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AW/PW/067

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Dear Joanna

Re: Gas Distribution Price Control Review Initial Proposals

I attach NGN's detailed response to Ofgem's Initial Proposals for the five year review. I summarise below the key points from our response which I would be happy to take you through in more detail if that would be helpful.

Incentivising efficient companies

NGN continues to support the use of benchmarking in this review. It is important that frontier companies are provided with strong rewards for the benefits that they provide to customers to ensure incentives to provide future customer benefits.

NGN, by setting the frontier, is delivering £70m additional benefit to customers over five years by comparative competition under Ofgem's methodology, and £150m if the alternative approach of adjusting costs to upper quartile rather than frontier was adopted. This has been calculated by repeating Ofgem's analysis but with NGN opex at the midpoint of all GDNs and calculating the resulting additional opex allowance that GDNs would receive (which is equivalent to the loss of benefit for customers).

The benefit provided by the most efficient company should be shared between the frontier company and customers to strengthen the incentives for companies to achieve the frontier and hence create future customer benefits. NGN's proposal is that the value of this benefit should be shared 70:30 between customers and the company in line with the current sharing ratio of capex efficiency benefits. This incentive would equate to an "efficiency bonus" totalling £21m over five years under Ofgem's methodology and £45m if the methodology moved to upper quartile. Such an approach would incentivise effective competition between GDNs to attempt to achieve the frontier.

Benchmarking methodology

NGN welcomes the proposal that both efficient and inefficient companies are immediately moved to the benchmark target as this maintains strong incentives. We strongly believe that this must be retained in Updated Proposals.

However, NGN has concerns with the "hybrid" benchmarking methodology that combines bottom up and top down analysis and we highlight three of these concerns below.

Firstly, every single company has to achieve a "catch up" to the frontier target, as illustrated by the table below, whereas the precedent in previous electricity reviews is that frontier companies receive a cost allowance at least that of their base year cost to maintain incentives for efficiency.

£m	Base year Controllable opex	Base year Ofgem allowance	Difference (catch up)
EoE	106.9	94.4	(12.5)
Lon	77.9	71.0	(6.9)
NW	89.7	78.1	(11.6)
WM	61.0	54.8	(6.2)
NGN	74.3	73.2	(1.1)
Sc	64.2	49.9	(14.3)
So	109.7	101.6	(8.1)
WWU	75.4	67.4	(8.0)
Total	**659.1**	**590.6**	**(68.5)**

NGN, the frontier company, has £1.1m catch up to achieve in the base year, equivalent to an additional loss of allowance over 5 years of approximately £5m which is unreasonable. If Ofgem is targeting frontier (and not upper quartile) then NGN should have at least an additional £1.1m allowance for the base year.

Our second concern is that the hybrid methodology appears to reward inefficient companies and penalise efficient companies thus providing inappropriate incentives to achieve future benefits for customers. This is depicted in the table below.

Group	Top down bench-marking (£m)	Base year Ofgem allowance (£m)	Benefit/(penalty) of 5.6% uplift (£m)
National Grid	291.5	298.5	7.0
NGN	74.3	73.2	(1.1)
Scotia	152.8	151.5	(1.3)
WWU	72.0	67.4	(4.6)
Total	**590.6**	**590.6**	**0**

Ofgem has applied a flat 5.6% increase to the benchmarks suggested by the disaggregated analysis. When compared to the top down benchmarking, companies at or close to the efficiency frontier such as NGN (first) and WWU (third) are penalised and the methodology does not reflect the relative efficiencies. In contrast, NG's GDNs are ranked below average efficiency (2nd, 4th, 7th and 8th) but NG receives an allowance higher than for the top-down benchmarking. Ofgem's 5.6% adjustment has inappropriately been applied equally across all companies which benefits the inefficient companies more than the efficient companies, in part because it rewards the inefficient element of costs with an extra 5.6%.

Our third concern is that the benchmarking has resulted in the four NG GDNs having a total indirect opex allowance over five years of £391m compared to £326m for the four sold GDNs as shown overleaf.

NG GDNs	Ofgem indirect opex allowance (£m)	IDNs	Ofgem indirect opex allowance (£m)
EoE	129.1	NGN	80.6
London	88.0	Scotland	65.4
NW	98.2	Southern	98.1
WM	75.3	WWU	81.8
Total	**390.6**	**Total**	**325.9**

Economies of scale should mean that the IDNs are given allowances at least as much as NG's. The 20% reduction in allowance for IDNs compared to that for NG for indirect costs suggests that the disaggregated analysis is not providing appropriate allowances. Furthermore, the IDNs have 50% of customers and 52% of total network length. Hence, using Ofgem's composite variable, the IDNs account for 51% of the total "size" of the gas distribution network and NG accounts for only 49%, thus one would expect a higher indirect cost allowance for the IDNs.

The disaggregated analysis, in places, uses inappropriate cost drivers and suffers from allocation issues between different categories of expenditure. Top down modelling alone would provide a more accurate, simpler, clearer and more robust measure of relative efficiency than the disaggregated modelling that Ofgem has used. NGN agrees with Ofgem's composite variable of network length and customer numbers as an appropriate cost driver but it should be noted that this is not currently used for any comparative efficiency analysis but only to estimate the uplift required. The only robust methodology is a top-down approach.

Upper quartile v frontier

The precedent is to adjust company costs to the upper quartile, and indeed this is how Ofgem has undertaken the disaggregated analysis, but not how the top down adjustment has been made.

We believe that the target should be upper quartile to recognise any potential weaknesses in the model and to provide a (modest) allowance to achieve the efficiencies required.

If disaggregated modelling continues to be used, Ofgem's recognition of the "cherry-picking" issue by adjusting to ensure that on average GDNs achieve the results from top down analysis must be retained. Furthermore it is inappropriate that this moves companies to the frontier; the overall adjustment should be 10% not 5.6% to target an upper quartile and should be weighted towards the efficient companies.

Frontier shift

NGN has achieved substantive efficiency savings in the price control period just finished and an annual 2.5% frontier shift for the next five years is extremely challenging if not impossible to achieve. It is difficult to believe that GDNs can continue to outperform the wider economy by 2.5% each year. We accept that approximately 1% annual efficiency can be achieved through comparative efficiency but the scope for further outperformance is limited, in particular given the substantial efficiency gains made by the frontier company. Furthermore, comparative competition has enabled Ofgem to adjust every GDN's base year opex down, by a total of £68.5m, to the estimated efficiency frontier hence there is an element of double counting by also applying the full estimate of 1.1% for each year for frontier shift.

Europe Economics' use of an out-of-date dataset from 1973-1999 cannot be justified and their benchmarks for total factor productivity, for example the capital intensive machinery industry, has resulted in a flawed analysis. First Economics' analysis which captures both the average rate of productivity improvement and relative price effects is more methodologically robust and this methodology should be used to assess the scope for efficiency savings. NGN welcomes Ofgem's recognition of the cost pressures that are driving real price increases for GDNs but the average 0.9% allowed inadequately reflects the impact of these cost pressures.

First Economics show that GDN costs, after taking account of total factor productivity, are growing at about 2% more than the wider economy. Offsetting this is about 1% impact of comparative competition and 0.5% efficiency from capital substitution suggesting that GDN controllable opex is likely to increase when compared to RPI. In Updated Proposals, Ofgem should use the more robust Europe Economics' approach to assess the scope for frontier shift.

Cost of capital

The allowed Cost of Capital is unacceptable. The total allowed cost of capital return on assets (including tax) has reduced from 6.25% in 2006/07 to a proposed 4.84%. This is a reduction of 24% in allowed return which is not the "gradual change" in cost of capital that we understand is Ofgem's approach to ensure long term stability in returns.

A number of factors such as safety and security of supply indicate that gas distribution is riskier than transmission. This has been backed up using market evidence by a report from Oxera that demonstrates statistically that gas distribution companies in Europe and America have a significantly higher beta than transmission companies.

The level of PMICR consistently below 1.4x in Ofgem's financial model means that the costs of raising debt will increase and will certainly be higher than the 3.55% that Ofgem has assumed. Credit rating agencies would downgrade NGN dangerously close to investment grade and NGN would be in danger of breaching existing debt covenants. Ofgem has suggested that an appropriate range for PMICR is 1.5-1.6x.

NGN expects to see a substantive increase in the allowed cost of capital when Updated Proposals are published. The evidence suggests that the allowed vanilla cost of capital should be above the 5.05% set for transmission companies.

Metering work

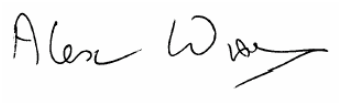
NGN reiterates that it is likely to lose a considerable portion of its metering work over the next price control period, of the order of £8.5m per year, and this loss of income must be taken into account by Ofgem when setting allowances. Customers have benefited from the reduction in regulated costs that have been allocated to metering in the past. It would be inappropriate for customers to retain this benefit at the expense of companies when metering work is lost. The opex allowance must reflect the likely loss of metering work and include a proportion of the operating costs currently allocated to metering.

