RIIO GD1 – COST ASSESSMENT

CHAPTER 2 - Overall approach to cost assessment

Question 1: Do you agree with our approach for assessing the companies' business plans?

NGN supports the overall approach outlined to assess the costs within companies business plans.

The use of a broader set of 'tools' to assess efficiency including Bottom-Up, Totex, Matrix Analysis and specialist review will overcome some of the consistency issues experienced during GDPCR1 (e.g. Bottom-Up vs Top Down).

However, there are several issues which the assessment framework needs to consider in its application:

> **Complexity** – the proposals include an additional layer of complexity and volume of data when compared to GDPCR1. The assessment needs to address some of the issues this complexity introduces including inconsistencies between results from different modelling techniques.
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> **Transparency** – The additional modelling techniques and the comparative assessment of both historic and forecast costs will make the process of identifying the overall efficient level of costs and allowances less transparent.
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> **Incentives** – The reduced ability to identify directly a specific efficient level of costs (e.g. Upper Quartile) makes it more difficult to ensure that companies' allowances are set at an appropriate level. This is especially true for companies who are at the efficiency frontier and potentially candidates for the fast track process. Your proposal to ensure that they are not disadvantaged by this process is the minimum necessary and a welcome clarification. However, the process must ensure this is observable and does not create a disincentive for efficiency.

Question 2: Have we proposed an optimum range of techniques;

(a) Are there better techniques that we have not included?

(b) Are we applying the appropriate techniques in the appropriate areas?

At this stage the range of techniques for assessing efficient expenditure would seem to be appropriate. The work must build upon the efficiency analysis carried out at GDPCR1 and that carried out by Ofgem on an annual basis in the intervening period. This consistency will assist in maintaining the efficiency incentives across the periods.

The final approach taken to determining relative efficiency between GDNs and overall efficient levels of costs will need to be flexible to accommodate differing and inconsistent results from alternative methodologies and analysis. The broader range of techniques proposed allows greater scope for dealing with these issues.

Consistent with the RIIO principles greater weighting should be given to overall cost assessment than more disaggregated approaches.

CHAPTER 3 - Input price inflation and ongoing efficiency

Question 1: Are there any additional analytical techniques that we should consider beyond those we have used at past price control reviews to assess these factors?

We believe the techniques used at GDPCR1 remain appropriate however where Ofgem can improve is ensuring that the cost indices it chooses are appropriate to use for the GDNs. For example using indices based on construction will not capture cost pressures within utilities and infrastructure which have been less impacted by the economic downturn in terms of price inflation.

Question 2: Are there any additional data sources that we should be aware of to assist with our analysis in these areas? In particular, are there specialist labour indices that would be relevant for the gas distribution sector?

This is an area we are presently assessing, however it is evident from our own wage settlement data aswell as other sector participants that there is a specialised labour effect which has to be incorporated.

Question 3: Of the data sources presented in this chapter, are there some that you think we should rely more on than others?

The high level data sources presented here all appear to be equally relevant. As mentioned above the key here is to ensure that the sectors chosen within these sources are pertinent to gas distribution.

CHAPTER 4 - TOTEX

Question 1: Do you agree with our approach for assessing the companies' business plans?

We agree with the overall approach you have outlined to assess the costs within companies business plans.

The use of a broader set of 'tools' to assess efficiency including Bottom-Up, Totex, Matrix Analysis and specialist review will overcome some of the consistency issues experienced during GDPCR1 (e.g. Bottom-Up vs Top Down).

Question 2: Are our tools and techniques adequate for assessing the GDNs expenditure plans?

The general approach to assessing costs and the relative efficiency of GDNs expenditure proposed within the consultation based upon a 'basket' of techniques and information available will provide a sound basis for assessing the best and worst performing companies. The approach recognises the fact that there is unlikely to be a single method of assessment that can provide a definitive answer to the relative efficiency of GDNs, however it will provide a good indicator of those companies that are performing well and those less well. This will be an important element of the fast tracking assessment.

