

SGN Sector Specific Methodology Consultation

14th March 2019



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1 Sector Methodology Consultation

1.1 Executive Summary

SGN welcomes the opportunity to respond to Ofgem's Sector Specific Methodology Consultation. SGN is the UK's leading gas distribution network company, operating some 74,000km of gas mains and services across Scotland and Southern England. With connections to nearly six million-meter points we deliver gas to more than 14 million people. Our two distinct network areas include the most densely populated areas of south London and the remotest parts of Scotland and the Hebrides. We manage the risks of gas transportation every day through appropriate interventions and investments.

Our charges account for around 20% of the average household gas bill, estimated at £136 a year. For this we deliver to our customers;

- A highly reliable gas supply – our customers currently experience an interruption on average once every 40 years. Our full emergency service responds to gas escapes 24/7, responding within an hour to uncontrolled gas escapes over 98% of the time.
- Award winning customer service standards. We are recognised as the best network for customer service and we are continually improving. We have reduced complaints by 65% so far during RIIO-1, we have increased our support services to our vulnerable customers, we are ranked first for customer satisfaction in Scotland, and we have consistently been a leading network in stakeholder engagement.
- Deploying innovation. We lead the way on innovation and helped other networks adopt new technologies for delivering more efficiently and with less disruption. Our innovations in RIIO-1 include robotics, management of gas risers in high rise buildings and the reduction of our impact through core-and-vac excavation technology. We were the first network to add the green gas biomethane to our network and we are on track to meet our target of supplying the equivalent of 250,000 homes with biomethane by 2021.
- Over RIIO-1 we forecast a reduction in customer bills of 8% in real terms. We expect to replace 8,300 kms of our metallic mains, renew over half a million steel service pipes, and connect 27,500 fuel poor customers.

As in all business planning, assumptions were made in RIIO-1. These were uncertain at the time but, with the exception of increasing labour costs, these assumptions have played out largely to the benefit of networks. For this reason, we are fully supportive of reducing the length of the price control to five years; of improving the appropriate indexation of costs; the simplification of output categories and the introduction of the enhanced consumer engagement process to provide valuable challenge. We think that this goes a long way towards addressing the concerns over RIIO-1.

We benefit from the long-term commitment, vision and investment of our shareholders and recognise that our role in the community requires social legitimacy. We have listened closely to our customers and broader stakeholders, undertaking a substantial research and engagement programme and acting on what we have learned. Recognising the need for legitimacy, we were the only gas distribution network to make a substantial voluntary contribution to customers. Our £145m contribution supported the roll out of further fuel poor network extensions, improved the security of our network, and reduced bills for our customers.

It is our view that RIIO-1 has worked, and has delivered strong consumer benefits - improved safety, improved customer service, improved efficiency and clarity of outputs. We are keen to ensure in RIIO-2 that the issues of RIIO-1 are appropriately addressed through an evolutionary approach consistent with the regulatory principles of proportionality, accountability, consistency, and transparency¹ and that we continue to deliver our shared ambitions for all our customers and stakeholders.

In RIIO-2 we will look to reduce our bills and deliver greater value to our customers. To achieve this, it is important RIIO-2 incentivises actions that are in customers' interests, whether that is through improved service, improved efficiency, or the effective targeting of innovation through a transparent and consistent regulatory structure.

This potential could be hindered by the number of regulatory structures that have departed from established regulatory principles that have been presented – cashflow floor, revenue adjustment mechanisms, expected return adjustments, dynamic incentives, innovation support and the business plan incentives. These need to be fully assessed both in isolation and as a broader package. Networks need clarity on how the package as a whole will operate in a transparent and timely

¹ http://www.legislation.gov.uk/ukpga/2006/51/pdfs/ukpga_20060051_en.pdf

manner prior to plan submission. Where timelines do not allow this to happen we would like to work with Ofgem to enable a fuller range of policies to be introduced for the following regulatory period.

In RIIO-2, we encourage Ofgem to recognise the mutual benefit delivered and to support strong incentives that drive efficiency and innovation to continue to improve customer outcomes. There is a risk that the regulatory structure proposed in the Sector Specific Methodology will not deliver this; rather the proposed structure risks stifling ambition by focusing on penalties rather than incentivising better consumer outcomes. These risks are set out below along with proposed solutions.

Consumer outcomes

We are fully aligned with Ofgem's objective of improving the consumer experience through RIIO-GD2. As proposed in the Sector Specific Methodology we do not believe that the RIIO-GD2 package will deliver its full potential for improving customer outcomes. To ensure that RIIO-GD2 delivers a better consumer outcome we believe that the Sector Specific Methodology requires:

- **A greater focus on incentive-based regulation.** We believe that incentive-based regulation creates a strong signal to drive better customer outcomes in a transparent manner. The success of RIIO (revenue, incentives, innovation and outputs) is that it has incentivised companies to deliver better outcomes, transforming our approach to customer service and delivery. In the Sector Specific Methodology Consultation, the proposed output delivery incentives (ODIs) have been significantly reduced in scope and positive incentives have often been replaced with penalty structures. We believe that penalty-based regulation encourages network companies to seek compliance with minimum standards rather than pursue better consumer outcomes. We encourage Ofgem to incentivise true ambition, with clear incentives based on clearly defined targets that are driven by customer engagement and where best practice is shared.
- **A broader definition of regulation.** It is our broader role in the community that is regularly brought to the fore by our customers and stakeholders – whether this is our impact on the roadway, the environment or the communities that we serve. The Sector Specific Methodology Consultation proposes to adopt a narrow remit that we consider to be at odds with its objective of improving the consumer and network user experience. Our customers and stakeholders regularly tell us that we should be looking to minimise the disruption that we cause as we go about our work, and we think that higher standards in this regard could be appropriately incentivised under the price control. A broader remit is consistent with the feedback from our stakeholders.
- **Customer centric ODIs.** Following extensive engagement with our customers, we have identified areas where company specific ODIs may be appropriate to progress. However, under the Sector Specific Methodology Consultation we note the apparent high bar for company specific ODIs, the limited enthusiasm for sector level incentives and the lack of clarity on success criteria. Our customers and stakeholders tell us that reducing disruption, reducing our environmental impact and increasing our support for local communities are important to them and we would like to reflect those priorities in our plan. There is however a very compressed programme and we encourage Ofgem to provide clarity regarding its ambition for company specific ODIs and clarity on the definition of what would make a company specific ODI attractive. There is however a very compressed time available to develop customer-centric outputs and we encourage Ofgem to provide clarity regarding its ambition for company specific ODIs along with clarity on the definition of what would make a company specific ODI attractive.
- **Recognising the importance of collaboration.** Collaboration has delivered excellent customer outcomes - sharing best practice to promote safety, deploying innovation, and working with vulnerable customers². At SGN we have regularly visited, and hosted visits from, other networks to share best practice. Over RIIO-GD1, the performance of all networks for customer satisfaction scores now exceed the best performer at the start of RIIO-GD1 due in part to sharing best practice and a clear incentive structure and there is a culture of shared innovation. Whilst we recognise Ofgem's duty to promote competition, we encourage Ofgem to recognise that it will discourage collaboration between network companies and the consumer benefits that arise from that collaboration.
- **Promoting innovation.** We believe that RIIO-1 has been a positive 'win-win'. We have improved efficiency through process improvements and innovation and these improvements have benefited both the company and the customer. For every process innovation or efficiency improvement achieved at the start of RIIO-GD1, the net benefit to the consumer exceeds the net benefit to the company before the end of RIIO-GD2. If the improvement is introduced in year

² Examples include the deployment of robotics to reduce leakage, processes surrounding risers in multi-occupancy buildings, deployment of innovative techniques such as core-and-vac, responding to large scale incidents such as Silsden, call handling and complaint processes, and vulnerable customer identification and support.

4 of RIIO-GD1 then this customer benefits exceeds the company benefit by year 2 of RIIO-GD2. The customer carries on benefiting from that efficiency improvement for its lifetime. We think that the strong focus on improving efficiency has benefited all stakeholders and should be replicated in RIIO-2.

Balance of risk and returns

For SGN to continue to be even more ambitious in delivering customer benefits and driving innovation throughout the company we believe that Ofgem needs to reflect the broader economic risks and regulatory uncertainties raised by the sector methodology. As it stands, and as we have previously brought to Ofgem's attention, we do not consider the Sector Specific Methodology consultation to provide an appropriate balance of risk and return. We consider the package to be very low powered, to have low returns and to have relatively high risk for those returns. This is due to the introduction of new operating risks, new regulatory risks, and the continued existence of energy, political and macro-economic risks which we do not believe have been taken into account.

- **Operating risks:** New operating risks include the introduction of relative and dynamic targets, cashflow floors, a disproportionate level of penalties and the tightening of licence obligations. These create less predictable and transparent cashflow forecasts and, as set out below, have created new asymmetric risks that will reduce the appetite for new innovation and deploying new customer focused services.
- **Regulatory risks:** The new regulatory risks are directly related to the new and untested regulatory structures and methodologies. These include very low sharing factors, the gradation of sharing factors according to 'confidence', the revenue adjustment mechanism, the differentiation between allowed and expected returns, the business plan incentive, the calibration of the competitive incentives, the unprecedented low returns and resulting concerns of financeability.
- **Energy sector risks:** These risks include the decarbonisation pathway and the potential that by 2050 significant areas of the gas network could be decommissioned to allow for electrification of heat or repurposed to enable hydrogen roll-out.
- **Political risks:** There are risks associated with Brexit and associated legislative changes, independence movements, political parties entering the next election on an agenda of nationalisation, along with the new obligations being placed on network companies from non-energy departments.
- **Macro-economic risks:** These include the risk of contractor market, supply chain or skilled labour market contraction, after Brexit, a rapid change in exchange rates driving a changing cost base and broader economic shocks.

We believe that risks should be appropriately calibrated, provide networks with the incentives to drive further innovation and customer standards while commensurate with the expected equity returns. To achieve this, these risks need to be either mitigated or accounted for within the cost of capital.

Asymmetric risks

In addition to the broader level of risk identified above, the Sector Specific Methodology consultation proposes a number of regulatory structures that create a significant asymmetry in the risk borne by network companies. This risks disincentivising ambitious business plans and should be reflected in the cost of equity. These risks include:

- **Output Delivery Incentives (ODIs).** We would like the current incentive regimes to continue with an evolution in output targets to reflect the change in ambition and standards achieved by networks. As proposed, the current ODIs, are either downside penalties or dynamic incentives. Downside only penalties are clearly asymmetric in their risk profile. For dynamic incentive mechanisms the changing reward structure increases the risk that investments will not be recovered. This introduces a significant risk asymmetry that was not there in RIIO-GD1.
- **Increasing licence obligations.** Our research shows that consumers are not asking for an increase in licence obligations. By increasing licence obligations, the burden of compliance increases as does the risk of breaching the licence obligation. This increases the risk of direct fines, but potentially more importantly could lead to a breach of financing arrangements. In order to mitigate this risk, network companies will need to continue to deliver above the higher standard and this will incur a higher marginal cost. We are not aware of a strong body of stakeholder or consumer evidence that supports increasing licence obligations or that consumers are willing to pay for an increase in costs or an increase in risk exposure.

- Business Plan Incentive – competitive upside.** Within the business plan incentive there is a downside risk of 2% and an upside potential that is a share of 2%. Whilst this is asymmetric in design it is particularly detrimental to SGN where SGN Southern and SGN Scotland are separate licence entities therefore SGN as whole has a maximum incentive of 1% and, in some scenarios could be as low as 0.13%. We believe that the upside potential should be fixed to remove this asymmetry and the specific detriment to SGN. There is a direct contrast with Cadent, which covers four of the eight network areas under a single licence which could allow a full 2% of totex as an incentive. Wales & West Utilities and Northern Gas Networks who operate under separate licences and brands but have common shareholders also maintain a full 2% totex incentive.
- Business Plan Incentive - efficiency.** We would welcome a more flexible efficiency incentive. Currently, the boundary for the definition of an efficient plan at 4% is very low and does not reflect actual experience in RIIO-GD1 or RIIO-ED1. In RIIO-GD1 the average efficiency score for the networks has been between 6% and 18%. This assessment was based on four Ofgem models; SGN Scotland had a variance in its efficiency of between 1% and 12% across those four Ofgem models. An efficiency test of 4% is within the error margin of Ofgem’s modelling and risks penalising companies on the basis of modelling assumptions. It is important for Ofgem to set out the error margin within its own models and how this error margin relates to the efficiency test boundaries prior to the submission of the business plan. In addition to the range we encourage Ofgem to consider the scale of the impact and introduce a higher level of gradation in performance.
- Output measures.** We encourage Ofgem to return to the symmetrical risk approach for output measures. Currently output measures, such as NARMs and PCDs, are proposed to be downside risk only. For NARMs the non-delivery penalty is based on the monetised benefit rather than the cost of the measure. As the monetised benefit can be several times greater than the cost of the measure, and there is no equivalent reward for justified over delivery this presents a significant asymmetric risk. This contrasts to the current structure where 2.5% of cost is an incentive/penalty according to whether the over/under delivery is justified or not.
- Cash flow floor.** We do not believe the cashflow floor is either appropriate or desirable and places an unwarranted additional risk on the equity providers. The equity provider takes the risk of Ofgem mis-calibrating the price control and the baselines or mis-calibrating financeability by setting the cost of capital too low. S&P have recently commented that *“We therefore struggle to recognize the value of the cash flow floor mechanism and question whether the introduction of the mechanism signals the regulator’s willingness to allow credit quality in the industry to decline.”*³ On this basis, it is important that all financeability downside tests should be carried out without the cash flow distorting normal market behaviour.

Lower credit quality

SGN are very concerned about the unforeseen consequences of Ofgem’s proposal on credit quality and its longer-term impact on investment in regulated assets across the UK and beyond. Investment is required in the UK energy sector - a requirement that will increase as we decarbonise. A stable regulatory regime able to support investors with a long-term investment horizon is a pre-requisite to delivering that investment at least cost. The UK has a good reputation for stable, transparent and predictable regulation in energy infrastructure, that risks being lost. If this reputation is lost, then it will be hard to re-establish confidence in the UK as an attractive investment destination.

In the Sector Specific Methodology Consultation Ofgem appear to be allowing a downgrade in the sector as a whole. If the regulator is willing to let credit quality decline, then this will be a concern for all investors. For current debt holders this will increase the risk debt holders attribute to their existing bonds and for new debt holders it will increase the returns they will require to invest.

We need to ensure that the package is demonstrably financeable for the industry as a whole both in RIIO-GD2 and the longer-term with sufficient headroom to absorb plausible shocks without a cashflow floor. Among the gas distribution networks Cadent, (who comprise of approximately half of the sector) have recently entered a new financial structure following a corporate sale. This enabled them to secure a historically low cost of debt, but to do so they incurred significant associated transaction costs. We need to ensure that the low cost of debt secured in their new financing structure does not distort the financeability tests. This low cost of debt and associated transaction costs should be accounted for in the finance test or the sector concept should be adjusted to reflect individual company circumstances.

³ p6, S&Ps Report ‘Ofgem’s Proposed RIIO-2 Regulatory Framework Will Test U.K. Energy Networks’ (Feb 19)

This is particularly important as there appears to be limited confidence in the cashflow floor. The expectation, based on Ofgem's duties, is that the package should be financeable without the need to revert to novel mechanisms in the event its cost of capital assumptions prove to be too low.

Cost of debt

In our response to the RIIO-2 Framework Consultation we identified a 15 to 20 year trailing average for the cost of debt as the conceptually correct approach based on the tenor of issuance of energy networks and that GDNs have issued debt since network sales in 2005. This is consistent with the determination made in RIIO-ED1.

Through the ENA we have also conducted an analysis of actual costs by an independent consultant, this provides strong evidence to support transaction and liquidity costs that are significantly higher than the historical levels allowed for by the regulator. Using appropriate industry benchmarks that take this into account broadly aligns with the 15-20 years conceptual approach set out above.

This report also presents strong evidence that the halo effect that Ofgem have assumed in previous price controls should be removed as an assumption.

With one company comprising of approximately half of the sector, it is important that the transaction costs incurred to secure their low cost of debt is taken into account when determining the debt benchmark or the sector concept should be replaced with an individual company assessment being undertaken, as we set out in the response to the framework consultation.

Low cost of equity

We consider that the cost of equity is too low in comparison to other sectors and international benchmarks and does not adequately reflect the risks of the sector.

- **Investor concerns.** We believe that this is reflected in the market sentiment that has been expressed in the share price of listed companies since the Sector Specific Methodology Consultation was published and in the negative watch assessment of credit ratings that have been subsequently published. We note the concern of international investors about the attractiveness of the UK regulatory space as reported in the Financial Times⁴ that '*concerns grow about 'negative' and 'hostile' political and regulatory environment*'.
- **Adjustment for expected returns.** We disagree that the application of an adjustment for expected returns is appropriate. The evidence is based on recent price controls and overlooks earlier price controls that showed significant under-performance and it is a primarily subjective adjustment. The adjustment carries performance between price control periods, and any strong performance risks being double counted in the setting of the baseline and a corresponding adjustment to the allowed returns. This will disincentivise efficiency and dampen incentives to maximise efficiencies.
- **Methodological concerns.** We have methodological concerns with key elements of the cost of equity calculation. We disagree with the deflation and averaging of historical and long-term average returns and the approach to the calculation of the equity beta. We believe that Ofgem have miscalculated the long-term historical Total Market Return as a result of the methodology used.
- **Transfer of risk to Equity.** In addition to the risks set out above, the cashflow floor is a direct transfer of risk from debt to equity holders that has not been taken into consideration when calculating the return on equity. We believe the cashflow floor should be removed; however, if it remains, then the cost of equity should take into account this transfer of risk.
- **Comparability of returns.** Ofgem argue that the difference between the RIIO-2 and PR19 cost of equity (3% vs 4%) is made up of 50bps as an allowance for expected returns, and 50bps due to the choice of indexed RfR compared to a forward curve. Of this last component we think that less than half is due to the RfR indexation and the remainder is due to a different equity beta methodology. As a result, Ofgem's COE is more than 75Bps lower than Ofwat's due to adverse methodological choices.

⁴ Financial Times, 23rd January 2019, 'Infrastructure investors put 'blanket ban' on UK assets.

Investors have a choice about where they invest. There have already been public statements from key institutional investors that the UK regulatory space is looking less attractive for new investment as a result of Ofgem's proposals. There is a risk that a poorly calibrated price control will have a long-term detrimental impact on the industry and consumers. We believe that this is an increased risk under the proposed regulatory structure and we encourage Ofgem to reassess the balance of risk that network companies are exposed to.

Analysis put forward in the framework consultation supported a cost of equity significantly higher than the current Ofgem range. We still consider the arguments presented remain robust, and do not support the working assumptions that places the cost of equity at the bottom of the range.