We note that Ofgem is continuing to review the increased regulatory costs that would arise from metering work loss and to assess appropriate incentive mechanisms. NGN would be pleased to work with Ofgem to develop incentives that ensure efficient negotiations with metering companies and that balance the interests of customers and companies.

It is worth noting that any requirement for emergency personnel to carry and utilise CO monitoring equipment will not substitute for metering work loss as such a requirement will increase peak winter workloads.

Please note that this response can be regarded as non-confidential.

Yours sincerely



Alex Wiseman
Regulation Director

Gas Distribution Price Control Review – Initial Proposals document

CHAPTER: Two

Question 1: Do you think that a wider deadband on the revenue recovery correction mechanism is appropriate in gas distribution?

Weather does impact on allowed revenue even though the volume driver is removed; as we pointed out in response to the third consultation the shrinkage gas mechanism will impact on revenue. For example, projected shrinkage costs for 2007/08 for NGN reduced by over £6m in just 7 months between June 2006 and January 2007. This alone represents 2% of revenue and could not have been foreseen. Furthermore, weather still impacts on collected revenue, although this impact will be reduced if there is a further shift from commodity to capacity charging.

In addition, electricity DNOs are able to change prices twice each year whereas GDNs are restricted to one price change a year which limits their ability to control collected revenue. Consequently, the "dead band" should be wider than the 2% for DNOs – say 4% representing perhaps 2% for uncertainty in allowed revenue and 2% for uncertainty in collected revenue. In addition, Ofgem should consider increasing the 4% limit for overrecoveries in the Licence after which a letter of explanation is required to the Authority and restrictions are imposed on future price increases.

CHAPTER: Three

Question 1: Do you agree with our approach for setting opex allowances and the proposed allowances we have derived using that approach?

Overview

NGN continues to fully support the use of comparative analysis in determining the relative efficiency of the GDNs and its use in assisting the determination of appropriate operating expenditure allowances.

It is essential that frontier companies are rewarded for the benefits that they provide to customers and NGN welcomes the proposals that both efficient and inefficient companies are immediately moved to the upper quartile. It would be disappointing and inappropriate if this approach was changed in Updated Proposals.

Nevertheless NGN has some concerns with the benchmarking. The hybrid approach combining bottom up and top down benchmarking, in particular the use of disaggregated modelling, is flawed. The impact of Ofgem's benchmarking is that all companies, including the most efficient, have to achieve catch-up to the benchmark target as well as achieve frontier shift productivity improvements which cannot be appropriate for incentive regulation. Given the difference in allocation of costs by GDNs, top down modelling would provide a more precise measure of efficiency than the disaggregated modelling that Ofgem has used which in some cases produces somewhat arbitrary results, and would be simpler to understand. If disaggregated modelling continues to be used, Ofgem's recognition of the "cherry-picking" issue by adjusting to ensure that on average GDNs achieve the results from top down analysis must be retained. Furthermore it is inappropriate that this moves companies only to the frontier. In line with Ofgem's usual methodology, the adjustment should have been to the upper quartile, ie 10% and not 5.6%, to recognise any potential weaknesses in the model and to provide a (modest) allowance to achieve the efficiencies required. In addition, this adjustment should not be

equal across companies as this provides excessive rewards to inefficient companies; the adjustment must be weighted towards efficient companies.

Furthermore, the 2.5% annual efficiency target is unlikely to be achievable in an environment where significant efficiencies have already been made. It is noteworthy that in the first year of the electricity distribution price control DNOs are not achieving the efficiencies set for them by Ofgem last time even though the incentive mechanism provides greatest rewards for year one outperformance.

Use of glidepaths

NGN agrees that glidepaths should not be used as these provide additional funds for less efficient companies to 'catch-up' to those operating at the frontier. The use of glidepaths on setting allowances will impact significantly upon the long-term incentives for companies to achieve frontier levels of efficiency. The movement of all companies immediately to the benchmarked target provides immediate benefit to customers of reductions in operating expenditure and makes the process of setting allowances simpler and more transparent. An appropriate mechanism to allow for the uncertainty in the modelling is to use upper quartile rather than frontier and not to provide glidepaths as this only benefits inefficient companies.

Cost drivers

In carrying out the top-down analysis of total controllable opex, Ofgem has appropriately included Network Length in its calculation of the composite scale variable. This is the key scale variable that accounts for differences in operational characteristics and costs of different networks. NGN is comfortable with Ofgem's proposal to use the 50:50 composite variable of network length and throughput as an appropriate cost driver for total costs. However, as discussed in our answer to 3.2, this cost driver has no impact in Ofgem's comparative benchmarking as companies shown as inefficient under the top down analysis inappropriately get the same 5.6% uplift as the most efficient companies. Ofgem should ensure that their chosen cost driver is used to differentiate between companies and reward efficiency.

Frontier v upper quartile

The use of any statistical technique to measure relative efficiency will contain an element of uncertainty or error in estimation associated with factors such as model mis-specification, lack of observable data points and the fact that the modelling approach assumes that differences between actual and estimated costs are due to inefficiency. To derive allowances from a benchmark set at the level of the most efficient company would translate the error inherent within the modelling technique directly into allowances and overestimate the likely scope for efficiency. Consequently we agree with Ofgem that the use of an upper quartile measure as the benchmark is the most appropriate method for accounting for this modelling error and should form the basis of setting allowances. This approach has the additional benefit of significantly strengthening the incentives for achieving benchmark target efficiency status. This approach needs to be extended to the adjustment factor used in top down modelling.

Top down v disaggregated analysis

In response to the fourth consultation we agreed with Ofgem's preferred option for determining operating expenditure allowances derived from judgement based on evidence rather than the alternative options of a mechanistic approach or the use of disaggregated benchmarking.

However, we remain concerned regarding the use of the disaggregated comparative analysis of operating expenditure. Our primary concern is the tendency for such a disaggregated approach to overestimate the scope for efficiency. This is compounded by our significant concerns with the detailed modelling approaches taken by both PB Power and LECG which have been adopted by Ofgem in deriving allowances. These concerns have been set out in some detail in previous responses to Ofgem and can be summarised as:

- The tendency for disaggregated analysis to overestimate the scope for efficiency and identify an efficiency benchmark that is unachievable by any GDN including those at the frontier.

- The lack of a 'sense check' of disaggregated results with analysis of total direct and indirect opex.

- The LECG analysis:
  - has only four data points;
  - has allocation issues between direct and indirect costs which results in Scotia being an outlier in the analysis of indirect costs but yet has substantially higher direct costs;
  - benchmarks costs that have a different allocation of costs within categories whereby, for example, NGN regulatory costs include activities not in other GDN regulatory costs such as shrinkage purchase, xoserve management, pricing and network code management; and
  - uses inappropriate scale variable/cost drivers in the analysis of specific costs.

- The PB Power analysis:
  - employs composite scale variables that use notional unit costs as the weighting mechanism of the individual cost drivers; the identification and level of these unit costs and hence weightings remain unexplained and untested and impact significantly on the results of the analysis;
  - exhibits a lack of rigour in the application and testing of the statistical techniques employed in the analysis; and
  - suffers from the normalisation issues raised by different allocations of costs between indirect and direct costs as identified in the LECG analysis above.

We are concerned that these issues substantially distort the analysis with the result that the efficient companies are insufficiently rewarded as some of the analyses result in almost arbitrary results. The impact is that efficiency incentives are weakened and hence potential customer benefits are lower.

The key concern with adopting a disaggregated approach to comparative analysis of efficiency has materialised in Ofgem's results, whereby the allowances identified require significant reductions in operating expenditure even for those companies identified as operating at the efficiency frontier. For example, NGN, which has been benchmarked as the frontier company, nevertheless has £1.1m to catch up to the frontier as well as an annual frontier shift target to achieve. These results, if adopted directly, would have serious impacts on the incentives for efficiency and the benefits that comparative analysis can deliver for customers within the regulatory framework. The post analysis top-down adjustments made to account for this effect go some way to reducing the impact on the incentive framework, but cast doubt on the applicability of using this overall approach and the specific methodologies employed to set allowances. Our detailed comments on the application of these adjustments are set out in response to question 2 below.

Further evidence for the unpredictability and the inappropriateness of the disaggregated approach arises when reviewing the allowed level of indirect opex.

The benchmarking has resulted in the four NG GDNs having a total indirect opex allowance over five years of £391m compared to £326m for the four sold GDNs as shown below.