However, such a broad basket of techniques will mean it is much more difficult to identify in a mechanistic fashion the efficient level of expenditure for each company and the premium to be applied to the frontier company(ies) to reward and incentivise ongoing efficiency. NGN would propose believe that the primary form of analysis used should be the top down opex and repex used in GDPCR 1 these analyses have been shown to deliver the most robust and consistent results over the years which is illustrated in figure 4.2. This analysis can be enhanced by the use of totex analysis to give a full picture of relative efficiency across differing types of expenditure..

An adjustment for loss of metering needs to be made in the top down analysis as this will also be distorted by this issue. NGN believes that the loss of meter-work revenue driver is the most robust and consistent basis for making an adjustments (reduction to opex pre benchmarking).

CHAPTER 5 – Direct Opex

Question 1: Do you agree with our approach for assessing opex in the companies' business plans?

We agree with Ofgem's proposed approach however there are a number of problems that Ofgem have highlighted here notably the difference in cost categorisation of activities such as emergency and repair. For these reasons we believe like totex this bottom up analysis is used as a cross check on the top down opex analysis which is much more robust.

Question 2: Are our tools and techniques adequate for assessing the GDNs opex expenditure plans?

NGN believes that a combined regression analysis must be used for emergency and repair activities as it is clear to us that the two work areas are part of the same end-to-end process and are inextricably linked and that GDNs have different points at which the two activities interface.

We also believe an adjustment for loss of metering must be made here to avoid any distortion Benchmarking of emergency costs and top down opex will be distorted if companies like NGN are carrying higher costs due arising from loss of metering contracts, this not a matter of efficiency. As stated previously NGN's believes that the loss metering revenue driver is the most robust, consistent and simple basis for making such an adjustment

CHAPTER 6 - Indirect opex/business support costs

Question 1: Are there any comments on the proposed assessment for business support costs?

As with direct opex NGN believes that this analysis is prone to problems such as consistency of reporting and economies of scale and therefore as with direct opex we expect this analysis to be used as a crosscheck on top down opex. In principle we support the use of external benchmarks however Ofgem must take into account any key differences between industries before making any comparisons so as not to penalise singletons inappropriately.

Question 2: Are the costs drivers proposed the most appropriate ones?

The cost drivers look appropriate in theory. However as we have seen, Ofgem's initial analysis given the problems discussed above, this has proven historically to be one of the least robust analysis undertaken by Ofgem.

CHAPTER 7 - Capital expenditure

Question 1: Do you agree with our approach for assessing capex in the companies' business plans?

NGN support the use of outputs as a measure to assess GDNs capex submissions, these should also be an aligned to asset health indices where appropriate, for example increased capacity or security of supply.

Option analysis on those projects where more than one solution is available and where the size of the project warrants detailed assessment of alternatives should also form part of an evidence based allowance process. However it should be noted that it is not unusual to have high cost capital projects that have only one option available to deliver a suitable outcome for example legislative compliance related work, however in these circumstance costs would be reviewed to ensure efficient expenditure.

The use of regression analysis on reinforcement projects together with specialist independent technical assessment for governors both of which have proved to be robust mechanisms for determine efficient spend, It should be noted that one-off large diameter reinforcement projects can distort regression analysis and similarly on occasions certain governor builds can sit outside the traditional cost curves and hence it would be practicable to keep them outside of any regression analysis or collective unit cost assessment.

Connections is very much driven by economic conditions and therefore difficult to determine accurate forecasts particularly for new builds, however NGN support the proposal that where increased capital expenditure is forecasted then detail analysis should be available to support both costs and workload volumes. Assessment of IP and MP connections above £50K threshold should be treated as atypical and not included in regression analysis.

NGN support the use of asset health indices to assess other operational capital expenditure; however this approach would have limited benefits for non operational projects for example IT systems which are generally put in place to support operational activities and should be assessed on their individual merits.