Appropriate incentives

We believe that the incentive properties of RIIO support better customer outcomes and that it is in customer interests for them to be sharpened rather than dulled. It is in customer interests that efficiency and improved service are unlocked rather than overlooked.

- **Level of ambition.** For the revenue adjustment mechanism Ofgem considers that 300bps on RORE is an appropriate level for an extreme failsafe mechanism. We consider this to suggest a lack of ambition on behalf of the customer. As set out in RIIO-1 and PR19, we consider a 10% totex incentive an appropriate aspiration for a good performing company, equivalent to nearly 225bps on RORE. In RIIO-1 incentives allowed a further 120bps. Ofgem's expected calibration of RIIO-1, and Ofwat's calibration of PR19 would be either close to or exceed the extreme failsafe mechanism calibration of 300bps on RORE, as such we feel it represents a reduction in ambition for the price control.
- **Dynamic and relative incentives.** We disagree that competition through dynamic and relative incentives and outputs drives better customer outcomes. If Ofgem is going to pursue its implementation, then it is important to have clarity on the competitive entities. The gas distribution networks can be divided according to shareholder group (3 entities), brands (4 entities), licences (5 entities) or network regions (8 entities). The choice of entity will either benefit or disadvantage specific companies and will define the appropriate calibration of the incentive. We think that competition should be applied where it is appropriate, but the points raised in our response to CSQ5 and the high market concentration of the sector⁵ suggests that this is not an appropriate point of competition.
- **Sharing factors.** The proposed sharing factors are very low and will blunt the incentive properties of the ODIs, we therefore encourage clear ODIs based on clearly defined company specific targets that are outside the sharing mechanism giving clear transparency between the service delivered and the 'reward'.
- **Increasing the business plan incentive.** At a maximum of 2% of Totex, before being reduced through competition with other companies, we consider the business plan incentive too low to encourage companies to take on more risk in their cost efficiency. We believe that an improved business plan incentive would be more appropriate to drive ambitious cost plans that benefit the consumer by committing companies to efficiency improvements and broader benefits of reducing sector level benchmarks.

We encourage Ofgem to allow a stronger incentive regime as improved efficiency and standards are in the interests of all stakeholders. This can be achieved through the strengthening of the business plan incentive, sharpening the incentive structure and increasing the failsafe threshold on the revenue adjustment mechanism.

Sharing factors

We are concerned that by reducing sharing factors to a range of between 15-50% from a current sharing mechanism of 64% will reduce the incentive placed on companies to identify the opportunities with the greatest potential return, as the reward for taking a risk is dampened. We believe that this will be detrimental to the interests of consumers in the long run. The reduction in the sharing factor, coupled with the reduction in the time-frame of the price control period, will significantly reduce the incentive on companies to drive an improvement in performance. The reasons for this are set out below:

⁵ The Herfindahl-Hirschman Index (HHI) gives GDN's a score of 3825 based on current shareholding. CMA guidance suggests a score over 2000 as highly concentrated. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284449/OFT1254.pdf

- **Shorter price control period.** Given the shorter price control period, any benefits to customers will be captured through the benchmarking process at the end of the price control period, after 5 years. Rather than reducing sharing factors in principle they should be increased to allow for the shorter price control period.
- **Pass through equivalence.** A lower sharing factor protects companies from delivery risk on mandatory investments. By lowering sharing factors there is a risk that investment proposals effectively become a pass-through item with limited incentive to implement innovative technologies or process improvements that improve efficiency to the benefit of both customer and investors.
- **Reduced materiality.** A lower sharing factor reduces the incentive on companies to take on discretionary risk associated with innovation projects or establishing new ways of working. It is in customers' interests that a company should be incentivised to invest in projects with a greater upside potential; the materiality of this upside is reduced under a lower sharing factor, as is the incentive to invest in those projects.
- **Disincentivising investment at the end of price control periods.** Whilst the reduction in sharing factors is neutral on a purely NPV basis in a constant regulatory environment, when there is a significant departure from previous regulatory practice, such as between RIIO-GD1 and RIIO-GD2, then this structure significantly disincentivises investment towards the end of RIIO-GD1, as the company would incur 65% of the costs and receive only 15% of any benefits accrued.

For these reasons we would recommend that Ofgem reconsiders its approach to sharing factors, to ensure that a strong incentive remains on companies to drive efficiency improvements in this price control that can be fully credited to consumers in the next price control.

Multiple layers of control

As we set out in our response to RIIO Framework Consultation we remain concerned with the complexity introduced by the introduction of multiple layers of control. There are currently five layers of control proposed which serve to blunt the incentive properties of the price control. These are;

1. Shorter price control and indexation
2. Resetting the price control based on RIIO-1 actual costs
3. Price control deliverables and reduced sharing factors
4. Dynamic and relative incentive structures
5. Expected return and revenue adjustment mechanisms

We believe that there are enough existing tools and structures to appropriately calibrate the price control without resorting to further layers of control; 'dynamic and relative incentive structures' and 'expected return and revenue adjustment mechanisms'.

If Ofgem proceed to introduce a revenue adjustment mechanism, then an individual company sculpted sharing mechanism as we proposed in the framework consultation will be significantly less damaging than an anchoring mechanism. The reason for this is that an individual company sculpting mechanism maintains a marginal incentive to continue improving, a transparent and predictable basis on which to invest, and has significantly less complexity compared to an anchoring mechanism.

We have previously proposed that any 'additional' sharing as a result of the sculpted sharing factor should be used to create a partnership fund to build social value and community resilience, with positive economic health, safety and environmental outcomes. We would encourage Ofgem to consider the customer and social benefits of such an approach.

Such a structure needs to be calibrated appropriately, to ensure that there is not a double count of sharing – ie that additional sharing would only take effect once returns exceed an agreed dead-band range, and secondly that it acts as a true failsafe mechanism. Relevant market and regulatory evidence shows a wider range of 500 bps would be more appropriate as an extreme failsafe considering RIIO-1 and PR19 incentive structures.

Counter-acting incentives

There are a number of points through the Sector Specific Methodology Consultation where there appear to be incentive structures which either counteract each other or duplicate the intended impact of other structures. There is a risk that these could drive inconsistent behaviours or perverse outcomes. Some of these are:

- **Ambitious plans vs cost efficiency.** We support the notion that ambitious plans that promote decarbonisation, whole system approaches, improved customer service and embed innovation should be considered components of a 'good quality' business plan. There is normally a cost associated with these ambitions and as a result a business plan that promotes 'good quality' outcomes risks being penalised on the 'cost efficiency' component of the business plan assessment. It is therefore important that ambitious projects are ring-fenced and separated out from the core plan when assessing the cost efficiency of the plan.
- **Ambitious plans vs sharing factors.** It is likely that an ambitious plan will have a lower sharing factor. A plan which aims to deliver more ambitious outputs, better customer outcomes or to embed greater innovation, will have less supporting evidence and as a result is more likely to be considered a 'low-confidence' cost. Under the current proposal 'low confidence' costs will result in a lower sharing factor being applied. This structure risks discouraging companies from putting forward ambitious plans in order to avoid depressing the sharing factor. If a different sharing factor is going to be determined by cost category then it is important that it distinguishes between uncertainty associated with ambition and uncertainty in the evidence base of core plan cost components.
- **Performance vs dynamic targets.** Where targets are dynamically based on the company's performance, any investment in improving performance will risk introducing higher targets in the following years. This risks undermining the incentive to drive higher standards as a company will be making investment decisions in the knowledge that their investment outcome will influence future targets. The incentive therefore needs to be calibrated to allow substantial investments to recover their benefits in the year of delivery otherwise they will be disincentivised; i.e. a 5-year return needs to be recovered in a single year.
- **Anchoring mechanism vs marginal improvements.** As network companies approach a sector cap and there is an expectation of an adjustment taking place, there is a perverse forward incentive to reduce performance to mitigate the risk of such an adjustment taking place.
- **Expected returns adjustment vs longer term performance.** The introduction of an expected return adjustment mechanism that is based on historical precedent introduces a penalty associated with higher performance levels between regulatory periods. High performance in one period will be double counted with the resetting of baselines and increased expected return wedge applied in the following regulatory period.
- **Expected return adjustment vs efficiency test.** We believe that the efficiency test under the business plan incentive is intended to encourage companies to come forward with more financially ambitious plans (i.e. lower costs for the same outputs). This must result in a lower potential for totex efficiency gains, however under the proposed structure the same expected return adjustment would be applied. This creates conflicting drivers since an ambitious cost plan has higher risk of not delivering and still has a lower cost of equity due to the return adjustment.

Proposed adjustments

We understand the appetite for improvements within Ofgem, however we believe that the regulatory structure proposed in the Sector Specific Methodology Consultation is too great a step⁶. There are new regulatory structures that we do not think are appropriate. There are changes which we think can be implemented that target delivery of greater customer benefits, provide a more transparent and predictable regulatory environment. These are explained in detail in the consultation response, but can be summarised as;

- **Confirmation of incentives that deliver consumer aspirations.** We think that it is very important that Ofgem clearly sets out its aspirations for an appropriate range for returns, including expectations for incentives and totex incentive mechanisms. We think this range should be focused on aspirational outcomes in line with stakeholder insight and should not adversely impact collaboration that benefits all customers.
- **Strengthening ambition to drive new behaviours and outcomes for customers.** Many of the structures that have been put in place could have an adverse impact on ambition by penalising it through the efficiency test in the business plan incentive or the sharing factor structure. We would like ambition to remain at the heart of the price control, and therefore think it is important to remove 'ambitious' expenditure from the economic assessment and the sharing factor calculation. Where incentives are driving new behaviours and stronger outcomes then we would like further discussion on the appropriateness of applying sharing factors.

⁶ As recognised by the Competition Commission, "consistency with regulatory precedent is a relevant consideration [and] significant changes should be satisfactorily explained and well justified." Bristol Water, Competition Commission 2010 Report, 4 August 2010, para 9.21.

- Setting out what a ‘good’ business plan looks like.** We are in constant discussion with our customers and stakeholders about elements of the business plan that are important to them and whether we are reflecting their priorities. This clarity is important to us as we set out our plan, however, it is also important to be clear on whether their expectations are consistent with Ofgem’s. We have already identified some areas where there are differences, such as the scope of incentives, and as such we think it is important that we have a clear reference point of what Ofgem considers to be a good business plan.
- Strengthening the business plan incentive.** On the basis that concerns regarding the asymmetric risk and the efficiency assessment can be resolved, we think that the business plan incentive (BPI) itself should be strengthened. Under RIIO-GD1 a Totex incentive of +/- 10% was considered an acceptable component of the identified RORE range⁷. If the objective of the BPI is to encourage network companies to take on a higher level of delivery risk and commit to a reduction in allowances for the benefit of their customers, then while we will want to take into account the overall incentive package, our current view is that a more appropriate range for the BPI would be 3-4%. An incentive at this level would be more appropriate for driving a network company to take on more risk, to lower not only its own costs to customers, but also through the benchmarking process to encourage a lowering of the benchmarking threshold.
- Retaining only the structures that add clear consumer value.** We believe that the cashflow floor needs to be removed, the revenue adjustment mechanism should be removed or converted to a sculpted sharing factor and the expected return adjustment is unfounded and should be removed. All three increase the complexity, reduce transparency and predictability of the price control and we do not believe add value to the consumer. We note in this regard the CMA’s direction in 2015 that “future price controls should seek to learn lessons from the target-setting process in RIIO-ED1 and the issues of transparency which arose in [the appeal]”⁸.
- Clarifying the cost of equity.** There is currently a substantial difference between the cost of equity proposed by Ofgem at 3%, on a real post tax RPI deflated basis, and the cost of equity of 5.5% to 6.3% on an equivalent basis proposed by Oxera in their report to the ENA for the Framework Consultation response. As a part of the ongoing dialogue with Ofgem we are submitting further independent evidence to support this discussion. Our view remains that the cost of equity should be significantly above Ofgem’s proposed value.
- Demonstrating financeability.** There is a risk that returns are so low that they drive what is ultimately an unfinanceable regulatory structure, and that this is masked by a short-term increase in prices due to the move in inflationary measures from RPI for CPI(H). There is also a concern that the proposed application of the cashflow floor may be considered as a replacement to the downside financeability test used in previous regulatory periods. It is very important that demonstrable long-term financeability remains a core requirement of any regulatory settlement and this should be independent of the introduction of CPI(h) or the cashflow floor.
- Company and sector considerations.** Too much focus on the sector averages may distort and mask company specific considerations on both the cost of debt calibration and financeability assessments. This is a particular concern in the gas distribution sector where there are stark differences between companies given recent financing. The efficient action of any company should not be penalised, and we encourage Ofgem to maintain the company perspective alongside the sector average.
- Calibrating the price control on a notional basis.** Ofgem have to date maintained that they consider company structures to be a choice for shareholders rather than regulators, recognising that these decisions are made at a company’s own risk and this is consistent with the approach of the CMA in its assessment of previous price controls”⁹. With recent discussions there appears to be a move away from this principle and a move to reporting structures and adjustment mechanisms based on actual rather than notional structures. We disagree with the use of actual company structures and would encourage Ofgem to undertake a full consultation and impact assessment before changing such fundamental regulatory principles. Ofgem should also be mindful of the need to provide regulatory certainty/predictability before implementing any such changes.
- Full impact assessment.** Given the compressed timeline, and in order to reduce the risk of a mistake, we would encourage greater transparency around Ofgem’s thinking for the structures themselves and their potential impacts. To this end we think that it is very important that a full impact assessment is carried out to assess the regulatory structures put forward in the Sector Specific Methodology Consultation and improve transparency. The current lack of impact

⁷ <https://www.ofgem.gov.uk/ofgem-publications/48156/3riiogd1fpfinanceanduncertainty.pdf>, pg 33

⁸ British Gas Trading Limited v The Gas and Electricity Markets Authority, Final determination, 29 September 2015, para 5.61.

⁹ Bristol Water, Competition Commission 2010 Report, 4 August 2010, para 10.10

assessment is in notable contrast to RIIO-1¹⁰. We would expect, in line with its Assessment Guidance¹¹, for a transparent assessment of policy development that would reflect the significance of the proposed changes¹².

- **Programme for development.** The timeline of the programme has been compressed substantially. The RIIO-2 Framework decision stated that the formal business plan submission would be to Ofgem in Q4 2019. One of the reasons provided for removing fast tracking that would require the business plan to be submitted by Q3 2019 was that it ‘would limit the ability for stakeholders to scrutinise and challenge business plans’. As set out section ‘1.3 Giving Consumers a Stronger Voice’ we encourage Ofgem to ensure that information requested, for example in the July data templates, is only the information needed to support decision making at that time. This will allow us to maintain our strong focus on high quality stakeholder engagement and insight which will drive the further development and iteration of our plan.

We welcome the opportunity to respond to each of the questions below. Given the absence of an effective impact assessment, the complexity of the topics being considered, and the extent of change proposed we reserve our position on this response until the methodology has been more clearly articulated.

We look forward to working with Ofgem to deliver a RIIO-2 package that responds to our customers’ priorities and delivers a better outcome of improved service, lower bills and the innovation and investment needed to support the energy system transition towards decarbonisation.

For each section we have provided summary of key considerations that we think that it is important for Ofgem to take into account followed by a response to the direct questions asked.

¹⁰ <https://www.ofgem.gov.uk/ofgem-publications/51904/impactpdf>, https://www.ofgem.gov.uk/sites/default/files/docs/2010/12/t1-and-gd1-ia_1.pdf

¹¹ https://www.ofgem.gov.uk/system/files/docs/2016/10/impact_assessment_guidance_0.pdf

¹² We note the CMA stated in 2015 that it expected Ofgem to “take steps to ensure that [...] ambiguity does not reoccur in any elements of its future price control”¹² and consider that an impact assessment would plainly serve that purpose.

1.2 Introduction

Observations and overview

We support the objectives set by Ofgem in their introduction to give consumers a stronger voice, to allow networks to earn returns that are fair and represent value for consumers, to incentivise networks to respond to the way they may be used in the future, to drive innovation and to promote simplification.

In RIIO-2 we are looking to put forward an ambitious business plan. We define an ambitious plan to be one that delivers better outcomes for our customers - by being more innovative, providing the outcomes that customers want, and producing better environmental outcomes.

We also intend to put forward a cost efficient plan that drives value and reduces costs to our customers.

It is notable that within the Framework Consultation Response a number of decisions were taken that did not appear to have an adequate explanation as to why the decision was taken – the distinction between allowed vs expected returns being a notable example. Within this consultation document it is again apparent that Ofgem has progressed with minded to positions that are not clearly set out nor explained how they were arrived at. Apparent decisions include:

- To focus on the use of penalties and downside incentives with no discussion and without a full assessment of whether it is in consumer interests compared to positive incentives.
- To focus on relative and dynamic incentives without fully assessing whether an effective competitive environment can be established or the impact on consumer interests due to reduced collaboration and sharing of best practice between networks.
- To move from the notional to actual company structures as the basis for assessing companies without a full discussion about how this may change companies' behaviours or structures, and whether it is correct for Ofgem to move towards a more interventionist approach to company structures.

In this section of the Sector Specific Methodology consultation there is a single question on the extent of appeal consequence on other components of the price control. We consider that such an approach could undermine the appeals process and adversely impact third parties who are not involved in the appeal. As such we do not support the proposal.

In the Sector Specific Methodology consultation, we also note in the introduction that Ofgem references the change in transmission operator charges for access to the networks and compliance with EU law (para 2.24). It is important to recognise that the costs and the implications of this are not clear or fully understood, with significant debate and consultation currently underway. It is important that these potential changes are recognised, and networks are held whole for any financial impact or risk exposure through a re-opener mechanism.

Response to consultation questions:

CSQ1. Do you have any view on our proposed approach for considering the extent to which a successful appeal has consequences, if any, on other components of the price control?

While we understand Ofgem's desire for greater control and oversight over the scope/impact of appeals, we consider that Ofgem's approach undermines the current appeals framework, raises concerns of legal certainty and could negatively impact third parties who are not involved in the appeal. As such we do not support the proposal.

We think Ofgem's proposal is likely to lead to a number of unintended consequences as set out below and strongly recommend that Ofgem reconsiders its position on this issue.

- **Appeals framework:** The rationale for appealing Ofgem's price control determination is to address a perceived error in Ofgem's assessment. Unlike the appeals framework in water, appeals of Ofgem's price control determinations are not a re-determination of all issues. The statutory basis of the appeal is therefore intentionally narrower. If Ofgem has concerns regarding the impact of a CMA decision (and any related interdependencies), then we would expect these to be raised by Ofgem in the CMA proceedings, for instance as prompted by the CMA

in the 2015 British Gas Trading appeal.¹³ The CMA is the appropriate forum for this debate to be heard (and the CMA is the appropriate arbiter on these issues).