NG GDNs	Ofgem indirect opex allowance (£m)	IDNs	Ofgem indirect opex allowance (£m)
EoE	129.1	NGN	80.6
London	88.0	Scotland	65.4
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Total	**390.6**	**Total**	**325.9**

Economies of scale should mean that the IDNs are given allowances at least as much as NG's. The 20% reduction in allowance for IDNs compared to that for NG for indirect costs suggests that the disaggregated analysis is not providing appropriate allowances. Furthermore, the IDNs have 50% of customers and 52% of total network length. Hence, using Ofgem's composite variable, the IDNs account for 51% of the total "size" of the gas distribution network and NG accounts for only 49%, thus one would expect a higher indirect cost allowance for the IDNs.

Given these difficulties and concerns with the disaggregated approach carried out by LECG and PB Power, NGN believes that a top-down analysis of total controllable operating costs is more appropriate, such as that carried out by Europe Economics, to ensure clear and strong incentives. This approach should form the primary basis of determining allowances.

Appropriate incentives for efficient companies

We have estimated the benefit that the frontier company is providing to customers by taking Ofgem's analysis and then calculating revised allowances assuming that the frontier company is fourth instead of first which places it on the "line of best fit". The result is that customers benefit overall by £70m. Yet the frontier company, NGN is penalised with a reduction in allowance over the five years of £5m (before frontier shift). NGN proposes that the £70m should be shared between customers and the frontier company to strengthen incentives and hence encourage greater customer benefits in the next period. Our suggestion is a 30:70 sharing in line with the sharing of capex benefits and hence, in this case, the frontier company would be rewarded with £21m.

Using NGN's preferred approach of top down, upper quartile benchmarking, the frontier company provides £150m of benefits to customers over five years but is rewarded with only £13m over five years by moving immediately to the frontier. Again, this is insufficient incentive and the rewards for the frontier company should be greater.

Regional factors

NGN agrees with the general approach taken by Ofgem in identifying and accounting for the impact of regional differences in costs that exist between GDNs. It is clear that GDNs that operate in London face higher costs relating to direct labour and contractors and this should be accounted for in carrying out the comparative analysis. We also support Ofgem's assumption of higher salaries within the M25 and approximately consistent salaries across the remainder of the UK.

However, the factors that Ofgem has applied to these two elements of cost for London significantly overstate the actual regional differences that exist between them and the rest of the country. The Annual Survey of Hours and Employment 2006 is quoted by Ofgem as indicating a difference of 30% in labour costs between industries operating in London and the average of the rest of the country. It is inappropriate to use average salaries as London, for example, contains a greater proportion of workers in highly paid industries such as banking. A more appropriate statistic is the average salaries for workers in utilities. Examining data for annual gross salaries of industries that are directly comparable with the activities of the GDNs (utilities) from the same data source indicates that the difference is around 24% and not 30%. Using Ofgem's estimate of 22% for Southern and 53% for London within the M25 suggests that the regional factors to apply are 1.05 for Southern and 1.13 for London and that the factor to apply for NGN would increase to 0.97.

However even this lower difference in London and other UK salaries overstates the difference for gas networks as the networks had common ownership and national pay bargaining until very recently. We would suggest that Ofgem assesses NG's projections to ascertain the forecast salary differential between London and the other three NG networks. This is likely to conclude that the salary adjustment is less than 24% and that NGN's factor should be higher than 0.97.

The evidence to support regional differences in contractor costs is less clear. Contractors are more mobile than many other forms of labour resulting in small national cost variations. It is noteworthy that PB Power's analysis based on the quarterly review of building prices published by the Royal Institution of Chartered Surveyors suggests a regional factor of 1.01 for Northern. Consequently the proposed contractor price regional factor for NGN of 0.96 understates the costs within our region; similarly, we believe that Ofgem has overestimated the "London effect" in its analysis of factors for London and Southern.

The impact of the normalisation for these regional differences in costs is significant on the results of the benchmarking analysis. Accurate estimates of these differences are required to ensure robust estimates of efficient operation.

Regional effects

Ofgem also asks specifically whether there are regional effects that affect costs within each network. There are of course other genuine differences in costs between GDNs that are driven by the specific operational, geographical and configuration characteristics of each network. Examples of this type of regional difference from NGN's network include:

- the most sparsely populated network of all GDNs (Customers/Network Length) with large areas of rural population resulting in higher emergency and standby costs;

- in addition two significant densely populated urban conurbations in the Leeds/Bradford and Newcastle regions which increase maintenance and replacement costs due to the problems of accessing pipes; and

- the highest number of offtake points of any GDN resulting in relatively high total maintenance costs.

The list of such differences will be extensive and diverse across all GDNs. The process for how these regional factors can be validated and accounted for in either normalising cost data or explaining differences in levels of efficiency will need to be robust to ensure genuine differences are appropriately accounted for and reflected in allowances. NGN's view is that special factors should not be applied as this can result in complex and time

consuming calculations and each network can highlight specific issues such as those above; the result can be arbitrary as it will depend on exactly which factors Ofgem uses and how they are applied. However, if Ofgem is minded to allow special factors then NGN's factors also need careful consideration, in particular population density is an inappropriate average as a cost driver as it will obscure the impact of the first two bullets above.

Real Price Effects

We are encouraged to see Ofgem accepting that GDNs are facing increases in certain elements of its cost base that are in excess of inflation as measured by the RPI and that these will continue over the period under consideration. In particular NGN is forecasting:

- real increases in contract labour costs of 4% per annum;
- real increases in direct labour costs of 2% per annum; and
- real increases in materials costs of 2% per annum.

However, the real price effects suggested by Ofgem of 2%, 1% and 1% respectively fails to take account of the particular market conditions that are expected to exist over the period of the next price control. Instead the estimates rely on current or historic statistics that underestimate the likely impact of future demand and supply conditions in particular on the three elements of cost.

Contract Labour Costs

Ofgem has used a simple relationship between an index measuring historic engineering costs and an index of forward looking tender prices. However, the historic relationship between these two sets of indices does not necessarily provide a guide to future expected conditions. As NGN has pointed out in consultation responses the demand for contract labour is expected to be particularly high over the period to 2012 when compared to recent history. There are significant infrastructure investment programmes over the period including the water investment programme, Terminal 5 at Heathrow, electricity transmission network investment and the 2012 Olympics. This represents a significant increase in the demand for contract labour when compared to the previous price control period. There is also a continued and increasing shortage of experienced gas personnel that require higher levels of training and competence that attract a premium to general contractor costs. However, the indices employed in the analysis are general indices that are not focussed specifically on the gas industry and hence do not include the implications of labour shortage within the gas industry.

The Building Cost Information Service (BCIS) published by the Royal Institution of Chartered Surveyors confirms that tender prices are rising substantially faster than inflation. Their February 2007 newsletter predicts price increases of 6.1% (3.6% real) in 2008. The BCIS expects that work on the 2012 Olympics will make an impact from 2007.

Note that average growth in the Baxter index from 2000 to the end of 2006 was 1.13% above EC Harris National TPI and the latest EC Harris data to 2012 has annual price inflation of 4.45%, ie 1.95% above Ofgem's RPI of 2.5%. Hence using Ofgem's methodology now gives a forecast of real growth in contractor prices of 1.13% + 1.95%, ie just over 3% per annum.

NGN's evidence based on contract negotiations, particular for connections work where contractors are walking away rather than accepting modest unit cost price increases, suggests increases going forward of 4% or more.

Direct Labour

There are several industry specific factors that are driving wage increases for GDNs, eg:

- skills shortages;
- aging workforce; and
- historic trends

As with contract labour costs these specific factors affecting the supply of appropriate direct labour is placing significant upward pressure on salaries. RPI captures general wage inflation but not the extent to which specific market conditions in gas are causing real price effects when compared to economy wide wage inflation and the general measure of price inflation provided by RPI.

Recent evidence suggests that wage inflation in the private sector is increasing at a significant rate. In March 2007, IDS (pay specialist) reported that pay settlements in the UK spiked up in January to a six-year high, primarily because private sector pay is rising at twice the rate of that in the public sector. This was followed by a report from the Recruitment & Employment Confederation (REC) and consultancy firm KPMG who found that rising demand for staff and shortages of skilled candidates drove inflation of permanent staff pay to an eight-month high in February, and temporary/contract staff pay to a 27-month high. In gas, these increases are exacerbated by the shortage of appropriate skills.

In the construction industry wage settlements have averaged between 4.1% and 4.7% per year over the last five years and the three month average is currently 4.9%. This data underpins NGN's forecast of annual 2% direct labour inflation.

Materials Costs

Significant differences in the growth in different categories of costs has been particularly evident over the last 8 or 9 years with the growth rates for services costs being significantly higher than for goods in the UK economy. The mix of goods and services purchased and consumed by GDNs imply that their costs are increasing at a rate far greater than RPI at present.

The cost of oil, raw materials, energy and services are continuing to rise at a significantly faster rate than RPI and it is these input prices that largely determine the costs of materials purchased and consumed by the GDNs.