NGN agree that more detail should be provided by GDN's to support resilience projects including site security and flooding risks but would point out that this work is ongoing both locally and nationally and therefore expenditure submissions will be forecasted based on available information rather than any long term historical data.

Question 2: Are our tools and techniques adequate for assessing the GDNs' capex expenditure plans?

The existing tools and techniques used by Ofgem are adequate to assess GDN capital expenditure taking into account NGN's comment on the approach Ofgem should take as noted in Chapter 7 Q1 above. The use of an output based assessment criteria linked to asset health indices appear to be a sensible way forward, however it should be noted that GDN's are at the very early stages of developing meaningful measures and systems to support this approach and hence there is a risk that some work is still in progress at the onset of RIIO-GD1, and this should be taken into account during the review period.

CHAPTER 8 - Replacement expenditure

Question 1: Do you agree with our approach for assessing repex in the companies' business plans?

NGN broadly agrees with the approach that Ofgem has taken in assessing repex, particularly when assessing the efficiency of expenditure on high volume workloads such as iron mains replacement activities driven by HSE's '30/30' programme (i.e. normalising for length, diameter and some local factors).

Ofgem's proposal on paragraph 8.26 to move from a revenue driver based on pipes abandoned to one based on pipes laid appears to contradict proposals elsewhere in the document to move to driver based on risk removed.

Should Ofgem move to a driver based on pipes laid this would be a retrograde step and would not be in the interest of customers. It simply incentivises companies to lay more pipe and would not therefore not drive the right behaviours. The purpose of HSE's '30/30' programme is to decommission iron pipes. A revenue driver based on abandonment actually incentivises the GDNs to design projects and explore and develop techniques which will deliver the desired outcome (the decommissioning of an amount of iron pipes) in the most cost-effective manner, even if this involves the use of an expensive technique. A revenue driver based on pipes laid, however, encourages efficient construction of new pipes regardless of what is decommissioned. Therefore NGN supports the use of a revenue driver based on abandoned not laid pipes.

Low volume, high-cost projects (e.g. LTS repex) should continue to be assessed individually on the basis of need and project efficiency.

NGN note that under the current price control there is a fixed repex expenditure cap. Whilst this provides a degree of certainty in terms of total costs to customers, it fails to recognise the dynamic nature of the replacement process. For risk based replacement schemes, the individual pipes and, more importantly, the diameter profile of the focus of pipes to be replaced can vary dynamically in a way that cannot be accurately predicted at the start of the forecast period. As has been seen in the current formula period, even a small shift (relative to the total target length) of pipe from smaller to larger diameters can drive a significant change in cost, (even with efficient delivery). Although this can partly be accommodated within a formula period by using the flexibility allowed within the GDN's methodologies for the selection of pipes to be replaced within a particular year, this additional constraint can drive the development of less efficient projects which would as a consequence, increase total costs to the consumer across consecutive PCRs. Given that the proposal is for an 8-year agreement under RIIO GD1, it is important that sufficient flexibility is built in to accommodate dynamic changes in the risk / diameter profile which will inevitably occur.

Question 2: Are our tools and techniques adequate for assessing the GDNs repex expenditure plans?

The range of tools and techniques are deemed appropriate.

The assessment of the GDNs repex plans should reflect what the Networks are required to do to comply with legislation and HSE instructions; what they need to do to maintain system integrity, reliability and security of supply; and what they ought to do in order to proactively manage the long-term efficiency, effectiveness and maintainability of the system. Once the scope of the plans have been assessed, the tools and techniques used should be appropriate to ensure that the plans can be delivered efficiently.

The majority of the expenditure relates to the HSE-driven Iron replacement programme with the remainder being driven by condition replacement and diversions and system alterations. It is appropriate that the cost of this high-volume work is assessed for relative efficiency using the current tools (unit cost by diameter band). This also applies to associated domestic-type services relaid or transferred in conjunction with HSE Policy work. The assessment of the GDN's workload plans should be sufficiently flexible to allow for dynamic changes in the target population of pipes to be replaced within the formula period outside the control of the GDNs.