- **Legal certainty concerns:** Ofgem's approach, as set out in its methodology, does not clarify how it would intend to apply its discretionary mechanism and seems to be far too broad in its potential application. We do not think it is appropriate for Ofgem to reserve its ability to introduce additional discretionary measures in response to a CMA determination that it disagrees with. This risks undermining the appeal framework and the regulatory certainty and stability offered by it. Also, not mentioned in the consultation document, is that we assume that any further exercise of its powers by Ofgem would necessarily need to be subject to a separate right of appeal, as such this could lead to protracted legal proceedings and follow-on appeals.
- **Impact on third parties:** Ofgem's consultation suggests that Ofgem would reserve the right to consider the impact of one parties' appeal on other licensees. This appears to breach the principles of legal certainty; for instance, it is unclear why the outcome of one licensee's appeal should impact other market participants who chose not to appeal. Furthermore, we assume that many third parties would seek to intervene to mitigate the risk that they are negatively affected by any Ofgem discretionary measure (and we would assume that the CMA would be minded to grant permission in light of Ofgem's stated approach).

¹³ The CMA stated at para 3.52 "We consider that the question as to whether there are sufficient links between parts of the Decision which are challenged and parts which are not challenged must be decided on a case-by-case basis taking into account the circumstances of the case. Where there are such links, we would, in the first instance, have expected GEMA to have highlighted these and addressed them in its response."

1.3 Giving consumers a stronger voice

Observations and overview

We remain fully supportive of the aspiration that the consumer should be at the heart of the price control in RIIO-GD2. Our business plan programme has included a structured approach to ensuring that consumer voice is embedded within the planning process and that at all stages our plans are informed by consumers.

We are concerned about the timelines that are set out in the sector methodology. We note that the timelines involved in the business plan submission have been substantially bought forward. Ofgem (para 3.7) refers to the need to take two full drafts to the RIIO-2 challenge group as set out in the business plan guidance in (Sept 2018). Ofgem then goes on to be clear that the first submission should be accompanied by the full data templates (para 3.9).

This is substantially earlier than we had anticipated. Ofgem's Framework Decision Document (para 7.5) gave formal business plan submission as Q4 2019, with the recognition that draft version of the plan would be submitted to the RIIO-2 Consumer Challenge Group (CCG) and providing Ofgem with sight of these drafts (footnote 41). In addition, in the framework decision document (para 5.55) enhanced engagement and the submission of business plans in Q3 2019 was one of the reasons why fast tracking was rejected.

Ofgem is now requesting the full draft business plan, complete with data tables, to be submitted in July 2019. This acceleration of the programme coupled with additional requests from the RIIO Consumer Challenge Group for an overview of the plan and our performance in RIIO-GD1 is very disruptive to pre-established consumer engagement programmes.

Furthermore, the concentration of resource and senior management time in preparing responses in the first half of the year reduces the time that network companies can dedicate to assess any new regulatory structures and how they inter-relate with each other and supporting their effective design. Given the scale of the regulatory change proposed we consider this to be an important issue.

In our response to the Business Plan Guidance Consultation (submitted on the 15th of Feb) we set out in more detail our concerns associated with the business plan timelines and the bring forward the timeline with the full data template submission alongside the first draft business plan in on the 1st of July.

We would support Ofgem working with network companies on the RIIO-2 programme to identify where decisions are required as they will have a material impact on either the submission of the business plan or the operation of the business. Without prejudicing any points that we raise within our response these would include;

- Treatment of debt: As any decisions made could have a directly impact any bond issuances in the last years of RIIO-GD1.
- Business plan incentive – definition of quality, cost efficiency and quantum: We need to have clarity over the target so that we can identify differences with our stakeholder expectations and respond.
- Definition of ambitious and core business plan costs: How they will be captured in the business plan data templates and assessed in the cost efficiency assessment.
- Definition of high and low confidence costs and associated sharing factors: How they will be captured in the business plan data templates and assessed in the cost efficiency assessment.
- Financial model and the basis of the financeability assessment: So that we are able to undertake a comparison with the outputs of our own financial analysis.
- CBA duration: To have a clear process in which to agree the payback period for the assessment of projects that will be submitted within the business plan.
- Innovation: To have clarity on how and what sort of innovation will be supported through the BAU, allowances or competition-based funds.
- Bespoke Output Delivery Incentives: Clarity on the appetite and the definition of appropriate ODIs.
- Incentive package: Clarity on the size and scope of the incentive package.

1.4 Reflecting what consumers want and value from networks.

Observations and overview:

We welcome Ofgem's intention to simplify the output framework. However, we note that in practice simplification does not appear to have occurred. Instead significantly greater complexity has arisen from the introduction of new regulatory structures, and with this complexity there is also a reduction in transparency and predictability.

In the Sector Methodology Consultation Ofgem distinguishes between Licence Obligations, Price Control deliverables and Output Delivery Incentives.

- Licence Obligations.** As we set out in our framework consultation response, we agree with the use of licence obligations where they are true minimum standards supported by a strong incentive to drive actual behaviour – an example of this is 'Customer Complaint Times' where performance exceeds the obligation as it is driven by a broader incentive. We consider this structure to be appropriate given the serious implications of a breaching licence conditions. Such a breach could incur significant financial penalties and could be a breach of financial covenants and impair a company's financeability. To mitigate this risk network companies operate with a margin or headroom in performance above any licence obligations. Ofgem now appear to be incorporating this headroom into licence obligations by recalibrating them to current performance standards. The consequences of breach are not changed, so network companies need to sustain their margin, increasing costs in order to mitigate risks to network companies. Our stakeholder and customer feedback has not indicated that there is any strong support to increase these standards, but customers will have to incur a higher cost as a result. We encourage Ofgem to check that these proposals are supported by the customer's willingness to pay for higher standards.
- Price Control Deliverables (PCDs).** It would be helpful to have much greater clarity on the application of price control deliverables to the price control structure and how they will work in practice. Specifically, issues that we are concerned about include;
 - Scale and scope.** It would be helpful to understand the thresholds around which Ofgem consider a PCD to be appropriately applied. There is a materiality threshold and the expectations of where that threshold sits may be vary between stakeholders.
 - Interplay with uncertainty mechanisms.** It is very important to have clarity on PCDs will interact with re-openers and volume drivers. The sharing factor mechanism with a focus on cost confidence, coupled with the PCD focus on outputs rather than outcomes, emphasises the importance of appropriate volume and price adjustment mechanisms;
 - Downside Risk Potential.** If there are insufficient uncertainty mechanisms, then companies that do not deliver their PCDs have the money removed from their allowances (regardless of whether this is justifiable or not). If a network company justifiably exceeds its allowances, they will be unable to recover the costs over and above the sharing component;
 - Impact on Innovation.** If PCDs are too focused on the task and its implementation, rather than the customer outcome, then the PCD risks dis-incentivising innovation and the adoption of new approaches as network companies may not be willing to take the risk that an alternative approach may not be considered to deliver the PCD;
 - Impact of delay.** We note that the consultation focuses on the impact of delay and customer consequences. We think that it is equally important to emphasise that there could be consumer benefits associated with delay, if it means either a more efficient or a better project overall all can be implemented and that both should be recognised;

It is our view that it would be helpful to run through some practical examples of where price control deliverables could be applied and how their application would impact other components of the price control.

- Incentive Mechanisms.** We are disappointed that whilst the static, dynamic (absolute) and dynamic (relative) are described there is no real assessment of the evidence or concerns that were presented in our RIIO Framework Consultation response in Q19(i). We remain concerned that Ofgem has failed to have adequate regard to the concerns expressed previously about such mechanisms and potential measures to mitigate them. We think that competition in incentive mechanism could lead to detrimental consumer outcomes by limiting collaboration, create calibration challenges for both the baselines and values, and reduce the efficacy of the incentive.

Response to consultation questions:

CSQ2. Do you agree with our proposed three new output categories?

We broadly agree with the principles of three output categories and the objective of simplifying the price controls. However, in practice the simplification of the price controls is at best superficial. The complexity surrounding the output measures has significantly increased with relative and dynamic mechanisms separating the financial incentive from the customers willingness to pay or stated preference.

CSQ3. Are there any other outcomes currently not captured within the three output categories which we should consider including?

The output categories are broad enough to capture all the relevant attributes that our stakeholder feedback has told us is important. It is important to recognise, however, that network companies have developed a conversation with their customers and stakeholders that are framed slightly differently, and it is important for that difference to continue.

For SGN we divide our conversations with stakeholders into three themes that are then divided into seven priorities. The themes and priorities are

Safe and Efficient

- **Acting Safely** Keeping our customers, employees, contractors and the general public safe; responding to gas escapes within an hour and repairing and upgrading pipes to make them safer
- **Keeping the gas flowing** using innovative methods to undertake gas works with as little disruption as possible and improving the resilience of our network
- **Keeping Costs Down** investing in innovation to improve efficiency and reduce the cost of gas supplies

Shared Future

- **Future Energy Solutions** making use of alternative 'green' gases such as biomethane and hydrogen
- **Minimising Environmental Impact** reducing carbon emissions and waste and increasing efficiency

Positive Impact

- **Supporting Vulnerable Communities** providing free 'help to heat' gas connections to low income households and offering extra support services to potentially vulnerable customers
- **Excellent Customer service** responding promptly to customer enquiries and planning projects effectively to keep customers informed and disruption minimised

These themes form the basis of the conversation that we have been having with our customers and stakeholders, and whilst they broadly align with the Ofgem output categories, to force a direct alignment at this stage comes too late in the process and would undermine the quality of the stakeholder and customer feedback that we have secured to date.

CSQ4. Do you agree with our proposed overarching framework for licence obligations, price control deliverables and output delivery incentives?

We are supportive of the principle of transparency and accountability for delivery. We consider that licence obligations, price control deliverables and output delivery incentives go some way towards supporting this transparency and accountability.

We note though that licence obligations and price control deliverables both serve to reduce the scope for the application of innovation. As such the extensive use of both measures may limit the potential gains from innovation that could be otherwise anticipated. They promote innovation in delivering the defined output in the narrowest sense, but they do not promote innovation in delivering the desired customer outcome.

ODIs do promote the full deployment of innovation by clearly incentivising output delivery, however, it is noted that most of the ODIs proposed within the gas annex are downside only incentives or penalties, a structure that focuses delivery on compliance, rather than ambitious targets.

CSQ5. Do you agree with our proposals to introduce dynamic and relative incentives, where appropriate? Are there any additional considerations not captured in our proposed framework which you think we should take into account?

We do not agree with the proposal to introduce dynamic-absolute or dynamic-relative incentives as we do not think that this is in the interest of the consumers and is fraught with methodological issues that could distort the consumer outcome. Rather we believe that it is important that the companies have clarity on the target standards from the outset, a clear link from these targets to their associated customer outcomes and a clear understanding of the financial benefits or penalties that they may be subject to. If the financial benefits are not clearly understood then decision making will be inefficient.

As such we do not think that competition in incentives through either dynamic or relative incentive are appropriate. The Sector Methodology Consultation (pg 29) provides a description of what is being considered and an overview of possible 'pros-and-cons' associated with each. In our response to the framework consultation response we set out our reasons why we did not think that relative targets or dynamic targets and 'enforcing losers' was in the customers' best interest. We do not consider that these concerns have been appropriately assessed, responded to or mitigated.

For dynamic incentives – where targets evolve to take into account the companies own performance we have summarised our concerns below;

- **Reduced incentive effectiveness.** As any investment to improve performance ultimately undermines itself a dynamic incentive severely reduces the effectiveness of the incentive and as a result constrains the improvements in the overall standard of service that the customer can expect in RIIO-GD2 compared to an appropriately set static incentive.
- **Delinking willingness to pay and costs.** The stakeholder process is intended to identify the extent to which customers are willing to pay for an improvement in service. This link is broken under relative targets as the payment is dependent on previous performance by either the network or the sector. In RIIO-GD2 relative targets break the link with customer stated preferences and at worst under sector co-dependency assumes all regions have the same preferences.
- **Calibrating incentive values.** As the incentive values are likely to be calibrated at the start of the price control and improvements are likely to become more challenging and increase in cost, companies are likely to be less ambitious to ensure that they have consistent small incremental change. A significant step change in performance is unlikely to be appropriately rewarded in a single year to be viable as it will lead to higher targets the following years. As such ambition is likely to be constrained.
- **Calibrating baselines.** Relative targets assume that there is high level of consistency between companies in terms of their current standards of performance at the individual incentive level. We do not believe this to be the case, with 12-hour standard for example there are significant difference between companies. For companies with higher standards it requires additional resources to deliver that requirement and the incremental cost of an improvement will also be higher, as such either the baseline or the incentives values need to be calibrated appropriately.

For dynamic relative incentives - where targets evolve to take into account improvements across the sector – the additional concerns are;

- **Increased and undefined risk associated with investment.** As the financial reward or penalty is not clearly defined the relationship of marginal costs and benefits or avoided cost is broken undermining investor confidence, as it will no longer be clear that an investment will be recovered. This undermines the claim that networks are low risk assets requiring low returns. In RIIO-GD2 this break between marginal costs and benefits will lead to more inefficient investment decisions for any dynamic absolute or dynamic relative targets.
- **Reduced collaboration.** In addition to reduced effectiveness of the incentive, dynamic relative incentives reduce consumer benefits by reducing the willingness to collaborate and share best practice between networks. Without collaboration between networks fewer innovations and best practice approaches will be deployed. Over the course of RIIO-GD1 SGN has hosted other gas networks to run through our approach to risers, innovative techniques such as robotics, complaint handling procedures, repex work management procedures, OCC dispatch system and metered faults. We have been happy to host these visits and we have benefited from visiting other network companies. This has improved customer outcomes in general in RIIO-GD1. In RIIO-GD2 dynamic absolute or dynamic relative targets will act as a major barrier to collaboration across the sector¹⁴.
- **Calibrating incentives.** The calibration of incentives is extremely challenging. In a dynamic relative incentive structure, the level of effort needs to be calibrated to avoid enforced losses from poor calibration. As an example, there is

¹⁴ It should be noted that in natural markets, collaboration takes place to extend the market, In regulated natural monopolies, the market is defined by the physical characteristics and hence competition will be on a win / lose basis.

significant evidence that customer satisfaction varies across the country, regardless of their Gas Network, and that more effort and resource is required in certain areas to achieve the same satisfaction score. We think that it is inappropriate to either spend more significantly more per head or to face a penalty structure as a result of a poor calibration of incentives. In RIIO-2 appropriate calibration of an incentives will be problematic for any dynamic absolute or dynamic relative targets that draw comparisons across the sector or regions.

- **Co-dependency of outcomes.** Where competition across the sector is proposed the definition of the baseline and the incentive levels must be very carefully defined. An error or mistake with setting the baseline for one network will have implications for all other networks and the level of effort they need to put in to deliver their targets. In RIIO-2 errors in the baseline or in incentive design could result in a company being defaulted into a success or penalty position.
- **Accommodating exogenous variables.** Network companies do not have a choice about the geographical area that they operate in, rather the companies have to accommodate exogenous variables - geography, climate, density of customer, network flows or legacy considerations. These exogenous variables will need to be accounted for to enable a fair competition if dynamic relative incentives are to be introduced. Customer satisfaction is an example where there is substantial evidence of regional differences that would need to be taken into account.
- **Delinking customers and outcomes.** The customers of one network risk having to pay for other networks' performance even if their own standard of preferences have been delivered. RIIO-GD2 could see a transfer between consumers due to standards set by the regulator rather than requested by the customer.
- **Ineffective competition.** For gas networks there are three shareholder groups, four brands and five licences, and eight distribution networks. The basis of any competition would be dependent on the ease to which each incentive could be gamed, and to avoid distortive practices dominating the result. In RIIO-GD2 sector co-dependency must take into account the point of competition and the ability of companies to exercise market power or distort competition. Under standard metric of competition, the Herfindahl-Hirschman Index, on a shareholder basis the market is very highly concentrated with a score of 3835 compared to a CMA threshold of high concentration of 2000, It only drops below this threshold when considering the 8 distribution networks if you make the assumption that the each network operates fully independently.

On the basis of the above we identify a large number of challenges that need to be addressed. These challenges are particularly prevalent with dynamic-relative targets, due to the additional complexity, however the deterioration in the strength of the incentive and the resulting consumer detriment is consistent to both. For these reasons we think that maintaining appropriately set, stable, ex ante allowances deliver the best customer outcome and the most efficient way to deliver customer preferences. We believe that companies that deliver good performance should be recognised and rewarded for that performance

For these reasons we consider that maintaining static incentive structures is the most appropriate solution. With a five-year price control, we believe that the challenge of poor calibration is limited, however, if calibration remains a concern, we would suggest a dead-band range (positive and negative) in which incentives delivery can fluctuate, and targets can be reset should delivery clearly extend beyond this range. This will help to mitigate some of the issues identified above.

CSQ6. Do you agree with our proposals to allow network operators to propose bespoke outputs, in collaboration with their User Groups/ Customer Challenge Groups?

We broadly agree with the proposals to allow network operators to propose bespoke outputs. However, as we discussed in reference to 'Giving the Customer as strong voice' we are very concerned that the time limits for developing such proposals do not allow adequate time to do so effectively.

Given acceleration of the programme, it is very important that Ofgem gives clarity on the standards that are considered acceptable to progress bespoke outputs, otherwise there is a risk that valuable time and attention is wasted progressing bespoke outputs that are supported by customers but considered unacceptable by Ofgem.

CSQ7. When assessing proposals for bespoke financial ODIs, are there any additional considerations not captured which we should be taking into account?

We consider that the current proposals for bespoke ODIs appear to be unnecessarily limited to only those where the economic consideration is directly control by Ofgem. As a result, we consider there to be a lost opportunity to recognise

the positive impact that networks have across multiple environments, whether that is the roadway, local planning, energy efficiency, distributed heat and the decarbonisation of transport.

1.5 Enabling whole system solutions

Observations and overview:

We welcome Ofgem's clarification on the scope of whole systems and understand the reasons behind the decision to opt for the narrow scope given both the time available and regulatory remit. We would like to point out that this narrow scope limits some of whole systems considerations that may be applied to the gas network.

When considering whole system solutions within the context of the Sector Specific Methodology we noted the strength of the focus placed upon it. From the perspective of SGN we would encourage Ofgem to recognise that there are different priorities for electricity and gas networks. We believe that for gas networks it is important to establish the route to decarbonisation prior to focusing on whole system solutions. We accept that this may be different for electricity networks where there is an immediate regulatory challenge to define the interactions between networks and system operators. The reason why we consider the focus on the decarbonisation pathway is appropriate for gas networks is that this will define the scale of the challenge for electricity networks. The challenge will change by an order of magnitude according to whether the heat and transport are going to be decarbonised through decarbonised electricity or decarbonised gas networks.