The cost of steel and plastic pipes has been rising at an average of 5%-6.4% for the last four years. For example, at the end of 2006 there was a 22% increase for plastic pipes. Furthermore, our supplier of plastic pipes has now informed us that the annual price increase that we will be faced with this year is 7% for pipe and 12% for fittings.

Thus NGN believes forecast real price increases in materials costs of 2% per annum is a realistic and possibly conservative assumption.

<u>Productivity assumptions – frontier shift</u>

It is pleasing to note that the First Economics analysis of frontier shift is included in Initial Proposals but disappointing that Ofgem has taken little account of it. The Europe Economics' (EE) analysis is flawed and either Ofgem should use the First Economics' approach or the EE approach should be completely revamped with plausible assumptions.

The use of a data set from 1973 -1999 is totally inappropriate to set allowances from 2008-2013. There has been a fundamental shift in the economy since the 1970's and 1980's and recently productivity improvements have been driven by globalisation and internet-linked advances. If analysis continues to be based on this dataset it would be helpful if Ofgem explained why it considers "that the use of the 1973 to 1999 productivity set by Europe Economics is a reasonable method for considering long-term trends in productivity improvement". Annex 2 of the First Economics report submitted with the fourth consultation provides a clear analysis of the flaws in Europe Economics' calculations.

EE's view of the scope for outperformance of average UK TFP growth is based on EE's view that the machinery and equipment, utility and communications industries provide the best benchmarks. However:

- The machinery and equipment industry is a capital-intensive sector that bears no resemblance to the GDN labour-intensive engineering services; and

- Figures for TFP growth in the utility and communications industries are distorted by the 'privatisation effect' affecting the performance of network businesses transferred to the private sector in the 1980s and 1990s. Europe Economics claim that they have stripped out this privatisation effect, but do not say how and there is no evidence that the utility industry was out-performing economy-wide TFP growth before privatisation.

The dataset and analysis underpinning First Economics assessment is being shared with Ofgem so that Ofgem can come to its own conclusions about the scope for frontier shift using data from the last ten years.

Evidence from electricity DNOs where companies have underperformed allowances in the first year of their control despite incentives that reward underperformance in year one more than in other years, suggests that that review set unachievable productivity targets. It is important that Ofgem does not set unachievable targets for GDNs.

It is also worth noting recent regulatory precedent in this area:

- CAA's initial airport price control proposals, published in December 2006 commented that it should "be cautious before concluding automatically that an airport company operating at the industry's efficiency frontier will go on continuously achieving real terms opex reductions". The CAA concludes that it would be inappropriate to assume that frontier shift permits real terms cost reductions over and above the potential efficiencies it identified in its benchmarking.

- Ofwat's received a near identical paper from Europe Economics in 2003 to that provided to Ofgem but Ofwat chose to treat its findings cautiously. In its final determination, the regulator used frontier shift assumption of 0.3% for water and 0.5% for sewerage when fixing opex allowances rather than the much higher Europe Economics numbers. The regulator also made separate allowance for rising pension and energy costs. Taken together, the effect of these assumptions was to give the leading water and sewerage companies from the comparative efficiency analysis an overall efficiency target of roughly zero.

Compared to the CAA and Ofwat, Ofgem's 2.5% per annum frontier shift assumption is far too demanding and, in NGN's view, extremely challenging if not impossible to achieve for a company already at the efficiency frontier.

Furthermore the 2.5% frontier shift includes 1.1% for comparative competition. However, Ofgem has adjusted every company's base year opex down to their estimated efficiency frontier by a total of £68.5m as a result of comparative competition. Hence, Ofgem has already taken account of some of the benefits of comparative competition and thus there is an element of double counting by applying the full estimate of 1.1% comparative competition benefit for each year for frontier shift.

NGN concurs with First Economics that the achievable frontier shift is an upwards adjustment of between 0% and 0.5%. Indeed the frontier shift may be a higher upwards adjustment as we believe that First Economics has overestimated the scope for capital substitution.

Capital substitution

There is no justification for the 1.2% capital substitution used in EE's modelling and used as the upper end of Ofgem's range. Our understanding is that it has been lifted from the report EE undertook for Ofwat in 2003; the analysis is not directly applicable to gas. In particular, water has a breadth of activities from supply through water treatment, distribution and retail so the scope for capital substitution is much broader than for gas distribution.

The asset and cost base of GDNs are characterised by a dominance of long-lived infrastructure assets. With an average asset life in excess of 45 years and a mains replacement programme taking place over 30 years, the refresh of the asset stock takes place over a significant period of time and reduces the scope for the introduction of new assets and any associated new technology and innovation. The opportunities for technological advances in pipe-laying are relatively small. In consequence, the scope for the short term substitution of capital for other factor inputs is much less than the scope in the UK economy in general.

It is important to note that replacement expenditure does not contribute to capital substitution in Ofgem's methodology:

- Leakage and shrinkage gas reduction is dealt with separately as the productivity assumption is applied to controllable opex excluding shrinkage.

- The assumptions for repair and emergency costs assume frontier shift that includes capital substitution so to include the impact of the repex programme on these items would result in double counting and an unachievable efficiency target.

NGN's proposed capex expenditure of £255m can be split into two areas:

- £156m relates to growth, ie investment required to both physically connect new customers to the network and increase the size of the network to accommodate both new connections and load growth from within the existing customer base. The addition of these new assets to the system cannot be seen to deliver any reductions in total cost as they are effectively increasing the 'output' of the system and add to the workload required to maintain the network. However, neither is NGN forecasting an increase in costs related to these network additions. This is a genuine productivity improvement as greater output (measured by network capacity) is being delivered for the same cost.

- Renewals expenditure of £99m which is primarily delivered on a like for like basis and is justified on the basis of either a risk of failure assessment or that the current asset has become physically or technically obsolete. The nature of most of these assets means that there is little or no technological development in their

design/application and hence a limited scope for improving productivity through the programme of replacement. There is a short term effect that can be assigned to the reduced maintenance requirements of newly replaced assets. However, this effect is likely to be minimal and exist for a relatively short period of time. Some of the expenditure in IS assets over the period are associated with the replication of National Grid systems for system operation and are direct replacements of the shared systems and not designed to deliver improvements in productivity or cost reduction. The ability of the planned IS expenditure in NGN to replace direct labour or significantly change processes or working practices is minimal when compared to IS projects in other industries.

NGN's estimate of the scope for capital substitution is as follows.

£m	Planned Expenditure	Likely Substitution Effect
Replacement Expenditure:	**419**	0 (to avoid double counting)
Capex:	**255**	
Growth	156	0
Renewals	99	0.2 - 0.4
- IS	37	0.1 - 0.2
- Other (inc plant renewal, system control, vehicles, support)	62	0.1 - 0.2

Hence our estimate of the combined effect of the planned investment programme on operating expenditure is about £0.2m to 0.4m per year or about **0.3% to 0.5%** of our average controllable operating expenditure.

There are several other issues to consider when examining these substitution effects and how they translate into cost movements over the next control period:

- There are offsetting operating/labour substitution effects particularly relating to maintenance expenditure, ie ongoing maintenance schedules reduce the requirement for replacement capital expenditure.

- The outputs of the GDNs are forecast to increase over the plan period across several different measures: capacity (1 in 20 target) is increasing at 1.5% pa; throughput is increasing at 1% pa; NGN is working to increase levels of customer service.

- There are large elements of NGN's operating expenditure that are determined by the requirement to meet the emergency standards of service set out in the gas transporters licence. Although this activity is labour intensive in nature, the scope for capital substitution is very small and reduces significantly the scope for productivity gains in its operation.

Pensions

We welcome the conclusions reached by Ofgem in its Initial Proposals for the treatment of both ongoing pension contributions and the recovery of pension scheme deficit costs. The proposals form a practical and transparent mechanism for the determination of pension costs within operating expenditure.

NGN has had an up-to-date (as at March 2007) actuarial valuation undertaken of the pension scheme to which NGN contributes which recommends a higher contribution rate than the previous valuation (as at December 2005) submitted to Ofgem. The full report

will be available next week and will be submitted to Ofgem as a confidential document. Ofgem should take this into account when finalising pension allowances in the forthcoming price control period as it is based on latest assumptions on scheme deficit and required contribution. NGN can confirm that it expects to make contributions to the pension scheme at least equal to the allowance that Ofgem provides in Final Proposals.

The proposal to equalise incentives for pension costs and other operating expenditure efficiencies is an appropriate strengthening of the overall incentive framework.

Shrinkage

The modifications to the shrinkage arrangements that Ofgem introduced as part of the one year control were a welcome strengthening of the incentives for shrinkage cost management through the removal of the significant price risk that existed under previous arrangements. The uplift factor appears to be working appropriately in the one year control although the volatile winter months are still to come and these may suggest that 3.5% is too low; we await Ofgem's proposals for modification to the uplift factor. It is essential that any revised methodology minimises price risk and is symmetric in terms of the opportunities to underperform or outperform.