As discussed in 8.1, we believe it is more appropriate to incentivise the GDNs based on pipes taken off-risk rather than pipes laid. For other (non-30/30 driven) mains replacement activities (e.g. replacement on Condition or to mitigate ingress of water, etc.), the assessment of the GDNs plans should take account of the fact that the efficiency of the project may not be most appropriately measured by a simple length unit cost, and Ofgem should develop tools and techniques to assess proposals for this type of work. For activities with a highly variable cost (either per project or by pipe length) such as the replacement of risers / laterals to multi-occupancy buildings, Ofgem should develop tools for assessing the efficiency of these proposals.

Very high-cost, low-volume activities, such as repex replacement of LTS assets, should be assessed on an individual basis in terms of both proposal and delivery. It is important that such appraisal (either pre- or post-delivery) does not incentivise the GDN to carry out an investment at an inappropriate time.

Question 3: In light of our proposals, do you agree with our selection of risk removed as the primary output of the mains replacement programme?

Yes – there is no question that risk removed is the primary output of the iron mains replacement programme. The model used to determine the abandonment lengths is driven by risk based coefficients and our replacement policy ensures a replacement programme that is determined by the assessment of risk removed. However there are other benefits particularly environmental that should not be overlooked.

The existing methodology for assessing the replacement programme does take into account the removal of risk. Risk is currently only removed by abandoning iron mains. Therefore the only mechanism that is currently in place is to measure the amount of risk removed is calculated using the amount of iron main abandoned.

We understand Ofgem's desire to broaden out the definition of risk removal from simply abandoning mains to other future scenarios where treating or lining iron mains in some way removes the risks associated with failure. Whilst as an industry collaborative research is being undertaken into alternative approaches in our opinion there is still quite some way away from a practical application. The development of new techniques to both reduce costs and speed up installation works is supported by NGN and we will continue to be proactive in searching for more efficient ways of removing risk from iron mains.

Moving away from using abandoned iron mains as the primary way of measuring the output of risk removed presents a number of practical challenges in potentially calibrating what any alternative technique may deliver in risk reduction compared to abandoning the main. Unfortunately this will not be until such techniques have been fully tested and accepted by the industry and fully approved by

the HSE. It would seem appropriate that under such a scenario the HSE would be the primary party to determine the relative risk removal factor for any alternative approaches.

We also note Ofgem's desire to broaden out the concept of risk measurement beyond simply the iron mains replacement programme to the full suite of assets used on the gas networks. Although, at face value, "Quantity of Risk Removed" would appear to more closely align the primary measure with the desired outcome (and would open the possibility of making investment decisions for different classes of assets using a common measure), this would present considerable difficulties with compliance and robustness.

As well as removing risk, the purpose of the iron mains replacement programme is to comply with the HSE's enforcement policy on mains replacement, delivered by periodic agreement and achievement of an Approved Programme under PSR 13A. Currently, these agreements are based on a specific total length of iron pipe removed from service, with the pipes abandoned being selected using an approved process – the target length being that necessary to achieve abandonment of all iron pipes within 30m of buildings by 2032. If the level of Risk Removed is the primary output (particularly if this is incentivised) this would remove the linkage between the driver (achievement of the Approved Programme) and the targeted primary output.

If "level of risk removed" is to be used as the primary output (whether or not the requirements of the HSE's Approved Programme are changed to align with this), care and consideration will need to be given to how the target is set and how the results are measured. The method of calculating the risk of an individual pipe is complex and depends on the pipes physical characteristics, its location, its performance and the performance of other pipes in its vicinity and elsewhere. As a result, the risk scores of individual pipes (and therefore of larger populations) varies dynamically in an unpredictable manner. Because of this it would not be possible to set robust and meaningful medium or long term forecasts and targets, and any comparators (either between DNs as a snapshot or year-on-year within a DN) would be of no value.