Accordingly, whilst we support the approach to whole system solutions we encourage Ofgem to maintain the focus on the more pressing challenge of supporting the identification of the least cost decarbonisation pathway.

Within the consultation response we are also surprised by the apparent growth in the role of the Gas System Operator (GSO). Gas networks have different physical characteristics to the electricity network, as such each network operates its own system and we have established commercial agreements to define how we interact. Whilst we acknowledge the reports referred to by Ofgem undertaken by CEPA and Imperial on the savings potential of whole system coordination, we would like to clarify that their study reviewed the role of the Electricity System operator (ESO), and do not by default transfer to the gas networks. Our gas control centre responds to changes in forecasts, bookings and demand for gas and responds to telemetered faults to keep our network safe.

Working on the basis that whole systems and decarbonisation need to work in tandem we support the proposals that Ofgem is putting forward in the sector specific annex for gas distribution. However we think these policies are in themselves insufficient and we would encourage Ofgem to consider the funding of discrete projects and encourage appropriate levels of responsiveness to change through an appropriate incentive. However, we think these policies are in themselves insufficient and we would encourage Ofgem to consider the funding of discrete projects and encourage appropriate levels of responsiveness to change through an appropriate incentive.

The first, the challenge of discrete projects, addresses the challenge that whilst we can identify projects at the start of the business plan that support whole systems and decarbonisation approaches, given the short business planning period and the length of the time horizon out to 2026, important projects may not be identified in time or may not be developed to an appropriate standard to be included in the business plan. These projects should be enabled to progress in a timely manner. For these projects we propose a discretionary roll-out mechanism that supports the delivery of decarbonisation and whole systems projects.

The second, appropriate levels of responsiveness to change, recognises that for both whole systems and decarbonisation that we don't know at this point of time what 'good' looks like. As a result, we have proposed a discretionary incentive mechanism that encourages network companies to make adjustments to existing processes and procedures to support whole systems thinking and enable decarbonisation. It is our view that given the importance of both it is important to incentivise good practice separately and to recognise that as networks there is more that we can do to become more responsive to changing technology and use patterns on our network.

Response to consultation questions:

CSQ8. Do you feel we have defined the problem correctly?

As we move towards a more integrated energy system, supplied from a diverse range of renewable and low carbon sources, the need to ensure a coordinated approach towards investment, operation and the impact this has on consumers is increasingly important. The whole system approach to this is key in delivering solutions that support decarbonisation, ensure security of supply, and deliver at the most efficient cost to consumers.

It is important to recognise that there are different requirements for electricity and gas networks. For gas network, the decarbonisation pathway remains uncertain. It will be important to improve that clarity whilst defining how whole system trade-offs may materialise in future price controls (assuming that delivering the national decarbonisation targets through the gas networks remains a viable option).

The proposed approach in the consultation document goes some way to define the challenge that energy companies and consumers face to deliver an interlinked energy system that meets their needs. We think that it should be recognised that this is only one aspect of the whole systems challenge and to enable a broader consideration over RIIO-2 of how it evolves into heat and transport.

In the Sector Specific Methodology consultation Ofgem has identified six potential ways through which to incentivise whole systems thinking. We expand on these in our response to CSQ12. More broadly though we believe that an early focus on establishing effective leading and lagging market indicators that can minimise regulatory risk, stranded assets or incentivising the wrong behaviour is required. In the gas networks an important lagging indicator is the pressure across the system; and important leading indicators are: the numbers of flexible generators that are applying to connect to our system; the housing planning requirements and the number of new builds that propose to be connected with only an electricity supply, and the policy developments of local governments such as the scope and coverage of clean air zones.

Scenarios and forecasts are important in terms of guiding thinking, but they are tools to aid decision making. Establishing a set of agreed leading and lagging indicators will help guide forecasting and reduce the risk of incorrect investments are minimised. We would therefore support a more responsive and discretionary incentive and funding mechanism that is responsive to improved understanding and knowledge.

Such a structure, however, must note that there is a cost for networks in engaging in these mechanisms. This cost should be accommodated within the business plan templates in a manner that does not penalise ambitious companies under their efficiency assessment

CSQ9. What views do you have on our proposed approach to adopt a narrow focus for whole systems in the RIIO-2 price control, as set out above?

We believe a narrow focus on the whole system approach is a necessary definition given the time available and would hope that over the course of RIIO-2 that this will be extended in recognition that a limited definition does not reflect the complexity of a whole system approach. In the short term we can develop processes within that narrow band by developing processes to jointly plan decarbonisation and capacity solutions, but we would encourage the focus is broadened rapidly. For example, within RIIO-GD2 we are proposing to form a whole systems development team to facilitate additional engagement with the electricity sector in the first instance but widen this to infrastructure planning at a regional level. It is important to develop appropriate market indicators and interfaces with other network operators to ensure that energy solutions taken forward do not restrict emerging technologies.

We note in Para 5.15 that Ofgem ‘adopts a narrow focus on coordination of investment planning and operational delivery between the ESO, the GSO and the four network sectors (gas transmission, electricity transmission, gas distribution and electricity distribution)’. This distinction between the GSO and the gas networks is not one that we recognise; the transmission operator carries out the system operation role on its network, the gas distribution companies do the system operation on their networks; and, there are established rules on how they interact. At SGN, and in other GDNs, we do the forecasting of demand and planning of capacity on our network.

CSQ10. Where might there be benefits through adopting a broader scope for some mechanisms? Please provide evidence?

We think that there are multiple points where a broader scope could have benefits for the consumer overall, through greater alignment with the heating and the transport sector. For gas distribution companies these examples are in their infancy and whilst there have been some interesting NIA and NIC projects during RIIO-GD1, these concepts need to be encouraged and de-risked through iterative exploration. A narrow definition of whole systems risks putting in place a conceptual ring that excludes these projects when it is important that they are encouraged to progress either through a whole systems discretionary mechanism or through innovation funding.

The benefits for a broader scope across gas, electricity, waste, heat and transport can align readily using the three funding mechanisms:

- The continued research and development for projects that support the decarbonisation pathway;

- A discretionary mechanism for the rollout of decarbonisation projects, based on examples and subject to governance; and
- A re-opener mechanism for larger projects, where there will be significant material impact for the networks.

These will ensure the flexibility required of the networks for security of supply, adjusting to changing demand patterns and delivering policy changes during the period.

CSQ11. Do you have reasons and evidence to support or reject any of the possible mechanisms outlined in this chapter? Do you have views on how they should be designed to protect the interests of consumers?

We are open to exploring all the options for the proposed mechanisms to unlock whole systems benefits subject to our observations CSQ12 below. By developing a clear framework of leading and lagging market Indicators we can give the confidence to consumers and regulator the networks are investing in the right areas to provide the benefits to both consumers and decarbonisation. These real market indicators, such as the uptake of peaking plant connected to the gas network or the number of EVs coming to market, look to separate the whole systems approach from scenarios that depend on informed, but subjective, assessments of specific technologies.

There needs to be recognition of the significant increase in engagement and the development of processes to facilitate a whole system solution. A suitable set of metrics and the use of market indicators need to be utilised to ensure the interests of consumers are protected and that the balance of cost is appropriately split between gas and electricity customers.

Specific engagement with key stakeholders (such as Local Authorities in the development of their energy strategies) is also required to ensure their needs and expectations are being met.

Ofgem identifies six potential mechanism to unlock whole system benefits. Our response is from a gas network perspective and we encourage Ofgem to recognise that different structures may be appropriate for the gas and electricity sectors.

Of the options presented we consider 'Option 3 – Coordination and information sharing incentive' 'Option 6. - Whole systems discretionary funding mechanisms' and 'Option 2: ensuring network innovation has a whole system focus' to form an effective package that would fully support the deployment of whole systems. The reasons for this are set out below;

- **Option 3: Co-ordination and information sharing incentive.** We consider this to be an appropriate manner through which to incentivise a change in behaviour. Sharing information (and making sure it is high quality and useful information) is very important to reducing the overall social cost of decarbonisation and whole system solutions. Encouraging an open assessment of the options and involving stakeholders in that assessment is something that adds costs and should be incentivised.

We would recommend that this should be a discretionary based incentive where the criteria are defined according to the quality of the analysis undertaken. The extent of the analysis across capital investment proposals and the creativity of options considered should also be taken into account. The reason why we think that this is important is because it supports a better outcome. A whole system assessment can easily be derived with poor data; working with counter-parties to ensure high quality data is costly for both parties but delivers a more informed decision.

In para 5.33 Ofgem questions whether networks could be incentivised to put more information into the public domain. This is something that we would support. Networks have a significant amount of data that is currently difficult to access. Providing clearer access to this data would help to provide clearer understanding and allow greater public scrutiny.

- **Option 6: Whole system discretionary funding mechanism.** We support the concept of a discretionary funding mechanism (given the existing uncertainty surrounding the whole system approaches) on the basis that projects of a smaller scale could be accommodated compared to a more substantial re-opener mechanism. Furthermore, the discretionary funding mechanism would provide a structure that could evolve over time as the understanding of whole system requirements develop over time.
- **Option 2: Ensuring innovation has a whole systems focus.** Given the primary importance of the decarbonisation pathway, whilst it is clearly important that innovation has a whole system focus it should not be considered a pre-determined requirement. If innovation is going to be focused on the energy system transition, and the NIC is going to be broadened out to include more parties, then it is appropriate that this structure helps guide what is considered most beneficial in an informed and unconstrained manner.

CSQ12. Which of the possible mechanisms we have outlined above could pose regulatory risk, such as additionality payments or incentivising the wrong behaviour?

Options that we think are less appropriate from a gas network perspective are;

- **Option 1: Business Plan Incentive (BPI).** Given the uncertainty, we do not believe that a whole system mechanism should be based on a forecast as might be implied under the BPI option. As such, for gas networks, whilst we would look for ambition to be rewarded we do not think this should be the primary driver. Given the rapidly changing focus of whole system solutions and their currently conceptual nature we think that a BPI approach encourages companies to make commitments which may not be appropriate by the time the investment needs to be made. Furthermore, a solution that appears to be value adding at a local level may not be at a national level and may be dependent on the decarbonisation pathway selected. Given these uncertainties we do not think a strong BPI will be responsive enough.
- **Option 4: Balancing financial incentive between traditional and whole system.** We note that the proposals suggested by Ofgem are specifically relevant to trade-offs between two regulated companies and have an implicit assumption that both companies have a common understanding of the potential trade-offs. For the gas networks the main whole system trade-offs are likely to be through commercial intermediaries (such as flexible generators) looking to optimise their location on both networks to maximise their commercial returns. We believe that the GDNs' role should be to enable and assist the optimal location of such plant, but this may not require a totex trade off. There is therefore a risk that such structures do not incentivise appropriate behaviour.
- **Option 5: Ensuring the framework is able to flex to meet whole system needs.** A co-ordinated reopener mechanism may be appropriate for very substantial projects; however, it should be noted that many projects in isolation would not deliver the re-opener threshold. There would therefore be a risk to the network owner in terms of whether or not it is able to achieve the re-opener threshold; and if the reopener was triggered then the role of Ofgem in assessing the transaction is also a risk unless the assessment process is clearly defined.

CSQ13. Are there obstacles to transferring revenues between networks that disincentivise networks from using a coordinated solution (please give details and suggest any changes or solutions)?

It is important to note that there is a difference between gas and electricity networks in this regard. For gas networks we see very limited new investment. The majority of our expenditure is focused on keeping the network safe and reliable. This is likely to remain the case until there is a clearer decarbonisation pathway.

As such the key uncertainty for gas networks is policy developments and external decisions. As a pathway becomes more established and if that pathway requires substantive investment, then there may be obstacles towards the development of a co-ordinated solution. In this instance any transfer of revenue must reflect the costs incurred by the network to operate and coordinate the solution.

CSQ14. Can you recommend approaches that would better balance financial incentives between networks to enable whole system solutions?

As we have set out, we think that whole systems and decarbonisation are more closely linked than suggested under the current proposed regulatory framework. Our recommendation would be a tiered approach to funding mechanisms:

1. **Continued research and development for projects that support the decarbonisation pathway and whole systems projects.** We support the inclusion of energy system transition projects within the broader innovation stimulus, linking both decarbonisation and whole systems through demonstration projects, and providing technical and economic evidence to inform decarbonisation policy.
2. **A discretionary rollout of decarbonisation and whole system projects.** Recognises that there are projects that support the decarbonisation pathway and whole systems strategy that are not fully definable at the point of business plan submission that may require network investment to facilitate and implement. As such we would support a discretionary mechanism¹⁵ through which projects that have not been identified at the start of the business plan are able to progress without having to wait until the next business plan period in-order to secure the respective funding. This would for

¹⁵ This could be either discretionary or a use-it-or-lose-it mechanism as long as the network company is not penalised for being 'inefficient' for having an ambitious use-it-or-lose-it pot under the business plan incentive mechanism.

example enable changes due to Future Billing and Real-time networks projects to support changes to billing zones, the removal of constraints for embedded entry through smart controls & instrumentation or the provision of centralised entry facilities for green gas.

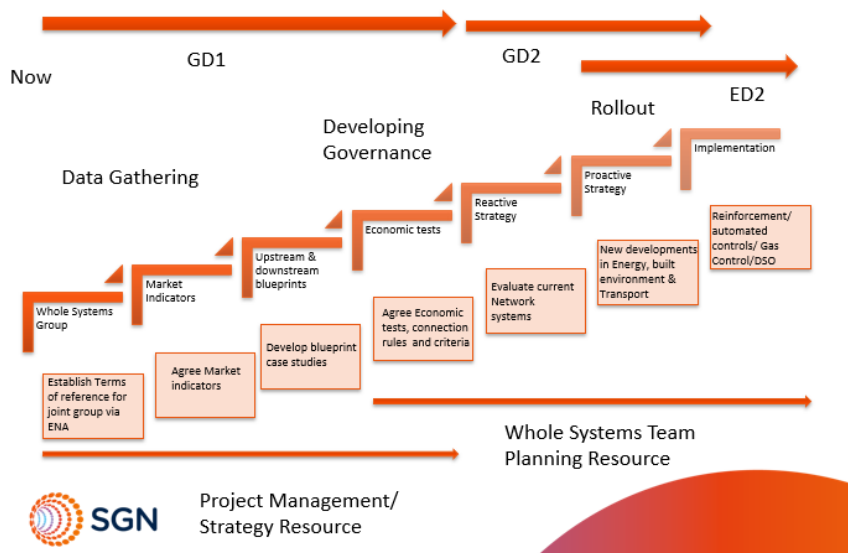
3. **A re-opener mechanism for larger projects.** The reopener is important for where there will be material impact for networks in terms of decarbonisation delivery. We would support the use of re-openers to enable the delivery of large pilot projects where it is better to recover the value through the RAV rather than a shorter-term impact on bills. A reopener mechanism we believe would provide appropriate transparency and consultation.
4. **Innovation in BAU and funding for higher TRL innovation projects.** It is important, to recognise that decarbonisation and whole system projects occur at all scales, and that we consider it very important that innovation funding mechanisms similar to the NIA are in place to facilitate smaller and more discrete projects that support decarbonisation (along with other points of innovation focus) and enable the technical field trials and assessments of third-party projects.

In identifying the tiered funding mechanism, we would suggest that the second tier, the discretionary mechanism is used for the implementation of small-scale decarbonisation projects and the roll out of whole system solutions. This discretionary mechanism is important to recognise that innovation funding in itself is not always sufficient to take projects all the way through to commercial deployment. Particularly with larger more complex projects such as BioSNG or biomethane hubs the associated technical, regulatory or economic risks are such that they prohibit full commercial role out at this point in time.

CSQ15. Are there other mechanisms that we have not identified that we should consider (please give details)?

Given the current challenge of defining an appropriate whole systems approach is, we think that it is important to place an early focus on establishing effective common understanding and defining appropriate leading and lagging market indicators. By clarifying current understanding and allowing this to develop we can look to ensure consistency across networks in desirable outcomes. In our whole systems strategy set out below we have then identified how this should be followed with blueprint case studies from which economic tests and studies can be carried out before moving between to proactive strategies prior to the start of RIIO-ED2. This is set out in the diagram below.

Whole Systems Strategy



To support this strategy and recognising that we don't have a clear definition of what 'good' looks like we think that this should be incentivised through a responsiveness incentive.

- **A Network responsiveness Incentive** We would advocate the introduction of a discretionary incentive that demonstrates facilitating good practice in supporting and promoting both decarbonisation and whole system approaches. This incentive recognises that good practice is currently undefined and recognises that business as usual approaches need to change across network planning teams to facilitate change and responsiveness to new policy and new technology. Measures that this could support include promoting changes to industrial standards, innovation and facilitation in new

entry connections, co-ordination with local energy strategy teams and housing developers. We believe that without specifically calling this out and incentivising it, then it will remain challenging to address industry barriers to change and reductions in consumer costs are less likely to achieve their full potential.

CSQ16. Are there any additional framework-level whole system barriers or unlocked benefits, and if so, any price control mechanisms to address these?

One area that could present challenges for unlocking the benefits of a whole system is the sharing of information that is commercially sensitive, specifically through the networks connections businesses. Our ability to share enquiry information is rightly very restrictive in order to maintain commercial confidentiality which may present challenges when trying to work collaboratively to develop a whole system solution.

CSQ17. Are there any sector specific whole system barriers or unlocked benefits, and if so, any sector-specific price control mechanisms to address these?

Changes under the Gas Safety (Management) Regulations and the Gas (Calculation of Thermal Energy) Regulations are required to bring benefits to UK customers and enable decarbonisation solutions to be developed.

For example, changes to billing arrangements, by redefinition of billing zones, would reduce both capital and operating costs to biomethane producers, which we would propose to fund under the discretionary mechanism described above. In respect of the trend in peaking plant connection to our network, we could be developing and implementing smarter automated control systems for network management, to ensure capacity is available without significant reinforcement on either power or gas networks.

It should be recognised that progressing these changes to legislation take a lot of time and resource, first in the preparation of the evidence base for the change, but secondly in instigating the change to move it from the status quo to a better customer outcome. The wide social benefit of this should be recognised in the network responsiveness incentive referred to above.

CSQ18. Which of the proposed mechanisms would be most suitable in circumstances where a broader definition of whole system is likely to deliver benefits to network consumers?

We believe there will be a continuing need to carry out R&D into whole systems impacts. However, it is important to have a vehicle for the rollout of solutions, therefore our preference would be to fund this type of project, which is not R&D, under our proposed second and third mechanism i.e. discretionary or re-opener. This would also enable network companies to deliver both UK government or devolved government policy as and when required.

1.6 Ensuring Future Resilience

Observations and overview:

These observations are set according to each of the categories below; asset resilience, workforce resilience, physical resilience and cyber resilience.