However we have concerns relating to the difficulty in accurately forecasting shrinkage factors. Annual shrinkage factors are calculated as a percentage of throughput. However, shrinkage volumes are largely not a factor of throughput but are instead driven by system operating pressure and the condition of the network. This means that shrinkage volumes, and in particular leakage volumes, are relatively stable over time, but shrinkage factors will fluctuate with changes in throughput. For example, NGN's indicative proposal for the 2007/08 shrinkage factor is for an increase of 3% as a result of lower demand in 2006/07. Hence NGN is likely to underperform the shrinkage allowance for 2007/08 between October and March by about 3% which will impact profitability by close to £200,000 despite a reduction in shrinkage volumes.

Forecasting shrinkage factors for the next five years will include a significant forecast error, particularly given the uncertainty surrounding demand patterns in the current market. Consequently, hard coding shrinkage factors intro the licence for each year of the price control can produce windfall gains or losses for GDNs driven solely by changes in throughput. This effect may have implications for the incentives to reduce shrinkage and leakage volumes as GDNs will not be facing the correct pricing signals to make efficient leakage reduction decisions over time with a resulting sub-optimal leakage reduction programme.

There are several approaches that can address this particular issue and more appropriately incentivise leakage reduction over time. The simplest, and NGN's preference, is to replace the target of forecast shrinkage factors in the licence with forecast shrinkage volumes in each year. This will ensure that allowance and actual shrinkage volumes will be the same and remove any perverse incentives that may derive from higher or lower demand than forecast.

Metering work

NGN can confirm that it is likely to lose a considerable portion of its metering work over the next price control period, of the order of £8.5m per year, and this loss of income must be taken into account by Ofgem when setting allowances. Customers have benefited from the reduction in regulated costs that have been allocated to metering in the past. It would be inappropriate for customers to retain this benefit at the expense of companies when metering work is lost. The opex allowance must reflect the likely loss

of metering work and include a proportion of the operating costs currently allocated to metering.

We note that Ofgem is continuing to review the increased regulatory costs that would arise from metering work loss and to assess appropriate incentive mechanisms. NGN would be pleased to work with Ofgem to develop incentives that ensure efficient negotiations with metering companies and that balance the interests of customers and companies.

It is worth noting that any requirement for emergency personnel to carry and utilise CO monitoring equipment will not in any way substitute for metering work loss as such a requirement will increase peak workloads.

xoserve

The proposed xoserve savings in operating expenditure are based on inappropriate comparisons with GDNs that do not take account of the different nature of the xoserve and GDN businesses. As already mentioned, NGN supports benchmarking and xoserve should be benchmarked against externally validated benchmarks that are comparable with xoserve. We would expect that such an exercise would demonstrate that xoserve performs better than benchmark.

The proposed savings in IS expenditure are derived from a comparison with just one GDN. This GDN utilises a different set of systems to xoserve and has a completely different profile of projects and cost pressures. Any changes in cost profile forecast by the GDN cannot be translated to xoserve in a simplistic manner without a detailed analysis of the underlying activities of the two companies. As with any benchmarking, it should be undertaken across a range of comparable companies.

The remainder of the proposed savings are in property expenditure and are derived from a comparison with the four GDN groupings. No recognition is made of the different nature of the businesses and property requirements and the location of xoserve accommodation. Additionally, no account whatsoever is taken of the high occupancy rate achieved by xoserve which has enabled overall efficiencies in property costs and it may be more appropriate to benchmark xoserve costs per person. Further, no account has been taken of the fact that xoserve is a significantly smaller company than any of the GDNs and consequently has much less flexibility to achieve savings through management of its property portfolio.

Other opex

There is currently no allowance for the impact of the Traffic Management Act or Waste Management Regulations. Ofgem has indicated that these areas remain outstanding. NGN expects to get further clarity on the likely level of costs to comply with this new legislation over the next couple of months and will work with Ofgem to ensure an appropriate allowance for efficiently incurred costs.

Consumers, estate agents and redress bill

GDNs will be required to set up an ombudsman scheme from next year to replace Energywatch for customer complaints. Controllable opex contains no costs for such a complaint handling service as Energywatch costs are all treated as pass through costs. Hence Ofgem will need to provide an additional allowance as part of the cost control. GDNs are discussing the appropriate way forwards and NGN will be able to estimate the costs by October.

Skills shortages

GDNs have an aging workforce with around 30% of the field employees over 50. Much of the work undertaken by these employees is physically challenging and involves shift and unsociable hours working. The capacity and capabilities of a significant proportion of these people are likely to deteriorate over the medium/long term. It is therefore necessary for NGN to invest to recruit and train new employees to fill the skill shortage the ageing workforce will create.

NGN has taken active measures to address this issue by instigating an apprentice recruitment programme, converting contractor first call operatives and contractor mates (GD1s) into direct labour and upskilling existing employees. It is very disappointing therefore that NGN's apprentice training costs have been disallowed entirely from the disaggregated analysis undertaken by Ofgem and its consultants. This represents very short term thinking and gives the wrong incentives to regulated companies to the detriment of customers. Given the importance of this issue, Ofgem should review the costs involved and a separate allowance should be given to reflect an efficient level of costs.

Base year

The benchmarking has used a combination of 2005/06 actuals and 2006/07 forecasts. The benchmarking for Updated Proposals should be based on 2006/07 actuals.

Question 2: Do you agree with the proposals to uplift allowances derived from disaggregated benchmarking so that they are consistent with the power of a top down approach?

Disaggregated approach

As noted above, NGN continues to have serious concerns about the use of the bottom-up analysis to form the basis of setting opex allowances and believes that only top down analysis should be undertaken.

Ofgem's disaggregated analysis produces results that require all GDNs including those operating at the frontier to make efficiency improvements even in the base year to achieve the benchmark target (as well as the 2.5% annual efficiency target). It is entirely inappropriate that every GDN must "catch-up" to the benchmark target as well as achieve an annual frontier shift target. This has serious implications for the long term incentives for efficiency and the ability of companies to finance their activities – even companies benchmarked as efficient are required to make further significant cost reductions. Any adjustment to compensate for the modelling and allocation issues of disaggregated analysis must be at least to achieve an average of upper quartile on the top down modelling.

If Ofgem is minded to continue with the disaggregated analysis then this must be adjusted to ensure that unachievable allowances are not set.

Quantum of the uplift

There is an inconsistency in the approach taken by Ofgem in deriving results from the bottom up and the top down analysis. Using frontier levels of efficiency is correctly identified as being inappropriate when deriving results from the bottom up analysis for the well rehearsed reasons of the general level of inaccuracy that may exist in the models. This was recognised in the analysis undertaken by Ofgem's consultants, Europe Economics. Given that the methodology assumes that all differences between actual and benchmark estimated costs are a result of inefficiency, any error that exists within the

model will overestimate the scope for efficiency when benchmarked at the frontier. The use of the frontier as the benchmark understates the efficient level of costs and consequently underestimates the uplift that should be applied using Ofgem's methodology. Hence an upper quartile measure of benchmark efficiency should be used; this is a standard approach to adjusting for inefficiency and has been correctly applied to the bottom up results. If Ofgem continues to pursue its "hybrid" modelling approach then an upper quartile top down model should be used to adjust allowances, ie the uplift should average 10% as calculated in Initial Proposals.

Use of an average uplift factor

The methodology employed by Ofgem uses a flat uplift factor applied to all GDNs to ensure that the results are consistent with the power of the top down approach. However, this approach takes no account of the differences in allowance derived from the bottom-up and top-down approaches. To the extent that there are differences, applying a uniform uplift factor across all GDNs provides the same percentage allowance to each company with no regard to the efficiency or inefficiency of that company. As well as providing no incentive for efficiency, this gives inefficient companies an extra 5.6% allowance for the inefficient element of their costs which cannot be appropriate. In general the results from Ofgem's analysis show the uplift is biased towards inefficient GDNs at the expense of efficient GDNs as shown in the table below:

Group	**Top down bench-marking (£m)**	**Base year Ofgem allowance (£m)**	**Benefit/(penalty) of 5.6% uplift (£m)**
National Grid	291.5	298.5	7.0
NGN	74.3	73.2	(1.1)
Scotia	152.8	151.5	(1.3)
WWU	72.0	67.4	(4.6)
Total	**590.6**	**590.6**	**0**

The table shows how the uniform uplift transfers the value of the uplift between ownership groups with only the National Grid group of GDNs receiving an allowance above that implied by both the bottom up and top down approaches without achieving overall frontier performance in either analysis. The owners of the sold GDNs all receive allowances below that implied by the top down benchmarking. Companies at or close to the efficiency frontier such as NGN (first) and WWU (third) are penalised and the methodology does not reflect the relative efficiencies. In contrast, NG's GDNs are ranked below average efficiency (2^{nd}, 4^{th}, 7^{th} and 8^{th}) but NG receives an allowance higher than for the top-down benchmarking. The power of the top down approach is ignored by applying a uniform uplift factor and not accounting for the relative performance against benchmark indicated by the top down.

