fees (documentation and the like), and other professional fees for tax advice etc. (a simpler mechanism could be to include an allowance of 50-75 bps on top of the index value). The timing of the refinancing of a company's debt depends on a number of factors e.g. maturity profile of debt, credit rating agency restrictions designed to protect liquidity, bank covenants and the state of the markets, therefore an allowance for the fees associated with re-financing could be subject to both an efficiency test and a requirement to repay if not fully utilised by the end of the regulatory period.

(b) Companies already have long term debt in place and I am not sure whether the second question is addressing the point that a company might feel obliged to refinance earlier than would otherwise have been the case in order to optimise its performance under the index. If on the other hand the question is focussed more on operational out-performance, it is impossible to answer- in the absence of further detail of how the regulatory settlement is to work in practice e.g. what happens at the 4 year review of outputs stage? The issue of regulatory uncertainty arises again, because I suspect Ofgem cannot specify how these issues will be treated.

I should note that network companies tend to fix the cost of their debt by contracting SWAPs and using other mechanisms to minimise their risk. I think therefore, that there is a case for retaining a fixed debt allowance that takes account of the existing debt and future refinancing requirements of the company. I would have thought that this could be incorporated into the company's business plan.

A final, crucial point about an index is that a company may need to transact a refinance (for the reasons noted in the latter part of (a) above) when the market is 'spiking'. In these circumstances, the cost of debt may lie above the index – it would appear that the equity would carry this risk....which compounds the re-fi/financing risk, given that Ofgem appear to

think that equity should also be subject to the risk of covering short term fluctuations in cash flow as a consequence of a different way of dealing with the financeability test (compared with that used in the current regulatory period).

4. In RIIO we set out to provide long-term financeability through providing clarity and predictability to the key financial drivers, based on long term sustainable positions for the asset base, allowed return, capitalisation and depreciation.

Do our proposals provide sufficient clarity to attract long-term capital into the sector recognising that there will need to be a period of transition?

There seems to be a 'catch 22' position developing. A period of transition is required, to enable the introduction of Ofgem's new proposals, which may need to cover the whole 8 year period of the next price control given the serious impacts that, for example, 100% capitalisation of repex would have on the cash flows of GDNs, yet Ofgem hopes that 'long term capital' will be attracted to the sector. I would have thought that before 2021 the 'long term capital' will wait to see the eventual outcome of the changes...and in the meantime may invest in countries which have a more stable regulatory regime and/or offer better returns.

With regard to the unlisted energy network companies, it is important to remember that the investment funds which invest in them are, in their turn, invested in by pension funds and insurance companies. The sole purpose of investing is to ensure that the cash yield is sufficient to pay pensions on a regular basis and to achieve some growth to cover future pension liabilities. In the case of the listed energy network companies there is a wider range of shareholders, not just institutions like pension funds, but also retail investors. Pension funds etc. have portfolio strategies and have limits on the amount of their funds which can be invested in infrastructure, typically between 2%-5% of the amounts invested. Not all invest in infrastructure (which from an investment perspective is a relatively new asset class), so there are 'new' investors who could be enticed into investing in the asset class – given the right conditions. Those pension funds that have invested in regulated UK assets, have done so because they have regarded the UK regulatory landscape as being well defined and stable...but this perception is changing because of the lack of definition of how regulatory mechanisms will work (e.g. uncertainty mechanisms), the need for a transition period due to the significant changes proposed (e.g. 100% capitalisation of repex) and (see Q1 above) the low returns suggested by Ofgem. I think it unlikely that the existing investors will raise their internal allocations to UK regulated utilities when there is so much uncertainty and it may be difficult to attract new entrants to the infrastructure class.

I note that EDFE networks have recently changed hands at an apparent value which supports Ofgem's suggested cost of equity range. Unfortunately, there are not many transactions in the regulated utility space. I suggest that it would be dangerous to use what may be an optimistic purchase as evidence that the regulated infrastructure space remains attractive if the aim of the U.K. is to attract long term, stable capital from now until 2020, from as many diversified sources as possible (e.g. sovereign funds and foreign pension funds/insurance companies) in order to minimise the risk of unbalanced capital repatriation in the future.