Asset resilience

In principle we agree with monetised risk as an important tool in defining output targets and setting allowances, as long as we are clear on the boundaries and limitations of the current methodology when it is applied to different asset classes. There are significant categories of assets where the data on risk impacts within the monetised risk model is either incomplete or has not been appropriately calibrated. As such, monetised risk remains a very valuable decision support tool and should be used as extensively as the data permits, but the limitations of that data need to be recognised. On the basis of data availability, we therefore don't agree that monetised risk outputs can be used as the primary means for justifying workloads.

In the Sector Specific Methodology consultation, it is proposed to extend the modelling to consider the long-term benefits against a counterfactual. We would strongly encourage Ofgem not to progress too quickly towards this: it is important to have a base model that is demonstrably shown as accurate for the asset classes that it represents, before adding further complexity.

To support the extension of the Network Asset Risk Metric (NARMs) and to recognise its importance to setting allowances, we encourage Ofgem to consider an Asset Records Quality Incentive to promote accuracy of asset data and condition and the coverage of asset classes within the NARMs model.

We are, however, extremely concerned about the proposed disincentive regime (para 6.40) whereby if output targets are over-delivered, the costs may be recoverable if they can be shown to be justifiable. On the other hand, if output targets are under-delivered then the associated cost allowances will be lost even if it is justified under-delivery, and if Ofgem considers it to be unjustified then the penalty will be the amount equivalent to the monetised risk benefit that consumers have foregone. This is disproportionately asymmetric compared to the current balanced structure where there is upside and downside incentive of 2.5%. We should note that the monetised benefit can be several times greater than the capital cost of the measure. We believe that this strongly disincentivises innovation and efficiency due to the risk that any deviation from the agreed output may not be considered justified at a later date.

Workforce resilience

We are pleased that Ofgem recognise the importance of this subject and agree that workforce resilience should be embedded as an explicit requirement in the RIIO2 business plans.

We would like to see workforce sustainability and skills investment be suitably funded in RIIO-2 so that we can meet the continuing challenges presented by our aging and changing workforce, the increasing competition for the skills we need, and maintain an effective contractor strategy. All this of course to ensure we can sustain the appropriate skills and resources necessary to continue the safe operation of our assets.

We also believe Ofgem should take into account that there is a broader social benefit associated with companies like ours sustaining a highly skilled workforce, offering good quality apprenticeships and training schemes, and pursuing diversity and inclusion (D&I) strategies to ensure the workforce better represents the communities we serve.

Given that workforce sustainability is an issue that extends beyond RIIO-2 and given the time lags associated with the training and apprenticeship programmes, we encourage Ofgem to take a long-term approach, taking appropriate account the competition for labour from other markets and infrastructure projects over and beyond the RIIO-2 period.

We would also look for recognition from Ofgem about the pressures we face from specific regional factors. Much of our business operates in an increasingly tight South Eastern labour market, which is typified by high wages and virtually full employment (particularly for those workers with the sort of skills we seek). While these regional factors already present significant challenges in terms of recruiting and retaining the skills we need at an acceptable cost, future extraneous factors (e.g. Brexit, big infrastructure projects) are only likely to increase these challenges.

Other significant extraneous factors include changing societal and HSE attitudes towards the traditional (and broadly efficient) GDN operating model of meeting out-of-hours operational demand largely through overtime and standby. We are under increasing pressure (mainly from the HSE, Trades Unions, and from changing attitudes within large parts of our

existing workforce and potential workforce) to engineer-out long hours working as far as possible. While we accept this is the right thing to do from a sustainable workforce point of view, it is likely to increase costs within the business.

Finally, we would point out that we have participated in cross-industry discussion (facilitated by EU Skills) on workforce sustainability and would want to signpost the Regulator to the collective response.

Physical resilience

We broadly agree with the proposed approach.

Cyber resilience

Cyber security risk, and the associated costs in cyber security, have increased exponentially during RIIO-GD1; and we have every expectation that they will continue to do so during RIIO-GD2. As such we agree that cyber resilience should be separated out as cyber security investment cannot be considered solely as “above Business as Usual (BAU)”. The nature of the risk profile is such that it is likely that all current and future technology will require significant additional cyber security requirements and capability irrespective of the NIS directive.

Cyber risk and the associated threats are highly variable and constantly changing. Therefore, long term investment plans need to be in place but must be flexible and cannot be detailed with any level of certainty. The mechanisms that we need to have in place should be sufficiently flexible and responsive to allow for network companies to respond to that risk with upward and downward variability in allowances according to the changing nature of the risk.

We think that cyber resilience should be separated out from the main cost-assessment data templates and companies should submit their best justifiable forecast. Recognising the changing threat, companies should have an operating range and be able to resubmit if there is a substantial deviation from this forecast [i.e. +/- 10%] of cumulative expenditure vs cumulative allowances. In this manner the consumer and companies have a balanced approach towards an unknown threat.

We note that currently Ofgem is planning to publish its guidance in June 2019 to inform the development of the strategic investment plans. This is late in the programme for incorporating the cyber resilience in the business plan and we would encourage as much early visibility as possible to enable a more robust plan to be submitted.

Asset resilience

Response to consultation questions:

CSQ19. Do you agree with our proposals to use monetised risk as the primary basis for network companies to justify their investment proposals for their asset management activities?

In principle monetised risk (MR) is a useful foundation for a cost benefit analysis output, and in principle, when fully developed and tested, it would be appropriate to use monetised risk as the primary basis for justification for investment. However, monetised risk is still at a relatively early stage of development and has not been sufficiently calibrated to demonstrate that it is able to deliver effective decision support for RIIO-GD2.

In the Sector Specific Methodology, Ofgem assert (para 6.5) that the monetised risk model has been developed over the past few price controls. This risks giving a false sense of maturity in the process that we don't think is appropriate. For gas networks monetised risk was only introduced into the gas networks at the start of RIIO-1 and only fully incorporated into the RRP submission in 2017. As such, it is too early to be confident that there is appropriate consistency in reporting and appropriate calibration for monetised risk to be the primary basis for justifying their asset management activities.

Within the consultation Ofgem propose the NARMS mechanism for RIIO-2 will only apply to asset categories within the current NOMs mechanism (para 6.19) We broadly support this approach and the recognition that asset management categories outside of the NARMS model will require their own assessment methodology.

As we set out in our RIIO Framework Response there remains substantial requirement to validate the outputs and ensure consistency in approach. Debate, however, has been dominated by the application to RIIO-1 targets rather than looking forward to preparedness for RIIO-2. We are keen to build on the progress made to date, but we must also be cognisant of the limitations within the model. These limitations include;

- **Unique Assets.** Some assets are unique and complex - such as statutory independent undertakings - so that the cost of modelling the assets, the failure modes and the consequences will be significant, whilst their uniqueness means that there will be limited comparable and benefits associated with the results.
- **Subsystem and components.** Assets – such as instrumentation – where the consequence of failure is not directly related to the sub system but rather to the unit that it operates within.
- **Asset health.** We are concerned there may be inconsistency in approach to asset condition between networks and that some models may overstate, and others understate investment need due to a lack of calibration in asset condition data between networks. We need consistency in this regard before the full capability of NARMs can be delivered.
- **Data quality.** We are concerned that there are inconsistencies between networks in their approach to input data. Some companies have based their data on established survey methods of individual assets, other networks have taken more a more statistical approach. We need to establish whether this difference in approach distorts the proposed investment decision.

CSQ20. Do you agree with our proposals to define outputs for all sectors using a relative measure of risk?

We agree with the proposal (para 6.25) that outputs should be defined using a relative measure of risk. This is already established practice for gas distribution networks. It is important, however, to keep the absolute level of risk as an important consideration in that assessment as this is the risk that customers and the public are exposed to at a given time.

CSQ21. Do you agree with our proposals for defining outputs using a long-term measure of the monetised risk benefit delivered through companies' investments?

Whilst we agree with the aspiration, we do not agree with the proposed timescales.

At this stage the NARMs methodology is not sufficiently robust, and as such we do not think that it is appropriate to overlay another level of complexity by looking to establish a long-term counterfactual. Rather, we are concerned that at this time this may be counter-productive as it will detract from validating the existing monetised risk methodology and ensuring comparability across the different networks.

By introducing a long-term counterfactual, we need to establish a clear methodology for how that counterfactual should be implemented over the life time of the asset. Whilst this may appear to be relatively simple for a single intervention on a single asset, it is very complex when it comes to a series of interventions over time and their cumulative impact, or a series of interventions on subsystems over time.

Figure 2 (para 6.27) could be interpreted as only covering the cumulative impact during the RIIO-2 period, potentially to minimise some of the challenges identified above. We assume this is not intentional as it would have some significant distortionary impacts if this was the case.

CSQ22. Do you agree with our proposed approach to setting allowances and outputs?

At this stage the NARMs methodology is not sufficiently robust, to be used as the primary means of justifying workloads and levels of expenditure as stated in Para 6.29. For specific asset classes we agree that the monetised risk methodology should be used as a key point of reference to justify workloads and expenditure levels. However, it is important that this is a key point of reference and not a sole justification. As a network company we have an aging asset base where the risk profile can be hard to define and quantify accurately, as such we need to ensure managerial knowledge and experience remains a central consideration.

Management hold ultimate health and safety responsibility and must be able to present justifiable investments to uphold this responsibility if they feel the monetised risk methodology does not accurately reflect the company's operational knowledge of the asset.

Ofgem has stated its intention to use monetised risk as a part of the process to benchmark company's proposals, check efficiency and value for money and hold companies to account for their investment decision. We agree with this aspiration however it is important that we recognise the current state of model validation, as such monetised risk is not appropriate for benchmarking across companies as there are too many inconsistencies.

On the last point in particular: it is very important that we learn the lessons from RIIO-GD1 and do not try to transfer across methodology during RIIO-2, and that we are clear at all time what the final account will be held against.

CSQ23. Do you have views on the proposed options for the funding of work programme spanning across price control periods?

We recognise Ofgem's definition of the problem of work spanning multiple price control periods and the appropriate allocation of funds between price control periods. This will be an increasing problem with the move from an eight to five-year price control, where the more regular breaks in the regulatory process risks introducing a more disruptive programme with associated additional costs.

As such we do not think that the first option of allowing for costs only for outputs to be delivered in RIIO-2 to be appropriate. Rolling expenditure in RIIO-2 forward for output delivery in RIIO-3 runs the risk that expenditure that is justifiable on RIIO-2 outputs may no longer be considered justifiable in RIIO-3. This would leave the expenditure exposed, and for large projects in particular this can be substantial amounts.

We think that the second option is more appropriate with a fixed pot of funding to bridge the gap between regulatory cycles to be on a use-it-or-lose it basis for projects above a minimum size threshold (we would suggest £3m), and with applications for that pot having clear deliverables between RIIO-2 and RIIO-3.

We also think that this pot should be linked with a 'future of heat' re-opener, so that if there is a significant expansion in the role of the gas or electricity networks in the provision of heat that this pot is able to expand accordingly so that the necessary investment decisions can be progressed at the earliest opportunity.

No previous arrangement for funding across GD boundaries, which is equivalent to option 1. This does not work for large Transmission projects and leads to gaps in delivery – no projects spanning the GD boundary. No DN is likely to invest in work that is not fully delivered in RIIO-GD2 for fear of not gaining the appropriate funding to finish the work in RIIO-GD2.

Option 2 allows for some funding for projects spanning the GD boundary and this would seem appropriate for large projects, say, in excess of £3-5m.

CSQ24. Do you have any views on the options and proposals for dealing with deviation of delivery from output targets?

We disagree with Ofgem's assessment on the method for dealing with deviation of delivery from output targets. In para 6.40 there appears to be a double penalty of losing the allowances and in addition losing the monetised benefit, which if the asset had already passed a CBA must by definition already include the value of the allowances. We therefore consider this to be completely inappropriate.

Secondly, it is important to recognise that the monetised benefit is a lifetime measure, and that we do not look to undertake all projects that have a positive relationship between monetised benefit and the costs to deliver those benefit. Rather we look to prioritise according to the monetised benefit / cost relationship. This helps us target projects efficiently but also means that the monetised benefit may in some instances be significantly greater than the cost and allowances applied for.

Thirdly, we note that this is a very penal disincentive only, there is not the equivalent incentive for delivering more customer benefit and sharing the value of that benefit with customer. Rather, it is proposed that companies should be cost neutral. This is a significant imbalance in the risk exposure to companies and a move away from incentive to disincentive-based regulation.

Finally, we are not clear on how this will work with interchanges between asset classes. In its ideal state, monetised risk should allow for a company to focus on the reduction of customer risk as a key customer outcome rather than the specific intervention output. So that if the same consumer benefit can be achieved more efficiently then companies should be incentivised to do this. By focusing on intervention outputs and penalising non-delivering of those outputs, we are moving away from the customer outcomes and limiting the opportunity to offset monetised risk delivery through more efficient interventions. Whilst this may be intentional, it is important that it is explicitly recognised.

CSQ25. Do you have any views on the interaction of the NARM mechanism with other funding mechanisms?

There are a number of instances where there are important interactions. These include;

- **Interactions with the CBA modelling.** NARMs does not cover all assets, some assets are covered in a robust manner, others are not. It is therefore important to understand where the boundaries are between methodologies, to recognise that these boundaries will differ between networks and to allow networks to explain where and why they have moved away from the NARMs methodology.
- **Repex Tier 1.** Is fully managed through a legislative framework and as mandatory work therefore sits outside of the NARMs mechanisms.

Leakage incentive. We note that Ofgem have queried whether there is an interaction between the Repex programme and the leakage incentive. The leakage baseline adjusts for the workload undertaken under the Repex programme, so we do not believe this to be the case. [With NARMs however, environmental impact is one of the components of the monetised risk methodology, so there are interactions that will need to be considered.

CSQ26. Do you have any views on ring-fencing of certain projects and activities with separate funding and PCDs? Do you have any views on the type of project or activity that might be ring-fenced for these purposes?

There are clear categories of assets that should be ring-fenced. These include Repex tier 1, including associated small diameter steel and steel service renewals, which is driven by a mandatory HSE programme and investment in network specific assets such as SIUs which are unique assets and the cost of modelling the risks would not offset the costs.

Workforce resilience

Response to consultation questions:

CSQ27. Where companies include a sustainable workforce strategy as part of their business plans, what measures do you think could be established to hold companies to account for delivering these plans, without distorting optimal resourcing decisions?

We recognise that it is important for the sustainable workforce strategy to be appropriately set out and funded within the business plan, and that as a result companies should be held to account for delivering these plans.

As a result, we would be keen to ensure detailed workforce plans that identify the critical roles and the number of people that we will need to recruit to fill those roles given expectation in staff turnover, retirements and changing working time practices. This will form the basis of a detailed training requirement that can be filled from internal development, apprenticeships, trainees and graduates. Each of these can be monetised.

In terms of measurable outputs, it is important that companies are able to maintain appropriate flexibility to manage their recruitment in the most appropriate way according to the characteristics of the local labour force. As such, we would encourage a series of measurable attributes (graduate training programmes, apprenticeships etc) and to recognise that the definition of those attributes needs to remain reasonably responsive to the different labour characteristics - plenty of graduates and apprenticeships may have had previous careers and be reskilling.

We would also support Ofgem's request for collaboration (para 6.59). However, we need to recognise the geographical limitations of collaboration and that recruitment challenges vary significantly on a regional basis. Therefore, a challenge in securing key technical skills in the south of England may not be as pressing in the north of England and as such a more local solution may be preferable. So, we strongly support collaboration where there is proximity and a common challenge across networks, but also collaboration with local educational establishments and local government.

In para 6.54 Ofgem question whether an incentive could be developed with networks reporting annually against their progress and funding being adjusted to reflect this. We are interested in exploring options for creating a skills capability score which could be monitored over time and through which the skills development of the company could be assessed allowing for staff changes. We think that such a measure would need to be a static incentive in place for the duration of the price control period, as any score may be volatile between years and be particularly sensitive to critical skills held by a relatively small group of individuals.

Physical security

Response to consultation questions:

CSQ28. Do you agree with maintaining the existing scope of costs that fall under Physical Security, ie costs associated with the PSUP works mandated by government? Please explain your reasons and suggest alternative definitions you believe should be considered.

We broadly agree with the approach set out in the Sector Methodology Consultation that this investment should continue alongside government strategy and linked to Critical National Infrastructure (CNI). These are clearly understood in their application.

Whilst we do not anticipate any change in this criterion and have a clear understanding of what is required to be delivered in RIIO-GD2, we also recognise threats change (as demonstrated by the drone incident at Gatwick Airport) and as such agree there should be a re-opener to ensure we are able to respond to changes in standards. This reopener should also be available for sites where changes in gas throughput impacts on their CNI status (either positively or negatively).

CSQ29. Do you agree with our proposed approach of ex ante allowances for PSUP works mandated by government? Please explain your reasons and suggest alternative approaches you believe should be considered.

We agree with the proposed approach as per existing arrangements and no issues have been experienced.

CSQ30. Do you agree with our proposal to include a reopener mechanism to deal with costs associated with changes in investment required due to government-mandated changes to the PSUP?

We agree with the proposed approach

CSQ31. We would also welcome views on the frequency that is required for any reopener, e.g. should there be one window for applications during RIIO-2 and, if so, when?

Network companies should be able to set out their requirements according to current understanding and justify funding for sites that need to be upgraded to meet CPNI criteria. As such we would not expect a re-opener to be required before 2023. However, because we think it is unlikely that reopener is likely to be required any change is therefore going to be unexpected. As a result we would not want to be too prescriptive surrounding the details which govern how it could be triggered because any trigger is likely to be an unknown event.

Cyber resilience

Response to consultation questions:

CSQ32. Do you agree with the scope of costs that are proposed to fall under cyber resilience, ie costs for cyber resilience which are (1) incurred as a direct result of the introduction of the NIS Regulations, and (2) above 'business-as-usual' activities? Please explain your reasons and suggest further or alternative costs you believe should be considered.

We disagree with this approach.

The introduction of the Network and Information Systems (NIS) Regulations in 2018 provides a framework to assess and report on Cyber Security levels that arguably all network companies must deliver. The NIS Directive simply provides a mechanism to allow governance and potentially a penalty mechanism for failing to meet these requirements. As such whilst the NIS regulations are an important framework, in themselves we do not consider them to be complete or flexible enough

to respond to a rapidly changing cyber security landscape. Cyber resilience needs to be far broader in its consideration to include operational technology as well as current and future information technology needs. Examples of investment that we consider to be outside of the existing NIS framework include;

- 'smart' operational tools
- Network sensors and monitoring technology
- Remote access operational tools
- Ever increasing speed of deployment and increased impact of malware such the Wannacry virus demonstrated

The above list provides examples to demonstrate the key principle that a framework or regulations in themselves do not manage or mitigate cyber risk and that the nature of technology and the cyber threat means that is continually shifting, evolving and growing the threat landscape. i.e. the scope and nature of what cyber security must address is ever-increasing.