If an approach of applying an uplift is to be used, then it must ensure that frontier efficiency companies are rewarded appropriately for their performance and ongoing incentives are not damaged by incorrectly allocating allowances to inefficient GDNs.

Furthermore, the impact of Ofgem's methodology is that every GDN has a base year allowance below its costs (see table overleaf) so all companies have both catch up and frontier shift applied which is inappropriate as it suggests that even the efficient company is inefficient.

£m	Base year Controllable opex	Base year Ofgem allowance	Difference (catch up)
EoE	106.9	94.4	(12.5)
Lon	77.9	71.0	(6.9)
NW	89.7	78.1	(11.6)
WM	61.0	54.8	(6.2)
NGN	74.3	73.2	(1.1)
Sc	64.2	49.9	(14.3)
So	109.7	101.6	(8.1)
WWU	75.4	67.4	(8.0)
Total	**659.1**	**590.6**	**(68.5)**

The result of the benchmarking needs to ensure that those companies operating at the efficiency frontier are provided with a reward and certainly see no reduction in operating expenditure in the base year. The uniform uplift approach seriously undermines the incentive properties of comparative competition and reduces the long term incentives for efficiency. Only a top down approach will provide rewards to the efficient companies in a robust and easily understood way.

Question 3: Do you agree that GDNs Emergency Service personnel should be required to carry out and use carbon monoxide measuring equipment during gas emergency investigations?

The recent HSE report on Domestic Gas Safety concluded that "the use of CO detection equipment by the gas emergency services should only be necessary if informed debate fails to improve the current position". NGN discussed this with the HSE at a meeting in June and there were no indications that they were in favour of this proposal.

Nevertheless, it may be appropriate for Ofgem to review the position now and identify the costs associated with GDNs Emergency Service personnel carrying and using CO equipment. If Ofgem and/or HSE determine that this use of carbon monoxide monitoring equipment is required then it is essential that the full additional costs are allowed within the price control. Costs will include training in the use of equipment and the decision process associated with the results.

It should be noted that this will not resolve any impacts to NGN from the likely loss of meterwork contracts. If anything, this proposal will accentuate peak winter workload hence requiring additional staff and increasing costs.

CHAPTER: Four

Question 1: Do you agree with our approach for setting capex allowances and the proposed allowances we have derived using that approach?

NGN firmly believes that the capital expenditure forecasts put forward in its BPQ response are robust and form an accurate estimate of the likely level of workload and costs over the plan period. As such we continue to question the assumptions that result in significant disallowances against forecast expenditure.

These disallowances are driven largely by the significant productivity assumptions and the reduction in real price effects from those that NGN is currently seeing and expects to continue during the next five years.

Productivity

The range of 2-3% per annum that Ofgem has assumed implies significant real terms increases in capital expenditure productivity over the plan period. It is unclear how Ofgem has arrived at its conclusions on the appropriate productivity assumptions to include in its proposals. For example, Ofgem has assumed 3% per annum productivity for connections capital expenditure and yet it is this area in particular where there is genuine evidence of a challenge in cost reduction with contractors requesting price increases above 10% and walking away from work if their demands are not met. The work is unattractive with many geographically dispersed small jobs and NGN will be challenged to contain costs at current levels.

Real Price Effects

In the answer to chapter 3, question 1, NGN laid out in detail the background to real price effects included in its forecasts over the plan period and the challenge to Ofgem's assumptions. The same comments apply to Ofgem's proposals for capex.

SOMSA and GTMS

NGN does not agree with the adjustments proposed to NGN's non-operational capex which appear to relate to SOMSA exit and GTMS. The requirement for SOMSA exit is driven by a regulatory requirement and is not an investment decision that would have been taken by NGN if was not obligated to exit the current arrangements. If Ofgem believes that exiting SOMSA will be for the long term benefit of customers through efficiencies and allowing a clearer comparison between GDNs then the exit costs should be allowed.

The replacement of GTMS is complex in nature, and whilst recognition of the costs attributed to the replacement application has been considered the true cost of replacing GTMS with SCX6 has not been allowed.

The basis of replacement has been considered as like for like at minimum cost, with agreement to collaborate with NG and the other IDNs on the replacement product, this has driven best value, but added additional complexities to the programme beyond those allowed.

Development of interfaces for other dependent products, facilitation of amendments to suitable infrastructure arrangements and associated training seems to have been disallowed, but some of this is clearly directly attributable to GTMS replacement.

Additionally, whilst collaborative in nature, it is now clear that some elements will be more expensive than was assumed at the time of the BPQ submission The overall solution for SCX6 is now likely to be £1.1m higher for NGN alone. We believe our forecast costs of £4.5m may now underestimate the likely costs and should be allowed in full.

LTS

Ofgem has excluded the extension to Eggborough from NGN's plans. At our bilateral meeting in May, Ofgem suggested that, because the extension to Eggborough may not happen, the expenditure would only be allowed if an ARCA was signed with the owners of Eggborough.

NGN is comfortable with this approach. It would be helpful if this was confirmed in Updated Proposals together with the implementation mechanism. In particular if an ARCA is signed, it would be consistent with other capex treatment for the allowed capital expenditure to be an ex ante and not an ex post allowance, for example that assumed by

PB Power in its report for Ofgem as an appropriate efficient level of expenditure. The expenditure should be deemed "pot 3" and allowed in the period incurred and not "logged up" for future inclusion in the RAV.

Question 2: Do you agree with our approach for setting repex allowances and the proposed allowances we have derived using that approach?

NGN is setting the efficiency frontier and, although we agree with Ofgem's benchmarking methodology including immediate movement to the benchmark target for both efficient and inefficient companies, has still been given a challenging 7% (£29m) reduction over the plan period when compared to NGN's forecasts.

The target of 2% annual efficiency is particularly challenging in an environment where NGN has achieved substantial efficiencies and is already operating efficiently. Furthermore we are concerned that there may be an element of double counting as the efficiency target includes an assumption by Ofgem that there is a capital substitution effect of repex which is then applied as the repex efficiency target!

The other adjustment to allowances relates to real price effects where NGN strongly challenges Ofgem's assumptions as laid out in our answer to chapter 3 question 1.

Furthermore, the tax treatment in Ofgem's modelling should follow the regulatory treatment and not the statutory treatment to be consistent with the way that Ofgem has used notional pro forma modelling for other price control aspects.

CHAPTER: Five

Question 1: Do you support our proposals for changes to the outputs and the quality of service arrangements?

NGN is committed to improving the quality of service that it provides and thus has no objection in principle to the changes Ofgem is proposing to the outputs and quality of service arrangements. However, it must be recognised that tightening existing standards and introducing new standards imposes additional costs on GDNs which need to be provided for in price control allowances.

We have a particular concern with the proposal to incorporate the telephone call standard (OS1) into a licence condition. Currently the performance level for each GDN can not be reported separately and NGG report a single national figure. Therefore if Ofgem imposes a licence obligation on NGN in this area it is not possible to measure the performance against the licence condition. NGN would require a derogation against any reporting requirement at the licensee level recognising that only national data can be provided. In addition, the degree of control NGN is able to exercise over the service is minimal given that there is a monopoly provider of the service backed by legislation.

Question 2: Do you support our proposals for improving the accuracy of pipeline records?

NGN supports the principles outlined in Initial Proposals. At this stage the proposals only require reporting on certain criteria which in themselves will not improve accuracy. This network, in common with some of the other GDNs, has for many years encouraged the reporting of DR4s; this clearly improves the accuracy of existing records. However, if Ofgem incentivises GDNs to minimise the number of DR4s (errors found and corrected), even by league tables, the impact may be that some GDNs avoid submitting these reports and this would reduce and not improve the accuracy of records.

It should also be recognised that if the rate of digitisation of records is accelerated then this will increase costs.

Question 3: Is Ofgem's proposed approach to setting allowances for the outputs and quality of service arrangements for 2008-2013 appropriate?

Ofgem's approach is not appropriate as additional obligations are being placed on DNs which are not being funded through the price control even though they impose additional costs.

Guaranteed standards require pro-active control systems and greater administrative effort than overall standards as the performance of each job has to be monitored in real time and if a failure is recorded payment must be made within the GS12 timescale. Overall standards are not monitored in real time and monthly or quarterly performance reporting is utilised. Therefore converting an overall standard into a guaranteed standard will in itself increase the DNs costs.