5. In the following areas:

- **Operational risk**
- **Regulatory risk**
- **Political risk / public perception**
- **Management quality**
- **Ability to access the market**
- **Overall attractiveness to investors**

In your opinion, how do regulated GB energy networks compare to:

- **other GB/UK regulated companies?**
- **European regulated networks?**

The UK water companies have a similar level of operational risk, a slightly higher level of regulatory risk (given that they are subject to regulation and other effects by the Environment Agency, the Drinking Water Inspectorate, a variety of quangos that protect the different aspects of the countryside, as well as OfWat and the HSE) and I would emphasize that due to the various changes proposed and reviews ongoing, the level of regulatory risk is perceived as being much higher than it was. In my view there is a similar level of political risk and public perception risk (water leaks can be as obvious as power outages with possibly more damaging effects on property/ gas escapes are dangerous to life and property etc.). Broadly, I would opine that the quality of management is high (and certainly very much higher than before privatisation) in the energy and water sectors due, in part, to the long history of regulation which has incentivised shareholders and managers to improve the training and development of management and introduce 'new blood'. In my opinion the quality of management is lower in the telecoms sector (BT), the rail sector (Network Rail), and Royal Mail (all of which are larger monopolies with less opportunity for 'comparative' regulation).
I assume '...access the market' means the capital market, in which case, access has become easier as the rating agencies have become more familiar with the sector. However, since the global financial crisis, the rating agencies have become much stricter with companies that have had to re-finance their acquisition debt (e.g. the GDNs following the network sales by National Grid) insisting that they do so well within the maturity timescales in order to avoid rating downgrades.
In terms of overall attractiveness, in my opinion the companies are less attractive than when they were first bought into, by private institutional investors, some years ago.

With regard to European networks (we have an important investment in one European regulated network) my opinion is that, allowing for cultural differences, management are equally competent from an engineering perspective, but are not as commercially attuned as UK management. Operationally the risk profiles are similar, regulation may be less intrusive (from a regulator's perspective, less 'well developed') but with a higher political risk – sometimes more manageable than in the UK, depending on the size and importance of the network. In terms of attractiveness to investors the returns are potentially higher because there is more opportunity to improve the commercial ability of management (including their cost management ability) and notwithstanding the financial difficulties of Europe there are apparently few issues in accessing the capital markets for 'core regulated' networks. Overall, for the long term infrastructure investor, there is more potential 'upside' than 'downside' and therefore the assets are more attractive than those in the UK. Some of this is due to the UK changing its hitherto relatively stable regulatory environment.

6. We believe there is an important role for investors in ensuring that management deliver returns.
Do you agree?
What do you see as reasonable upside/downside returns on regulated equity for good/poor performance?

(i) The unlisted energy network companies are owned by investment funds that take a very close and detailed interest in their management and operations. Management have incentives to align them with their shareholders desire to optimise returns. As the investments are relatively illiquid, thus precluding a short term view being taken, the investors endeavour to ensure that all of the components which contribute to the earning of acceptable returns are kept under scrutiny. These components include, inter alia, customer service, safety, reliability of the network, environmental footprint, governance practice and regulatory relationships. The scrutiny of management, operations and the components noted above is undertaken at board level by investor representatives and asset managers who sit on the boards of the companies. In addition investors often work with management directly on strategic issues.

(ii) the management of listed energy network companies are, in theory, more independent of their shareholders than those in unlisted companies, in that the shareholders rarely sit on the boards of the companies. However, the framework of discipline exercised by the companies' share prices, tends to concentrate the minds of management to optimise the returns that are delivered to the shareholders.

In summary, the answer to the first question is affirmative.

With regard to the second question, and taking account of the answer in Q1 above, upside/downside returns for good/poor performance should be in the following nominal ranges:

Poor performance: below 11% with no bottom limit (in normal circumstances, but with relief for circumstances outside of the company's control e.g regulatory change of circumstances (new legal obligations etc.)

Average performance: 11%-13%

Good performance: 13%-15%

This is consistent with the comment in Q1 above about existing equity investors anticipating a return of 12%-15% (nominal) because they thought that they would be able to ensure that management improved the performance of the companies.