We also disagree with the 'above BAU' activities as it is not possible to define BAU in a rapidly evolving risk environment. Each company may have a very different perspective of BAU and Ofgem will struggle with comparability. Rather than looking to establish a BAU baseline and then determine incremental expenditure, we would encourage all cyber resilience projects to be broken out as far as possible such that total expenditure can be assessed against output delivery.

CSQ33. Do you agree with our proposed approach of ex ante 'use-it or lose-it' allowances? Please explain your reasons and suggest alternative approaches you believe should be considered.

We disagree with the 'use-it or lose-it' allowance approach. Our own experience has shown rapid increases in expenditure in the past. Feedback from our stakeholders suggests that we can continue to expect further rapid increases in the future and that there is a good chance that the rate of expenditure will continue to increase in response to the increasingly sophisticated threat. It would be misleading and inappropriate to attempt to detail specific projects or areas of investment as this plan will almost certainly need to change over a seven-year time horizon (between the time of the submission and the end of the price control).

Given that an ex-ante 'use-it or lose it allowance' is not reciprocal, we are concerned that the process will not be sufficiently flexible to the changing and uncontrollable nature of the cyber threat that we face if it increases in a faster than anticipated manner.

At a time of significant uncertainty network companies will be required to trade-off against an efficiency incentive that encourages least cost their forecasts of cyber risk and significant fines that may arise from GDPR and NIS directives for failure to adequately address these risks.

Additionally, we expect that Ofgem will monitor Cyber Security capability on an ongoing basis through the Cyber Assessment Framework. This will provide detailed and granular assessment on whether investment is being directed appropriately and efficiently and will enable corrective action to be enforced. We believe that the level of scrutiny being proposed will enable Ofgem to give customers assurance that costs associated with Cyber Resilience are being incurred sensibly and efficiently, whilst giving additional assurance that Cyber risk is being adequately managed to enable adequate energy resilience.

Recognising the changing threat, companies should have an operating range and be able to resubmit if there is a substantial deviation from this forecast [ie +/- 10%] of cumulative expenditure vs cumulative allowances. In this manner the consumer and companies have a balanced approach towards an unknown threat.

Given this uncertainty, we also consider it important that a company should not be penalised or rewarded on cost efficiency for a different expectation of cyber resilience requirements given the associated uncertainty.

CSQ34. Do you agree with our proposal to include a re-opener mechanism for cyber resilience costs? Please also provide your views on the design of the re-opener mechanism.

Yes. It is important to note that the nature of this risk is such that it is a constantly shifting risk profile and Cyber security threat is impacted by numerous external factors such as the international and national political climate and vulnerabilities and weaknesses exposed by external groups and third parties.

In addition to this, changes to legislation, as has been the case with NIS Directive, may require a substantive additional investment to meet the ever-changing needs of this risk. It is also important to note that the fast and ever-changing nature of technology may mean that meeting the same or improved levels of Cyber resilience over a long-term time horizon until

2026, may require substantive changes in approach and potential investment requirements to achieve the same level of Cyber resilience expected by Government and customers.

We would propose that the reopener should be triggered on a percentage increase or decrease basis over and above cumulative allowances to date based on changes to:

- National or International threat to utilities that require a substantial improvement in cyber security;
- Significant change in third party or activist group and/or exposure of technology third party vulnerabilities that requires an immediate and/or substantive change;
- A major shift in technology adoption (including operational technology) that was not widely anticipated at the time of business plan submission; and,
- A significant change in legal or regulatory requirements that warrant a substantial shift in the organisations approach to cyber security.

1.7 Managing Uncertainty

Observations and overview:

Uncertainty mechanisms

We agree with Ofgem's assessment regarding the ability to forecast forward. However, we need to recognise that the risk does not disappear, it is either directly transferred to another party, transferred to another risk category (such as charge volatility) or partially mitigated. The move to a five-year price control period is an important step in the partial mitigation, but we should recognise that other proposals, whilst they may be appropriate, transfer risk to network companies and may lead to greater volatility in charging mechanisms.

We note that the 'range of uncertainty mechanisms' (para 7.7) does not appear to be complete. Additional uncertainty mechanisms referred to in the sector methodology consultation include 'use-it-or-lose-it' mechanisms (para 6.86), 'discretionary funding pots' (para 5.38), or submission to a 'joint working group' for high uncertain projects (para 7.38). We also think that any uncertainty band could have a range where there is high cost and volume uncertainty. We encourage Ofgem to set out a clear assessment of when different mechanisms are appropriate and the regulatory structures that will enable them.

Similarly, we note that (para 7.9) does not provide a complete list of uncertainty mechanisms. We think that it is important to consider uncertainty mechanisms around the deployment of decarbonisation projects and innovation under BAU and there are a number of sector specific changes where we think that uncertainty mechanisms are important to consider.

Interactions between mechanisms and sharing mechanisms

When considering these uncertainty mechanisms, it is important to recognise their interactions with the business plan incentive and the sharing mechanism. Important interactions include:

- **Low confidence and uncertainty mechanisms.** We need to recognise that a low sharing factor will encourage companies to submit costs under an uncertainty mechanism. Whilst there is not much clarity on the distinction between high and low confidence costs, it would be inappropriate to penalise companies who have submitted 'high confidence' costs based on the application of an uncertainty mechanism to then have those costs deemed 'low confidence' by Ofgem.
- **Uncertainty mechanism and efficiency tests.** Where there is an uncertainty mechanism, then it is very important that the associated costs should be removed from the efficiency assessment used for the business plan incentive. There is a risk that companies that put forward an ambitious plan with associated uncertainty mechanisms will be penalised under the business plan incentive if the costs are included in the efficiency assessment. For whole-systems, decarbonisation projects and innovation projects this may dis-incentivise companies from putting forward an ambitious plan that sets out the case for positive change. For cyber resilience network companies face an increased risk having to balance the business plan incentive with potentially facing fines for non-compliance (under NIS or GDPR directives); and,
- **Reopener thresholds and sharing factors.** Where re-openers are used we think that the threshold should be should be revised. Currently the threshold is defined by the expenditure divided by the totex incentive strength rate. As the totex incentive strength rate is now potentially varying substantially, with the adjusted sharing mechanism potentially as low as 15% we think that this is an inappropriate threshold mechanism. A company with a low sharing factor could be substantially penalised compared to a company with higher sharing factor for costs which have not yet been determined as 'low' or 'high confidence'.

We would encourage Ofgem to consider the interaction between the level of cost certainty and the business plan data templates. It may be that the existing reporting cost categories should be sub-divided to distinguish between 'high' and 'low' confidence costs. This would support greater clarity on the distinction between the two.

Real Price Effects

We broadly agree with the proposals for real price effects (RPEs) on the basis that the index selected appropriately captures the industry specific costs that we will incur. We believe that indexes are important for direct labour costs, contractor costs, and core materials costs where the cost exposure of network companies is not aligned with broader market indexes such as CPI.

Managing the risk of asset stranding

As Ofgem point out (para 7.19) the future of gas distribution networks will depend on decisions on the most effective manner to decarbonise heat, which needs to be taken in the mid 2020s. On the basis that this decision is not imminent and

new asset investment (and hence asset stranding) is minimal then we think that it would be premature to significantly change depreciation rates for gas network assets.

Rather, we believe that the focus should be on resolving the uncertainty on the decarbonisation pathway as quickly as possible and minimising new capital investments. Recognising that there will be a period of time where policy is under development, we are fully supportive of the anticipatory new investment structure as a way to ensure that appropriate investments can be undertaken but also to ensure that information around those investments are shared appropriately.

As a point to note, Ofgem (para 7.18) points to the falling gas demand in recent years as evidence of spare capacity on the gas transmission system. Whilst not directly commenting on the capacity of the gas transmission system, it is important to recognise that annual demand and capacity are only partially correlated. Capacity must be defined according to peak demand, and to provide the flexibility to manage that peak demand according to its geographical location. Falling national demand does not necessarily translate into falling peak demand on a locational basis.

Real price effects

Response to consultation questions:

CSQ35. Do you have any views on our proposed factors to consider in deciding on appropriate input price indices? Do you have any evidence justifying the need for RPEs and any initial views on appropriate price indices?

Cost Indices need to provide an appropriate balance of risk between companies and consumers but must also be robust and reflect the unique operation of Gas Networks. It is essential they accommodate the efficient costs that a GDN will incur and be produced by a reputable body.

We believe there are three key areas where we have seen real price impacts in the past (i.e. where costs do not consistently track RPI or CPI inflation) these being, direct labour costs, contractor costs and the costs for core materials. For labour and contractor costs we have seen that economic growth in London has continued to outstrip the rest of the economy¹⁶ on a consistent basis for the last 20 years putting greater upward pressures on costs as demand increases at a local level. It is important indices capture regional variations in real price effects where these are not covered by specific regional adjustments elsewhere in the cost assessment.

- **Directly employed Labour.** Indices must reflect real competition in the labour market and capture sector specific issues such as ageing workforces in the engineering sector. We will propose indices as part of our Business Plan submission that can capture variations across our specific operating regions to account for costs which may change at different rates to the rest of GB. We are facing some unique challenges in the labour market with increased demand for skilled resources and focus on working hours that could have both an impact on our resourcing levels and cost inflationary pressures.

We therefore believe it is appropriate for certain components of labour costs to be treated through an uncertainty mechanism, particularly where we consider a change in legislative or working time practices may drive a substantial change in costs.

- **Contractors.** Along with competing in similar markets and experiencing the same challenges that network companies face with directly employed labour, the cost of engaging Contractors are also determined by broader industry demands such as Smart Metering and other utility workloads. This will be a key inflationary cost pressure and whilst indices will provide some protection against this uncertainty, it will be difficult to predict. We have seen significant cost pressures in the second half of RIIO-GD1 which was not reflected in the first part of the price control, further evidencing the volatility in this area of significant cost.

Overall, we are supportive of indices for labour costs. We intend to provide additional evidence on the impact and materiality of the above inflationary pressures as part of our business plan.

In addition to labour and contractor rates, the other major input price impact are key materials where cost is based to varying extents on oil-based products.

¹⁶ <https://www.pwc.co.uk/economic-services/ukey/pwc-ukey-march18-regional-growth.pdf>

- **Materials.** Whilst materials, such as PE pipe are purchased as a finished product, various input costs (such as oil) are a major component of the price paid. It is normal to have contract agreements established that are directly linked to the main oil indices as suppliers are unwilling to accept the risk (or will charge a significant uplift to take on that risk) of oil-based fluctuation. We believe appropriate sector indices should therefore be applied and these will still drive the right incentive and behaviour within the market.

CSQ36. Do you agree with our initial views to retain notional cost structures in RIIO-2, where this is an option?

We agree that wherever possible, Ofgem should consider the retention of structures at a notional level with the exception of specific regional issues such as working in London and South East of sparse areas such as Wales and Scotland.

However, we would like to ensure that there is a transparent process through which submit evidence to inform the notional cost structures, how that evidence is weighted to take into account the volume of work completed, and the final derivation of those notional cost structures.

CSQ37. Do you agree with our initial views to update allowances for RPEs annually and to include a forecast of RPEs in allowances? Do you have any other comments on the implementation of RPE indexation?

We would strongly support the annual indexation of RPEs due to the reduction of complexity, associated with a single end of price control period true up. We believe volatility of cashflows should be minimised as well as large ex-post adjustments. This should benefit consumers and companies.

In terms of the three forecast options, we do not think that option 1 would be appropriate with prices remaining flat in nominal terms (ie decreasing in real terms) to then be increased to the full amount at a defined time as this would increase bill volatility.

Of the remaining forecast options, we would prefer the third option where RPE forecasts are updated annually according to the best view at that point of time. We think this reduces the risk of cumulative errors building up over the price control period and could be implemented in a transparent and mechanistic manner. Provided the indices are robust, any variation of actual costs to the indices should be subject to a strong sharing factor as it will be actions made by companies that drive the variations.

Ongoing efficiency

Response to consultation questions:

CSQ38. Do you agree with our proposal to use the EU KLEMS dataset to assess UK productivity trends? What other sources of evidence could we use?

We think that it is too early to set out the precise data set that is going to be used to assess the UK Productivity trends. One point that is very apparent from the Energy Policy Research Group (EPRG) that there is a challenge in sourcing a full and consistent dataset. As such we think that this is an area that needs more work and more discussion before we commit to a single approach.

Managing the risk of asset stranding

Response to consultation questions:

CSQ39. Do you think there is a need for a utilisation incentive at the sectoral level? If so, how do you think the incentive would operate coherently with the proposed RIIO-2 price control framework for that sector?

We agree with Ofgem's assessment (para 7.22) that a utilisation incentive would be inappropriate for the gas distribution networks.

CSQ40. Do you have any views on our direction of travel with regard to anticipatory investment?

Ofgem distinguishes between the approach that should be taken for new standard assets and for new anticipatory investment. For the first category, new standard assets, Ofgem proposes an enhanced CBA process where options of deferring the investment, least worst regrets and probabilistic CBAs are used to determine the robustness of the decision. This contrasts with highly anticipatory investment where the project would be submitted to a working group for review prior to approval.

We agree with this approach in principle. We consider that the proposed working group structure, could be a valuable forum through which broader applications could be progressed. Specifically, we are concerned that there is a group of decarbonisation and whole system projects that are no longer eligible for innovation funding but are not sufficiently established on either a commercial or regulatory basis to progress within a standard price control structure.

In developing this approach, it would be good to have greater clarity around the definitions of what would make a project appear in each category and any minimum expenditure thresholds that would be applied to the project for it to be progressed down the second route. Similarly, it would be helpful to understand the boundary between new standard assets and the extension of existing standard assets. Finally, where a probabilistic CBA is required then it would be helpful to understand what is the appropriate confidence level at which an investment can be considered suitable.

As with an ambitious components of the business plan, where a highly anticipatory project is proposed, it would also be helpful to understand how this will be considered within the broader cost-efficiency framework. Our expectation is that it would be removed, so as not to distort the assessment of the core business, and this would facilitate a 'use-it-or-lose-it' style mechanism.

CSQ41. What type of projects may be appropriate for a risk-sharing approach?

Within a decarbonisation and whole system basis there are number of projects where investments may be required in anticipation of market demand materialising, particularly as technologies and markets move through the early maturity stages.

In these instances, it may be more economically efficient for network companies to undertake an investment because the market demand risk may simply be too great for a commercial company to undertake.

Examples of this would be the provision of Compressed Natural Gas (CNG) filling stations where the investment by a network company may provide the initial network prior to commercial companies taking over, but there is clearly a higher risk of the market not developing.

An alternative example could be biomethane hubs, where biomethane is collected from a region (rather than laying a pipe to each individual asset) and where the market and political uncertainty make the investment unattractive to a commercial company, but over-all costs could be significantly lower and environmental benefits significantly higher by the network company undertaking the investment.

Clearly for both of these the additional return on equity would have to be commensurate with the additional risk taken on by the network company.

CSQ42. How can we best facilitate risk-sharing approaches for high-value anticipatory investments?

Whilst we understand Ofgem's wish to facilitate risk-sharing for high value anticipatory investments we consider it is too early to be prescriptive at this stage.

From our perspective high-value anticipatory investments are required where there is a clear gap to be bridged between the demonstration project that may have been supported through an earlier innovation funding mechanism, and the establishment of an effective commercial market. At this stage the risks may be too high for a commercial investor. These risks may be technical, commercial, regulatory or political and in each instance the risk sharing approach should be dependent on the organisation that is best positioned to manage that risk effectively, or at least cost.

CSQ43. How can we guard against network companies proposing risk-sharing arrangements for project they may have undertaken as business as usual?

We are not sure that this would be a problem, particularly if each project is individually scrutinised and assessed against key tests such as whether it is more cost effective, and if it is more cost effective why can it not be progressed under existing structures or by a commercial provider.

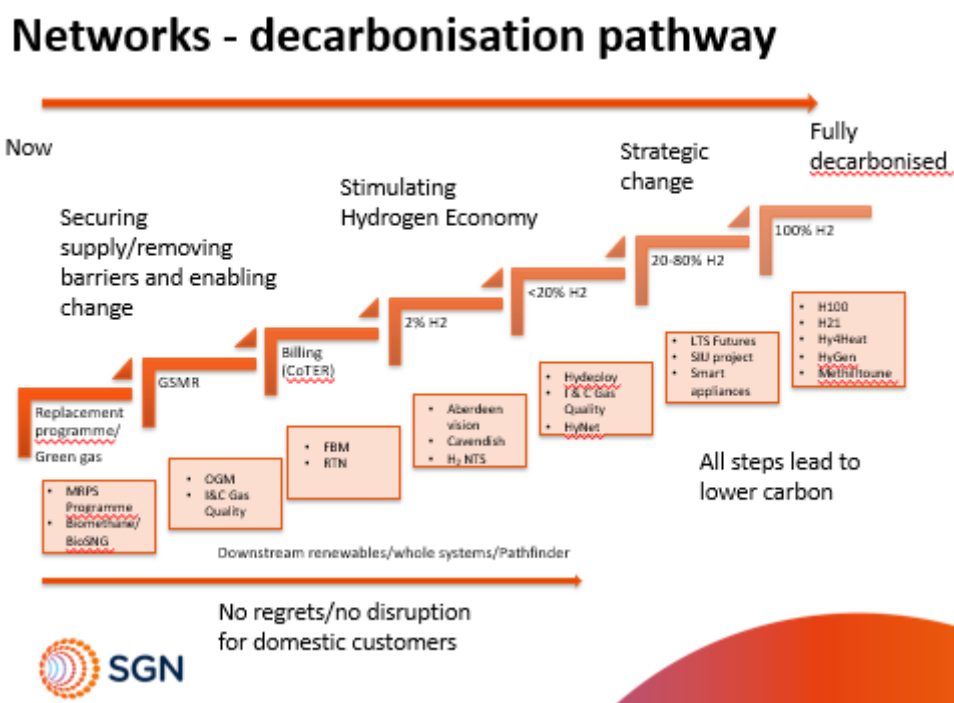
1.8 Driving innovation and efficiency through competition

Observations and overview:

Innovation structures

Innovation has been a major success of the RIIO-GD1 period. It has changed business processes to create efficiency savings to the benefit of customers, it has promoted social and environmental benefits and it has enhanced the safety of both our workforces and the public.

Going forward in RIIO-GD2 we recognise the challenge of decarbonisation of heat is probably the most pressing challenge for the UK energy system. As such we support the proposed focus on the energy system transition challenge, and the need to work with third parties in addressing this challenge. This challenge though is not just about large pilot projects and demonstration projects, a focus has to remain on safety and customer acceptability. For these reasons the gas networks have agreed a decarbonisation pathway that sets out the stages for moving towards a full decarbonised gas network. These are stages that largely need to happen in parallel and each may demonstrate that this pathway is not appropriate and needs to be changed.