NGN estimates that the additional obligations will increase NGN's cost by £320k p.a. and £1.6m over the price control period. This is broken down as follows:

Additional Guaranteed Standard obligation	**Annual Cost (£'000)**	**Five Year Cost (£'000)**
Advanced notification of planned interruptions	50	250
Responding to complaints	20	100
Reinstatement	200	1,000
Provision of alternative cooking & heating	50	250
Total	**320**	**1,600**

The proposed allowances for third party damage or water ingress and for additional customer satisfaction surveys are broadly in line with NGN estimates of these costs, however the allowances proposed for the revised supply restoration standard are unacceptable. NGN is given an allowance of just £8k per annum for unplanned interruptions which compares to £330k per annum in supply restoration payments NGN has made during the last two years. It is inappropriate for Ofgem to remove outliers from its calculation of the efficient level of payments. Outliers have probably made high payments because of the impact of a significant supply interruption. NGN's payments for example are impacted by a single interruption to 6,500 customers It is reasonable to expect that a number of similar significant incidents will occur during the five year period. Including GDN's in Ofgem's analysis (like NGN) that have made high payments is essential to take account of this factor. In addition Ofgem's analysis takes no account of the additional payments that GDN's will have to make to IGT customers as a result of the extension of the standard.

The calculation used to derive the unplanned interruptions allowance as described in Appendix 6 is giving spurious results as NGN is given an allowance which is broadly equal to the West Midlands DN which has around 30% less customers than NGN and just a third of that for Scotland which has fewer customers. Furthermore it is unclear why an exception has been made for London on the basis of high rise buildings when other networks, including ours, have high rise buildings. It cannot be reasonable to allocate 65% of the total allowance across all networks to London and just 2% to NGN.

CHAPTER: Six

Question 1: Are the proposals for the capex rolling incentives and IQI appropriate?

NGN welcomes the IQI together with the capex rolling incentive and believes that this provides appropriate and strong incentives for accurate forecasting as optimal rewards are achieved when capex submissions are consistent with company forecast spends.

However, it is disappointing that the additional 5% allowed expenditure that DNOs received as a reward for forecasts close to Ofgem's view has not been included. The impact is that the IQI now offers insufficient reward for accurate forecasters and a significant penalty for poor forecasters that will make it challenging for them to achieve the allowed cost of capital. Thus NGN believes that this 5% additional expenditure should be allowed to maintain the strength of the incentive so that the benefits of accurate forecasting can be delivered to customers.

Additionally, Ofgem needs to provide clarity in Updated Proposals on how actual repex expenditure with a different mix profile to allowance will be treated within the IQI mechanism.

Question 2: Is it appropriate to implement an opex rolling incentive?

An opex rolling incentive is required to equalise the benefits of opex efficiencies across the five year price control, in particular to incentivise efficiencies towards the end of a price control period. The low incentives for opex savings at the end of a price control cannot be in customers' best interests.

Ofgem suggests that an opex roller is risky because it may encourage GDNs to capitalise opex costs. However, the scope for flexing capitalisation policy is very small and the cost reporting project that Ofgem will implement before the start of the next price control should ensure minimal if any opportunity to inappropriately treat opex as capex. Ofgem also raises a concern that, as capex incentives are lower than those for opex, a trade off between opex and capex will result in companies choosing to incur capex. However, in NGN's view there are limited opportunities for these trade-offs. Thus NGN believes that it is appropriate to implement an opex rolling incentive to ensure that savings are achieved consistently through the price control period to provide greater benefits for customers.

CHAPTER: Seven

Question 1: Do you agree with our assessment of the risks, costs and benefits attributable to the options for facilitating network extensions (Appendix 14)?

NGN agrees with Ofgem's assessment of risks, costs and benefits. The implementation of option 6 reduces risk to GDNs by allowing investment to enter the RAV and hence is likely to result in more schemes and hence greater alleviation of fuel poverty.

It should be noted that neither NGN's October BPQ nor its updated July BPQ contain capital expenditure for network extensions to fuel poor areas.

Question 2: Do you agree with our initial proposal (i.e. Option 3 complemented by a discretionary reward scheme)?

NGN agrees with the proposed approach, however the discretionary rewards available may be insufficient to incentivise GDNs. The opportunities for network extensions are likely to be those that are unattractive to IGTs and hence may not be attractive to GDNs. It may be appropriate to provide an enhanced return above WACC to incentivise these schemes and ensure that fuel poverty is reduced.

Additionally, we do not agree that GDNs should have to wait until the end of the price control period to receive financing for this investment as this is a disincentive which may result in fewer schemes undertaken. NGN shareholders and debt providers may be unwilling to provide additional capital, in particular as there is a risk that not all expenditure will be allowed if Ofgem deems any inefficient but there is no compensating opportunity for outperformance. This means that network extensions are riskier than any other form of capex or repex and would not be attractive to GDNs. A methodology should be found to provide financing as costs are incurred, for example:

- including an annual allowance in Final Proposals;
- an adjustment mechanism to allowed revenue based on appropriate parameters, eg length of connection or number of households connected; or
- allowing actual costs of connection into the RAV immediately with an ex post review to determine efficiency of the expenditure.

Question 3: Do you consider our proposed method to implement Option 6 appropriate (i.e. through GDNs' connection charging statements)?

Modification of connection charging statements is an appropriate implementation methodology.

Question 4: Do you consider the Government's Index of Multiple Deprivation to be an appropriate index to identify which fuel poor non-gas communities qualify for special treatment for gas network extensions/ If not, what do you recommend?

NGN believes that the Government Index of Multiple Deprivation would be an appropriate measure of overall poverty and hence is suitable to assess non-gas communities for special treatment for gas network extensions. Consequently NGN supports using this index.

Question 5: Do you support our proposals for the introduction of a Discretionary Reward Scheme for GDNs and its format given the larger reward?

NGN supports the Discretionary reward scheme as it appropriately incentivises better service to consumers. It may be helpful to fix the proportions available in each of the areas from the outset with an option to adjust proportions during the course of the five year control if deemed appropriate.

Another area of importance is improving the awareness of gas safety, an area where all the GDNs are working together. It may be appropriate for this to be funded through the discretionary scheme,

It is a little disappointing that Ofgem's proposals for an innovation funding incentive (IFI) have not been included in Initial Proposals. The incentive appears to work well in electricity and the low level of R&D within gas distribution suggests that a stimulus is needed. An IFI, if appropriately introduced, should effectively be self funding and resulting innovations would benefit customers.

CHAPTER: Eight

Question 1: Do you agree with the proposed approach to the funding of xoserve?

NGN is broadly supportive of a user pays approach providing that it is funding incremental costs and that all fixed unavoidable costs are fully funded by price control allowances. That is, xoserve is fully funded in the event that there is no demand for user pays services.

However, Ofgem needs to recognise that there are costs in introducing a user pays system such as administration costs, changes to the charging systems and, potentially, changes to the UNC.

Any industry changes not involving transporters should be subject to user pays arrangements. This would include, for example, the impact of changes made as a result of the review of supply licences and the costs of meter point reconciliation of smaller supply points.

It is important that Ofgem is involved in any user pays discussions to ensure consistency between Price Review assumptions and user pays arrangements.

Question 2: How should we address any benefits arising to xoserve from redundancy created from the replacement of UK link?

The replacement of UK Link will be designed to be consistent with the key features outlined to the Industry Dialogue Workgroup with sufficient capacity to meet the forecast demands on the system with no planned redundancy. This is the most cost efficient approach rather than adding capacity in a piecemeal manner.

During the life of the system it may be possible to deliver additional services. The price of these services will be based on additional costs incurred in developing and operating the services plus an evaluation of the value of using assets funded by price control allowances. This value could be considered to be the benefit gained. xoserve plans to publish a methodology for calculating the benefit and also publishing the actual benefit realised. NGN's preference is Ofgem's option 3 which is to do nothing as UK Link occurs at the end of the price control period. Option 1, identify a mechanism to share revenue with customers, is acceptable. Option 2, subtract the value of the redundancy from cost allowances is unacceptable as there is no guarantee that any redundancy will be sold.

Question 3: Do you agree with our approach of modifying SSC A15 to facilitate governance arrangements for user-pays?

SSC A15 defines the current scope of agency services and so it would seem logical for the same condition to define the core and user-pays subsets of the services, although other licence conditions may also require amendment. Any changes should be resolved in sufficient time to ensure no inconsistency between governance and funding.

Question 4: Do you think that the existing arrangements are adequate to ensure enforcement of the range of services and outputs delivered by xoserve in light of these proposals?

Yes, existing arrangements that provide an obligation to deliver the services are working well and we are unaware of any industry impetus to change them. As owners of xoserve and also parties to the Agency Services Agreement, GDNs are in a strong

position to anticipate performance issues and, if they arise, to resolve any failures to deliver.

CHAPTER: Nine

Question 1: What are your views on the factors relevant to our consideration of cost of capital?