To support policy from UK and Scottish governments we think that it will be very important to have an appropriate mechanism in place.

- **Innovation projects that support the decarbonisation pathway.** The continued research and development for projects that support the decarbonisation pathway and energy system transition. That recognises the need to evaluate and evidence key policy requirements for government (BEIS/Scottish Government/local authorities) and the need to explore how to facilitate and plan for emerging technologies, customer acceptance, and technology readiness, and the need to bring 3rd parties in for funding both proactively and reactively, ideas and deliverability.

Innovation should be focused on delivering a better environment, reducing emissions, improving safety, customer service and delivering greater efficiency. Whilst we recognise Ofgem's preference for innovation through business as usual to be more common place in RIIO-2, we are concerned with the move to incentivise innovation through Business as Usual will not be successful given the short price control period, the low sharing factors and the proposed layers of return recovery mechanisms that serve to reduce potential returns that could be generated from the application of innovation. As a result, we are concerned that network companies will invest less in innovation and in its deployment and that this will be detrimental to customer in the RIIO-GD2 price control period and future price control periods.

We believe that the current set of proposals are likely to limit innovation to process development that utilises off-the-shelf technologies, where innovation is limited to the application of that innovation to an existing business process. As such this

will limit 3rd party involvement to those providers of established technologies and is unlikely to support innovation that is currently at or below TRL level 8. This is likely to put at risk the extensive ecosystem of SMEs that have developed to support innovation through the NIA over RIIO-1.

We expressed our concerns in our response to the RIIO-2 Framework Consultation and were pleased by the decision taken to retain an innovation stimulus package limited to innovation that might not otherwise be delivered under the core RIIO-2 framework. Reviewing the Sector Specific Methodology, we are not clear on how this Framework decision has been carried forward. In Sector Specific Methodology, the focus appears to be on strategic challenges for the larger projects through an NIC equivalent; and where the limitation of funding to innovation that can be delivered through BAU totex. There are a substantial body of projects that are below TRL level 8 that will not progress under the proposed core RIIO-2 framework. For projects that are TRL 8 and above, their roll-out will be determined by whether they can be rolled out easily (with minimum change to established working practices) and with a high confidence of success. We do not believe that this is in consumer interests.

In the sector specific methodology consultation Ofgem state (para 8.19) that it will be considering the level of ambition as a factor in the business plan submission. Given the above we need clear guidance on both how innovation is going to be supported and how innovation ambition is going to be assessed within the quality component of the business plan incentive. Secondly, we need to have clarity how innovation is going to be considered within the business plan tables, as the high initial costs of deploying innovation should not be counted against a company in the assessment of the efficiency component of the business plan incentive. Finally, for companies to present an ambitious view of innovation, we need to have clarity on the structures that will support innovation prior to business plan submission prior to submission in July.

We strongly support the retention of additional funding for innovation projects this could take two forms – funding through totex or innovation allowance – of these two we think that an annual innovation allowance would be most effective.

- **Funding through totex allowances.** Some projects can be funded through where they can be clearly identified at the time of the business plan submission. This funding could support either undertaking innovation or the roll out of innovation. Given the compressed timescales though that we are submitting the business plan over, there is limited potential to identify the full range of projects, and as such there is a risk that projects are progressed on the basis of preparedness rather than quality.
- **Funding through annual innovation allowance.** Recognising the challenge with selecting the best projects in 2019 to be deployed between 2021 and 2026 we would be more supportive of an innovation allowance to support the deployment of innovation technologies that support both decarbonisation, whole systems transition and broader efficiency and safety objectives. Tracking benefits is challenging, however from the evidence that we are currently collating and will be submitting to the RIIO Consumer Challenge Group on the 24th of March demonstrates savings are significantly greater than the original funding costs. We ask that this is taken into consideration as a part of the consultation process.

Should Ofgem progress along the lines that it has set out, we recommend a full assessment is carried out to determine the loss that arises from not progressing lower TRL level technology in terms of future consumer benefits (through efficiency and quality) and whether the loss of SME supply chain is offset by the expected savings in reduced funding.

Competition

Whilst we remain supportive of competition, this needs to be done with full industry consultation and full impact assessments to determine where competition is in the longer-term interest of the customer.

We believe that the only appropriate body for running a competition is Ofgem, as they are the only organisation that are able to determine whether a cost over-run should be recovered from consumer bills and to determine whether or not a cost has been efficiently incurred.

We have significant reservations regarding the proposals for native competition. This appears to be rebranding established practice with no additional benefit but a higher administrative cost.

Innovation

Response to consultation questions:

CSQ44. Do you agree with our proposals to encourage more innovation as BAU?

We recognise the intention to transition innovation to BAU funding, however, as it stands we do not have sufficient clarity on what is intended by introducing new measures to ensure companies undertake more innovation as BAU. As we expressed in our response to the Framework Consultation (Q12), we remain concerned that constrain innovation in high-risk and pre-commercial projects and will be detrimental to the level and pace of innovation. We remain concerned that without an additional mechanism to support BAU funding then there will be significantly less innovation than is currently the case.

If innovation funding is limited to BAU funding structures, then it will encourage network companies to focus on the highest technology readiness level (TRL) projects that can be readily deployed and can be expected to generate a net benefit within the price control period.

Furthermore, a move to BAU funding structures is likely to change the associated risk of deployment. Currently the funding arrangements allow us to de-risk the participation of small and medium size businesses. This has helped to stimulate the SME market place and enables us to be more ambitious in our approach. By moving innovation into a BAU structure, it is likely to encourage a more standard commercial approach to sharing of risk, which is typically less supportive for smaller companies and may have a negative impact on collaboration with other networks.

With the shorter price control period this already constrains the time in which a net benefit can be realised, if companies are also operating a lower sharing factor then this will also reduce the benefits that projects that can be realise. We therefore anticipate that under BAU funding, with a 5-year price control and a low sharing factor, that it will be very challenging to find innovations that can be identified, tested, trialled and then rolled-out whilst providing a net benefit. Where innovations are identified that generate a net benefit, then we anticipate that under BAU funding there will be less collaboration and sharing of information surrounding successful innovation.

In order to support innovation appropriately we think that a 'use-it-or-lose-it' allowance is the most appropriate structure for facilitating innovation through-out the price control with conditions that support the sharing of information across networks and third parties.

An alternative would be to progress an upfront allowance for innovation projects that are identified early in the price control, however we do not think that forecasting appropriate innovation expenditure forward through to 2025 is appropriate given the pace of change in technology, innovation and priorities. Also, it would be important to have early visibility on such a structure to ensure that we are able to build it into our first business plan submissions in July.

In the Sector Specific Methodology Consultation (para 8.16) raises the risk of innovation that is not subsequently rolled out will be recovered as a part of the close out. We appreciate subsequent clarification that this specifically with regards the funding of innovation roll out contained within company's proposals which were not subsequently used for that purpose.

CSQ45. Do you agree with our proposals to remove the IRM for RIIO-2?

We agree with this proposal as the IRM in our view did not provide flexibility for smaller scale rollout of innovation solutions. This was an issue with the design of the IRM rather than the objective it intended to deliver. The qualifying criteria to initiate the IRM by its nature has made this prohibitive, reducing to a level where by it could be practically utilised who be a genuine benefit to the networks helping to embed more process driven efficiency lead innovation.

CSQ46. Do you agree with our proposals to introduce a new network innovation funding pot, in place of the Network Innovation Competition, that will have a sharper focus on strategic energy system transition challenges?

We agree that a mechanism to facilitate decarbonisation and energy system transition projects is essential. This will give a focus on the strategic challenges that networks will face in the light of the uncertainty with government policy around heat and decarbonisation. We believe it is also essential to maintain discretionary funding similar to NIA to carry out early stage feasibility and small-scale demonstration to meet whole system and decarbonisation challenges.

It is important that when considering energy system transition projects, that the body evaluating the projects and proposals should have sufficiently strong representation of the gas networks and the challenges associated with decarbonisation of heat, and the decarbonisation of heat pathway.

CSQ47. Do you have any views on our proposals for raising innovation funds?

We see this proposal as acceptable, concurrent with the existing arrangements for RIIO-GD1. Where a whole system solution is proposed the costs need to be reflected across both gas and electricity consumers and what they pay, as in the case of gas transmission shrinkage versus electricity shrinkage.

CSQ48. Do you think there is a continued need for the NIA within RIIO-2? In consultation responses, we would welcome information about what projects NIA may be used to fund, why these could not be funded through totex allowances and what the benefits of these projects would be.

A clear requirement from all stakeholder engagement is to develop and fund research and demonstration projects to support options for decarbonisation and the energy system transition. All such projects are outside the BAU scope. This would align with the emerging policy decisions from the UK and devolved governments, where further evidence to support decisions on the decarbonisation of energy are required by the mid 2020's. In our view a discretionary mechanism, similar to NIA, is required for us to support emerging and new technologies for the benefit of our stakeholders and customers.

The influence of emerging technologies and the needs of consumers on decarbonisation will also require specific R&D funding. However, R&D funding for operational efficiency is still a key factor to continue to improve business performance, stimulating collaboration amongst networks and maintain an active SME ecosystem. It has been evident that NIA in RIIO1 that SMEs have played a critical part in delivering solutions needed to maintain a more efficient gas network adding value for our customers. We believe SMEs will still have a critical role in the future developing solutions to address our strategic objectives and decarbonisation and the energy system transition.

Innovation in SGN has focused on delivering a better environment, reducing emissions, improving safety, customer service and delivering greater efficiency whilst sharing the benefits with other networks. We also recognise that innovation through business as usual may have a place in RIIO-2, however we are concerned with the move to incentivise innovation through totex will not be successful and we will become less innovative as a result.

Our innovation strategy is an evolving roadmap which we hope to apply in RIIO-GD2, the ambition of the strategy will ultimately be dictated by the funding mechanism applied, this is will be aligned to the subsequent action plans developed to deliver the specified outputs.

CSQ49. If we were to retain the NIA, what measures could be introduced to better track the benefits delivered?

It is challenging to track the deployment of new technology in the field due to the challenges of introducing an effective reporting system that is easily deployed and utilised by our front-line operatives whilst they are working in the field. The second challenge is to then identify and quantify the appropriate counterfactual of what would have happened if the innovation had not been implemented. This can be particularly complex if the saving is a process saving which related to time savings rather than a direct replacement between two pieces of equipment or that the benefits are not directly attributable to a single point of saving and there may be multiple benefits.

These practical challenges make it difficult to accurately track the benefits of innovation. We do, however, recognise that tracing the benefits of innovation is important, and that is important to demonstrate how innovation funding is being used and the extent to which innovation deliver direct value.

In addition to this we need to recognise that the innovation benefits tracker, may be focused on the financial benefits that are achieved. The non-financial benefits of improved safety reduce environment impact, customer satisfaction (including reduced disruption) bringing forward an innovation through the technology readiness levels should also be recognised within the reporting framework.

The key balance is therefore the cost of deploying robust innovation reporting frameworks with the practicalities of increasing reporting burdens on people in the field and recognising the limitations of the data that can be captured.

CSQ50. Do you agree with our proposals for electricity distribution companies prior to the commencement of RIIO-ED2?

We agree that the appropriate mechanisms should be in place for electricity distribution companies to continue to participate in collaborative projects where the benefits, particularly for whole system solutions, can be developed and funded across gas and electricity consumers. This should be tempered by a clear understanding of where the benefits will be realised, and an appropriate cost allocation to gas or power customers.

Competition

Response to consultation questions:

CSQ51. Have we set out an appropriate set of models for both late and early competition to explore further?

As stated within our response to the Framework Consultation we are in favour of competition, where it can clearly be shown to be in interests of both present and future consumers' through rigorous Impact Assessment (IA) and does not lead to the fragmentation of the industry.

We welcome Ofgem's proposal that the new, separable and high value criteria developed for Electricity Transmission are to be used to determine suitable projects for late competition across all network sectors.

We are concerned, however, with the three 'late competition' models currently under development for Electricity Transmission and discussed in Appendix 2 to the consultation. Our concerns are:

- The Competitively Appointed Transmission Operator (CATO) model requires primary legislation to enact, with no timescale for when that will be brought forward;
- The Special Purpose Vehicle (SPV) requires a clear accountability of the risk. Normally under an SPV the project financiers in the event of a default, understanding how this would operate and where the risk resides will be very important; and,
- With regard to the Competition Proxy Model (CPM) we remain concerned about comparability with the CPM. As we have seen from comparisons with the Cost of Equity and the OFTO model and Thames Tideway it is very easy to assume that a return level is equivalent when they have a very different risk profile.

Furthermore, the development of an 'early competition' model is at an early stage; whilst Ofgem cite examples of early competition in other sectors and other countries, it is not immediately clear that they are transferable to the energy sector. Our current view is that early competition models will also require primary legislation to enact.

Given the above, we would expect significant industry involvement in the development of both late and early competition models as and when the UK government clarifies its timetable for the requisite primary legislation.

CSQ52. Do you agree with the proposed criteria we have set out for assessing the suitability of late competition models? Would you suggest any other criteria, and if so, why?

Whilst we are generally comfortable with the proposed criteria for assessing late competition models, we do have some concerns about the direct read across of the 'separable' criteria to gas distribution. Table 13, of Annex 2 notes the separable criteria may need to '... seek an appropriate third party', with no explanation of what this means? In our view we should seek to identify suitable separability requirements for gas distribution, taking into account the need to maintain a safe network at all times. We would welcome further discussion within the sector over what constitutes 'separable' for gas distribution.

CSQ53. Do you have any views on the costs and benefits we have used for our draft impact assessment on late competition? And CSQ54. Are there any considerations for a specific sector we should include in our IA?

We note that the IA is at draft stage; and that Ofgem has identified, as a key consideration, the need to further develop the competition models to optimise them for the relevant network sector. As such, we would expect to see full regulatory IAs carried out for each sector.

Furthermore, once the late competition models have been fully developed (and the requisite primary legislation enacted where appropriate), we would expect IAs to be carried out for each individual project as proposed by the House of Commons Energy and Climate Change Committee¹⁷.

CSQ55. What are your views on the potential issues we have raised in relation to early competition? How would you propose mitigating any issues and why? Are there additional issues you would raise? And CSQ56. Are there other potential drawbacks of early competition?

We note that the development and implementation of early competition is new to the energy sector in GB. Whilst non-network solutions are being developed by some networks, we would not describe this as ‘early competition’, rather it is innovative thinking around cost efficiency and whole system solutions.

We have reservations about the introduction of early competition models in the GB energy sector. The potential drawbacks identified by Ofgem for early competition models are significant, in particular any changes in need or circumstances. It will be essential to design appropriate regulatory and commercial arrangements to ensure that relevant parties are held accountable and costs are recovered by those impacted.

In addition, Ofgem has noted that that early competition could have higher tender costs, but potentially greater benefits. It will be essential to ensure that the ‘high level’ threshold for early competition is tested for individual projects, not simply used as a broad benchmark for all projects.

CSQ57. Do you consider that there are any existing examples of early competition (including international examples or examples from other sectors) which demonstrate models of early competition that could generate consumer benefit in the GB context?

We would caution against citing examples of early competition in different countries and sectors, where the regulatory and legal frameworks can be vastly different. One example that we would draw Ofgem’s attention to is the experience of the Northern Ireland Regulator, who engaged in an early stage competition to extend the gas network out to the west of the country. This project is drawing to a close and valuable lessons can be learnt from this within a similar regulatory and legal landscape.

CSQ58. What are your views on the advantages and disadvantages of the high-level approaches to early competition outlined? How would you recommend mitigating any disadvantages?

With regard to the two high-level approaches, we would make the following observations:

- Two stage process. We do not believe that this will result in reduced complexity. Splitting the competition will bring additional bureaucracy and cost, will little additional benefit; and it is not clear that ideas could be used elsewhere on the system – intellectual property rights are likely to preclude this.
- One stage process. In our view this approach is more likely to provide the optimal solution. If the winning bidder is not proposing the best idea and the most cost-effective delivery, then a partnership could be developed to take these forward together.

¹⁷ Pre-legislative scrutiny of the Government’s draft legislation on energy Sixth Report of Session 2015-2016, published 4 May 2016

Notwithstanding the discussion above, early competition will be complex and the development of a working model will require the input of the whole of industry. What works for one sector may not work for another, but it will be essential to agree a general framework across the industry that can then be adapted for each sector.

CSQ59. Do you have any views on the potential criteria for identifying projects for early competition discussed above? Would you suggest any other criteria, and if so, why?

We welcome sight of Ofgem's early thinking on the criteria for early competition. Considering the potential appropriateness of the criteria for late competition being applied to early competition, we believe that all three continue to be appropriate. Our views are as follows:

- **New.** We believe that this criterion is as valid for early as it is for late competition. Whilst the potential solution may not be known under early competition, the need is e.g. new connection; new capacity etc.
- **Separable.** We note Ofgem's concern about rendering potential solutions ineligible. However, the reasons for separability do not change because of when competition is carried out. As noted in response to CSQ52, we would welcome further discussion within the sector over what constitutes 'separable' for gas distribution (for both early and late competition models).
- **High value.** In our view, the high value criteria should remain at £100 million. Each individual competition, early or late will need an impact assessment carried out to ascertain that there are tangible benefits to the consumer. We accept that the eventual solution will not be known at the time of identifying the system need, but an impact assessment will be required before a, to be agreed, threshold of expenditure is committed.

Considering the additional criteria identified by Ofgem:

- **Time criticality.** We believe that it will be essential that there is sufficient time to undertake an early competition before a system need becomes critical.
- **Certainty.** Both certainty of need and certainty of specification are two characteristics of a system need which must be considered when assessing a projects suitability for competition. Where the need or change in specification occur after the competition has been started, impacted parties must be able to recover any costs expended to that time.
- **Range of technical solutions available.** It is not clear to us why a narrow range of solutions should preclude early competition. If all other criteria are met, then the solution identified should be the optimal and competition should go ahead at that stage.

CSQ60. Do you agree with the criteria we have set out for assessing who should run competitions? Based on these criteria, which institution do you consider is best placed to run early and late competitions?

We need to be very careful about roles, responsibilities and legal liabilities when considering the institution that is best able to run competitions. The tendering party needs to have sufficient technical and engineering knowledge to be able to differentiate between tenderers on the basis of the quality of their bid, and there needs to be a clear allocation of legal roles and responsibilities for when things go wrong and also a clear mechanism through which any financial liabilities are closed out. Furthermore the tendering organisation needs to have the authority to take decisions in the consumers best interest which may have bill implications if costs are not as they were originally anticipated.