We agree with the CAPM approach taken by Ofgem in estimating the relevant cost of capital but the parameters that Ofgem has used are inappropriate leading to an unacceptable cost of capital. The total allowed cost of capital return on assets (including tax) has reduced from 6.25% in 2006/07 to a proposed 4.84%. This is a substantive reduction of 24% in allowed return which is not the "gradual change" in cost of capital that we understand is Ofgem's approach to ensure long term stability in returns. Over the last 45 years investors have invested in assets on the basis of expected returns over the life of those assets of over 6%. The returns proposed for GDNs are lower than any other utility suggesting that capital is likely to be harder to obtain than for water, electricity or transmission. NGN will need to refinance existing debt and raise new funds totalling around £500m over the next year or so. This will be extremely challenging if the cost of capital is set at the low level proposed.

We recognise that the cost of capital in Initial Proposals is indicative but there are several assumptions that Ofgem has used that have led to an underestimate of the true cost of capital for GDNs over the next plan period. These need to be revised when the cost of capital estimates are updated.

Gearing

Ofgem has assumed a higher level of gearing (debt:RAV) for the GDNs of 62.5% compared to 60% for Transmission. There is no basis to assume that Gas Distribution can be more highly geared than gas or electricity transmission and there has been no trend in increased gearing since TPCR. Consequently the gearing level assumed for GDNs should be no higher than that assumed for TPCR.

Initial Proposals suggest that IDNs are geared at 70-80%. It should be noted that NGN currently has gearing of 66% (debt:RAV) and has always had gearing below 70%.

A higher gearing level for GDNs (compared to transmission) with no change in risk results in a higher cost of debt and a higher cost of equity. Hence Ofgem's parameters are not consistent as cost of debt is lower and cost of equity is unchanged. The increase in gearing implicitly suggests that Ofgem believes that gas distribution is riskier than transmission.

There must be consistency between all the parameters that Ofgem uses in its cost of capital estimate.

Relative Risk Differentials

We welcome Ofgem's intention to examine in detail the possible differences in risk that exist between gas distribution and transmission in an attempt to avoid underestimating the true cost of capital for the GDNs.

We have previously provided Ofgem with substantial evidence that indicates that gas distribution is indeed riskier than transmission and suggests that the equity beta employed in estimating the cost of capital should be higher than that employed at TPCR

and put forward in the initial proposals to reflect this risk differential. Ofgem needs to consider the report submitted by OXERA that provides statistical validity that quoted gas distribution companies are regarded by investors as riskier than transmission. We would expect this differential to be reflected in the appropriate cost of capital for the GDNs.

Furthermore, there is much empirical evidence that GDN activities and its regulatory framework are riskier than other comparable activities. Specific evidence of the riskier nature of gas distribution includes:

- There are no price reopeners in gas distribution whereas there are in water.
- The Northern Ireland regulator set a higher cost of capital for distribution than for transmission because of its higher risk.
- Safety issues are greater within gas, require a separate HSE safety case and have the potential to significantly impact reputation.
- The licence is revocable at 10 years' notice compared to 25 years for water and electricity.
- The repex programme is a larger, riskier programme than any electricity capital programmes.
- Security of supply is of fundamental importance, and insufficient supply has more serious financial and reputational consequences than in electricity.
- Gas will eventually run out providing a greater risk of stranding of assets than for electricity companies.

We look forward to working with Ofgem in examining this issue in an attempt to accurately quantify the risk differential and ensure it is reflected in the cost of capital allowance.

<u>Cost of Debt</u>

The following factors need to be considered in setting the appropriate level of the cost of debt:

- As indicated above, GDNs are riskier than transmission. These genuine differences in risk need to be reflected in the cost of debt as well as in the cost of equity.
- Transmission companies are more highly rated than GDNs (typically A+, A or A- vs BBB+). This suggests that the debt premium for distribution companies, and hence the cost of debt, should be higher.
- The market cost of debt has increased substantially – medium term debt is around 1% higher than last November when the transmission cost of capital was set. These increases need to be reflected in the overall cost of debt and there is certainly no basis to reduce the rate from that proposed for transmission. Interest rates are continuing to rise and rates are now at or above the ten year average.

On this basis, we would propose that the appropriate cost of debt after accounting for relative risk and shorter term increases in market rates is higher than allowed for transmission and above the 3.75% at the high end of Ofgem's range.

Cost of equity

The higher risk of gas distribution suggests a higher beta factor than transmission. Ofgem appears to have used an equity beta of 0.9x for transmission, which implies an asset beta of 0.36, and an equity premium of 5.0%. Even if the asset beta of GDNs was as low as that of transmission companies, the gearing of 62.5% used by Ofgem would suggest an equity beta of 0.96 and hence a cost of equity of 7.3%. The higher risk of GDNs suggests a cost of equity higher than this and above the top of Ofgem's range of 6.5% - 7.5%.

Debt indexation

Ofgem asks for views on the indexation of cost of debt. This conceptually simple idea has a number of practical difficulties:

- Which market rate should be used – eg short term or long term or a mix of maturities?
- Which type of corporate bonds or financial instrument should be used?
- Should fixed or floating rate or some combination be used?

The answers to these questions are not clear and are likely to reward some companies' borrowing structure and penalise others'. The impact would be regulators assessing how companies should borrow, but a fundamental principle of risk allocation is that it should be allocated to the party best able to manage it. Allocating this risk to the regulator is likely to result in higher risk for both customers and shareholders, which suggests a higher cost of capital which would further disadvantage customers. Furthermore, an adjustment mechanism is likely to result in substantive swings and unpredictability in allowed return and hence allowed revenue and transportation. In summary, NGN is opposed to debt indexation and believes that it would not be in the best interests of customers.

Tax

NGN has sent a letter to Ofgem separately outlining concerns with the treatment of tax. The principal issue raised is that Ofgem has assumed a change in capital allowance rates. However the suggested change is likely to be challenged by tax payers such as water companies, ports and airports, is being consulted on and is not in any finance bill. It is normal practice to base tax assumptions on existing law and the change in capital allowance should not be assumed.

Question 2: Are the factors affecting financeability set out in paragraph 9.36 the responsibility of shareholders or the regulator to address and how should they be addressed?

The regulator has an obligation to ensure that GDNs can finance their functions and hence it is clearly the responsibility of the regulator to ensure that the cost of capital parameters used in Ofgem's modelling and cost of capital are adequate to achieve a credit rating sufficiently above investment grade to enable a company to cope with potential cost shocks and remain at or above investment grade.

The ratios used to assess financeability should be the same as those used by credit raters and debt providers. The credit raters continue to use PMICR and NGN has debt

covenants relating to PMICR. Hence it is essential that Ofgem ensures that the PMICR shown in its financial model is the level required by credit raters for the investment grade implied by the gearing level and allowed cost of debt assumed. Our understanding is that Ofgem confirmed during the presentation of Initial Proposals to analysts that the credit rating required for GDNs implied a PMICR ratio of 1.5x - 1.6x. In Ofgem's modelling, NGN's PMICR ratio is between 1.3x and 1.4x for every year in Ofgem's model from 2008/09 to 2017/18. At this level NGN would not be able to raise finance and would be in danger of breaching existing debt covenants. This clearly suggests that the cost of capital has been set at an inadequate level. An appropriate level of PMICR can be achieved by a combination of setting an appropriate cost of capital and expensing more of the repex.

It is worth noting that NGN has no index-linked debt and it would not be appropriate for Ofgem to assume any issuance of index-linked debt to address financeability issues as it is for companies and not for regulators to determine the companies' financial structure.

A further issue is that the cost of equity is provided to enable companies to pay dividends to its shareholders. NGN's shareholders expect the full return allowed on equity to be remitted annually in dividends. It is therefore inappropriate to assume that some of this allowed return is retained by the GDN to pay for capital expenditure. Any requirement assumed for new equity needs to include an allowance for the full costs of raising that equity as happened in CAA's settlement for BAA at their last review.

Ofgem asks for views on three specific items mentioned in 9.36. NGN believes that the appropriate principles to adopt in modelling and assessing financeability are:

- Ofgem must enable companies to finance their functions on the base level of revenue allowed and any increase or decrease as a result of incentives should act as an increase or decrease on allowed return and should be respectively a reward or a matter for companies to finance.

- Historic regulatory decisions prior to the period in question should be included in the modelling as Ofgem is assessing financeability for a future period. The starting point should be the pro forma balance sheet based on starting RAV and if this results in inadequate financial ratios then it suggests that the cost of capital is inadequate or a financeability uplift is required.

Thus on the three items respectively:

- It is appropriate to continue to exclude the pot 2 expenditure from the RAV for five years as this is a regulatory decision made for a prior period.

- The impact of incentives, including IQI, should be excluded from the analysis as this is reward or punishment for the period in question.

- The impact of RAV sculpting results from a decision in a previous control and should be included in the analysis.