As such we think that the only organisation that can carry out this role is therefore Ofgem and that Ofgem will need to build the technical capability to evaluate between tenders based on their quality. The reason why this needs to be Ofgem is that ultimately any disagreement is likely to be a financial consideration that will impact customer bills and therefore Ofgem is the appropriate arbitrator.

We do not think that an electricity SO could carry on this role for gas, it has no technical expertise in this area, nor is it fully independent; and there is currently no independent Gas SO, and we don't think one is necessary.

CSQ61. Do you agree with how we have described native competition? Do you agree we should explore the proposals described above to enhance the use of native competition? Are there any other aspects we should consider?

We are unclear and request much greater clarity on Ofgem's interpretation of 'native competition'.

Most native competition is as a result of EU procurement rules. These procurement rules have already identified a monetary threshold above which a competitive process should be undertaken. Competitive processes for procurements and projects below this threshold remains standard practice to demonstrate cost efficiency.

Therefore, as a part of further exploration of the concept of native competition we would suggest an impact assessment should be carried out to identify the tipping point where benefits outweigh the costs. We do not believe that adding a margin to a process that we currently carry out would be in the customers interests.

Secondly, we need to have clarity on our understanding of "utilisation or competitive processes for all procurements and projects" in para 8.89. There are a number of projects (particularly in more remote regions) where we may not have sufficient interest to run an effective competition, despite canvassing for greater participation. Similarly, there are some projects that we choose to carry out with internal resources as it is more efficient in the broader context of the operating business, something that should not be discouraged or discriminated against.

We agree that the complexity of the competitive process used should be proportionate to the value and time-sensitivity of the project or system in question. We believe this is exactly what the EU procurement rules are designed to do.

In summary, it is our view that native competition is already in place. It is our view that the EU procurement rules are in line with principles of best practice – they have already identified the threshold for utilisation of competitive processes for all procurements and most companies operate to a higher standard. We are keen to understand more about Ofgem's thinking on this topic and keen to ensure that it only adds additional reporting standards if there is clearly seen to be a consumer interest.

CSQ62. How do you think competition undertaken by network companies should be incentivised? Is the use of totex the best approach? Will this ensure a level playing field between network and non-network solutions including the deployment of flexibility services?

We believe that the current EU procurement rules and processes, embedded with UK law, provide the appropriate threshold for native competition. We do not believe it is appropriate or cost effective to seek to incentivise network companies via totex (or in any other manner). Incentives to innovate and seek whole system solutions will drive network companies to look at both network and non-network solutions to a need.

CSQ63. What views do you have on an approach where totex allowances would be based on costs revealed through competition, with a margin or fee for the competition-running entity?

Currently costs are mainly set through benchmarking; costs revealed through competition are used when they are available (e.g. via framework contracts, competitive tenders for high value projects etc).

We agree that as [or when] network solutions become more and more contestable, it may become appropriate to set allowances on costs revealed through competition. However, until competition is established for particular network solutions or thresholds of expenditure, then benchmarking will continue to be the primary tool for assessing efficient costs.

CSQ64. Do you think the ESO could have a role to play in facilitating competition in the gas sectors?

As we stated in CSQ60 above, we do not think that this is appropriate.

1.9 Business plan and totex incentives

Observations and overview:

We believe that the proposed approach to establishing a business plan incentive is broadly appropriate. However, careful consideration needs to be given to both the design details and calibration to ensure that it delivers its intended objectives. Specifically, these are;

- **Definition of quality.** Currently quality is very loosely defined and discretionary. There are multiple instances in the Sector Specific Methodology where reference is being made to the quality component which are not included in the business plan guidance. It is important that greater clarity is given and that network companies should be able to self-assess the quality of their plan through an agreed set of assessment criteria;
- **Entities bidding.** It needs to be recognised that there is not a consistent unit that applies equally and fairly to all networks. It would be most appropriate to consider the unit to be the majority shareholding, whereby WWU and NGN will be considered as one entity, SGN Scotland and SGN Southern will be considered as one entity and Cadent will be considered as one entity. If it is based on licences then SGN is at a material disadvantage to the other networks as, assuming Scotland and Southern are produced to the same quality, then our maximum incentive is 1% whilst other networks can secure 2% of totex. The other alternative would be to use either brands whereby SGN would be treated as one entity, or distribution zones, whereby Cadent would be treated as four entities. We believe that both of these are problematic for legal basis (with regards Brands) and the potential distortionary impacts of overhead allocations if distribution zones are used.
- **Risk asymmetry and the competitive rewards.** We disagree with the competitive nature of this reward pot as it disincentivises ambition in the business plan. According to the definition entities bidding we estimate that our incentive could be between 0.13% and 1% compared with a fixed 2% penalty.
- **Low powered incentive.** We agree with Ofgem's objective that the business plan incentive should encourage companies to submit a challenging business plan and to promote cost efficiency. As it stands we do not consider that the business plan incentive is sufficiently high powered to create the desired consequences. At 2% of totex this is the equivalent of 4% on performance vs allowances. We believe that it is customers interests for companies to put forward more aggressive business plans, and to take on risk
- **Efficiency band.** The current band of 4% variance is unrealistically narrow based on past submissions. There is a risk that a narrow band condition everyone into the 'poor' category and drive quality by looking to minimise penalty. In RIIO-GD1 the average efficiency score for the networks assessed was between 6% and 18%. This assessment was based on four Ofgem models, SGN Scotland had a variance in its efficiency of between 1% and 12% according the model that Ofgem deployed. To therefore determine a company is a poor performer when there is such variation in the Ofgem modelling appears to be inappropriate, and much greater clarity is required on how the efficiency metric will be calculate prior to business plan submission. Without this clarification there will be insufficient transparency for companies to have a fair and equitable chance of meeting the success criteria.
- **Reduction in sharing factor.** We do not believe that the reduction in sharing factor is appropriately calibrated. This represents as substantial weakening in the totex incentive that we believe will reduce the incentive for network companies to deliver a more efficient outcome. In the longer term this will be detrimental to customers who will experience lower efficiency gains and higher overall costs.
- **Step Change.** Currently a single step change between no penalty and high penalty is particularly penal given the variances in the benchmarking and calibration models that determine the Ofgem perception of an 'efficient' cost. We are concerned that the evidence does not support what could be a £13m loss for what could be a 0.1% difference in perception of efficiency.
- **Statistical errors.** In RIIO-1 the IQI process recognised that an element of the model's results represents statistical error as opposed to relative efficiency. In RIIO-1 if a network submitted a cost forecast above Ofgem's determination of an 'efficient' cost then the network was asked to close 75% of the difference in recognition that the Ofgem's 'efficient' cost may not be correct. We believe that the same propensity for statistical errors remains in RIIO-2 and that a similar consideration needs to be implemented.

Response to consultation questions:

CSQ65. What are your views on our proposed approach to establishing a business plan incentive?

As we set out above, we do not believe the proposed approach will deliver its objectives as there is too great an emphasis on an asymmetric downside risk. We think that the proposed calibration is insufficiently defined to have confidence in whether it is a deliverable or not. Without sufficient definition then there is a risk that it will not create the desired incentives as the goal and what is required to achieve that goal are not sufficiently established.

We would support early visibility on this to ensure that we can fully embed this into our business plan alongside the broader stakeholder and customer research.

CSQ66. Under the blended sharing factor approach, should the scope of stage 2 evaluation of cost assessment be based on the entire totex or only on cost items that we consider we can baseline with high confidence?

It is not possible to give a full answer to this without greater clarity on the definition of a 'high' and 'low' confidence cost.

Rather than determining on the basis of high or low confidence, we would prefer to see a distinction on the basis of whether Ofgem would like to see ambition or not.

Under the proposed structure if we are ambitious in our plans and that increases the cost, such as by doing more for decarbonisation investment, BAU innovation, cyber security investment or more whole systems investment then this is likely to count against us on the assessment of cost effectiveness. We would consider this to be inappropriate and therefore should be taken into consideration in the assessment, and the business plan data templates should be structured to allow for this.

CSQ67. What should be the method for categorising cost forecast as High, Medium or Low? Are the indicative boundaries of 1.0 (High to Medium) and 1.04 (Medium to Low) appropriate?

We think that this is a very narrow band and likely to have counter-productive impacts. For GDNs in RIIO-GD1 the efficiency band ranged from 6% to 18% as an average across models and the variance between models was as high as 9% for SGN Scotland¹⁸.

Similarly, for slow-track Electricity Networks, once RPEs and Smart meters were taken into account the efficiency scored varied from 4% up to 22%¹⁹. So, under both of these determinations no company would have achieved the average cost efficiency range.

In Appendix 3 Ofgem states that 4% is the set of an inflexion point within the IQI mechanism. However, it is important to recognise that there is a significant difference between an inflexion in the calculation of a sharing factor under a gradual scale that the IQI provided and the risk of an absolute loss of either 1% or 2% of totex.

CSQ68. What should be the range for the business plan reward/penalty? Is the range of $\pm 2\%$ of totex equivalent appropriate for incentivising high quality and ambitious business plan submissions (e.g. Value or Good Value)?

We do not think that the range is appropriate 2% is approximately equivalent to a 0.5% RORE uplift as such we do not think it is sufficient to incentivise a company to go beyond the best expectation of out-turn costs and to take on additional risk of delivering the services at lower cost.

If this is limited to by the design of the competition, then SGN may only be able to secure a maximum of 1% or 0.25% RoRe uplift and this could be as low as 0.13% or 0.03% RORE uplift.

As a comparison in Australia, an equivalent upfront incentive was valued as a return uplift of 1.2% to incentivise companies to take on a higher level of risk in their business plan submission equivalent to nearly 5% as a business plan incentive.

¹⁸ https://www.ofgem.gov.uk/sites/default/files/docs/2012/12/1_riiogd1_fp_overview_dec12.pdf

¹⁹ <https://www.ofgem.gov.uk/ofgem-publications/91565/riio-ed1finaldeterminationexpenditureassessmentpdf>

During RIIO-GD1 it was set out that well-performing company can earn post-tax real double digit returns, of which a substantial component was made up totex Incentive Mechanism²⁰ which attributed to a 2% up/downside in RORE. Whilst expectations for RIIO-GD2 may be changed, the expectation is that there is a up/downside potential in the business plan submission, if companies are going to be taking on more risk and increase their downside potential then the incentive structure to support this needs to be stronger.

CSQ69. Do you agree with our assessment of the IQI? (if not please provide your reasons). Do you agree with our proposal to remove the IQI?

Whilst we may share some of the concerns that you have identified with IQI, we are not currently convinced that the proposed alternative will provide a more effective mechanism. It is important to note that the one of the reasons we think that the IQI mechanism may not have achieved the desired results was that it was introduced to late in the process. We think that there is a strong case for providing early clarity over the creation of a new process.

CSQ70. Do you have views on the effectiveness of the blended sharing factors approach and in particular the incentive it provides on companies to submit more rigorous totex submissions?

Whilst there is an initial logic to having a blended sharing factor, its practical application is limited. The lower sharing factor is based upon a premise that a cost which has greater uncertainty is likely to be more likely to come out at a lower cost as result of this uncertainty and therefore companies should share a more of these costs with consumers. We do not accept this premise. Furthermore, and as we set out in response to CSQ75 this could have unintended consequences on the submission of the actual business plan

We accept that it should be in a company's interest to support their business plan with high quality evidence to support their cost estimates and that it is appropriate for network companies with a higher quality evidence in terms of the costs that should be rewarded for that higher quality submission compared to a company with lower quality evidence. However, we would have anticipated a difference between the low and high confidence costs of nearer to 5% would be more appropriate rather than 35%.

CSQ71. Do you agree with our assessment of the blended sharing factor in comparison to the Ofwat cost sharing mechanism? If not, please provide your reasons.

We broadly agree with the assessment in principle, however the analysis is notable in its exceptions.

Firstly, it is notable that in the in the assessment of ambition, this is related only to costs. It is disappointing that ambition does not refer to ambition in the broader context of decarbonisation, whole systems or innovation, which we think could be disincentivised through this mechanism.

Secondly, it is notable in that it omits an assessment of the relative impacts of the sharing factor. Our understanding is that the Ofwat methodology generates significantly higher sharing factors (with a range of 40-60%²¹) compared to the Ofgem range of 15-50%.

CSQ72. Considering the blended sharing factor, what are your views on the factors (e.g.predictability, ability to effectively deal with uncertainty) or evidence that could be used to distinguish between costs that can be baselined with high confidence and other costs?

We can understand the rationale for distinguishing between costs on this basis, however this approach appears to present a bias in favour of business plans with a high proportion of highly repeatable projects, compared with business plans looking to demonstrate ambition. Our concern is that this is not so applicable to labour and service-based activities, which could default into the 'low confidence' box.

²⁰ https://www.ofgem.gov.uk/sites/default/files/docs/2012/12/1_riiogd1_fp_overview_dec12.pdf

²¹ <https://www.ey.com/uk/en/industries/power---utilities/ey-pipes-and-wires-september-2017-csi-ofwat>

There are some observations where we would like further clarification:

- **Predictability.** Historical expenditure is an important point of assessment and may be the only manner in which to assess operational costs or labour-based activities. It is important to understand whether for a trend based on historical evidence that costs within that trend line will be considered high confidence and that a deviation from that trend (i.e. wage cost pressures) will be considered low confidence, or will the whole cost be considered high confidence as we have a historical understanding of how many people are required to do a job and the wage is likely to indexed separately?
- **Ability to deal with uncertainty.** We think that this is an important consideration particularly for looking at ambitious projects which may be subject to a policy or technical risk in their delivery. We would not expect network companies that put forward appropriate and justified uncertainty mechanism to be penalised with a lower sharing factor if those uncertainty mechanisms are subsequently not accepted by Ofgem.; and
- **Quality of evidence.** This is likely to be a contentious area and we encourage Ofgem to establish at an early stage what high quality evidence looks like. International comparisons, for example, may often be several years old by the time the data is collated. In addition, we think that it is important that actual procurement evidence should be submissible to demonstrate high confidence.

CSQ73. Do you have any views on the level of cost disaggregation we should apply to calculate the blended sharing factors approach on (regulatory reporting pack level or another level)?

We think that the categories of the RRP are not sufficiently disaggregated particularly for the operational costs. Keeping then at this level risks a large proportion of costs being considered 'low confidence', which will severely curtail the maximum sharing factor that can be achieved by a company.

We think that it is important to be able to separate out costs into those components with high-confidence and those where we have low-confidence within the business plan submission, alongside any justifications that we may like to put forward to support that assertion.

CSQ74. Do you have any views on whether the proposed business plan incentive coupled with the blended sharing factor will drive the right behaviours?

We do not think that it is currently calibrated correctly to drive the right behaviours. We think that it will dis-incentivise ambition, innovation and will limit efficiency gains that are delivered. This is discussed in more detail in our statement at the start of this section and our responses to questions CSQ66 CSQ67 and CSQ75 below

CSQ75. What views do you have on our assessment of the sharing factor ranges?

There are two components to this, the range between the high and low confidence costs and the overall reduction in the sharing factor compared to RIIO-GD1.

We do not support the overall reduction in sharing factors compared to RIIO-GD1 due to;

- **Discouraging investment.** A lower sharing factor discourages investment in efficiency and innovation and leads to a worse consumer outcome. Under RIIO-GD1 an efficiency saving generated in the first year of RIIO-GD1 would be shared through-out RIIO-GD1 and then fully absorbed by customers. By the end of the RIIO-GD2 the customer's NPV is approximately 20% higher than the NPV to the network company. The higher sharing factor creates the right incentive to invest in project with a greater upside potential.
- **Distortionary impacts around price control stages.** There is a significant disincentive to invest close to the end of the price control with higher sharing factor as it moves towards a price control at a lower sharing factor. This is because any capital expenditure will be shared at the higher rate, whilst any savings will be shared at the lower rate.
- **Pass through equivalence.** As the sharing factor reduces the allowances become closer to a pass-through equivalence. This reduces the incentive to try new structures, processes and innovation, rather the focus becomes one on process implementation rather than positive experimentation.

Similarly, we do not support such a large disparity between the sharing factors for low and high confidence costs.

- **Low Confidence Cost Uncertainty.** We do not accept the premise that a low confidence cost is more likely to have a cost over-estimate. Rather we would assert that a cost with lower cost confidence has a broader distribution of potential out turn costs, whilst high cost confidence items have a narrower distribution of potential out turn costs. By introducing a lower sharing factor at 15% for lower cost confidence items then you are likely to dis-incentivise companies from taking on these projects as they will be penalising their own performance.
- **Distorting Cost submission.** Based on our analysis the implication for of being categorised as either high or low confidence start to vary markedly according to the scenario of whether the over/under cost recovery is realised on the high or the low confidence cost component. This is then magnified where the sharing factor starts to impact re-opener thresholds.

CSQ76. Are there any other factors that you think we should take into account in the design of sharing factors?

Apart from the interactions mentioned above, an additional interaction that needs to be considered is that between any proposed adjustment between allowed vs expected returns and the sharing factors that will determine those returns. It appears that there is significant double counting of lowering the sharing factor for low-confidence costs and reducing rates of return on the basis of asymmetry of information for those same costs.

CSQ77. Do you have any evidence on the scope for productivity improvements in the different sectors?

Due to the scope and complexity of this consultation and the short time period that we have been provided to submit it in we are not able to provide further evidence in this time, we are conducting research and will look to submit that too you.

CSQ78. Do you have views on whether adjustments to sharing factor levels after the price control is set are desirable or necessary?

We are surprised that such adjustments are considered either desirable or necessary and would request a more complete explanation as to the scenarios where Ofgem would consider them likely to be required.

CSQ79. Under which circumstance do you consider such adjustments should take place?

Please see our response to CSQ78 above.

CSQ80. When do you consider an adjusted sharing factor should be calculated?

Please see our response to CSQ78 above.

1.10 Ensuring fair returns

Observations and overview:

We recognise the importance that network company returns should be seen to be legitimate and justified, that to achieve this it is important that relevant market information is taken into account. However, it is important in this context to balance the needs of the current consumers and the needs of future consumers, the balance between lower bills today and a longer-term investment proposition that is able to secure low cost debt and long term capital required to transition the energy sector on its pathway to decarbonisation.

There is a risk that by setting the cost of equity too low and allowing the sector and allowing credit quality to deteriorate that the costs to the future consumer will be substantially higher than they need to be due to the higher associated finance costs and the challenge of attracting sufficient investment.

Cost of Debt

In our response to the questions on the cost of debt, section 3.2, we set out that we consider that the conceptually correct treatment for the cost of debt is that the debt allowance should be recalibrated to allow for a 15year allowance with a trombone to 20 years to ensure that bonds that have been issued by networks since the time of their sales receive an appropriate allowance and that covers the efficiently incurred cost of debt.

We recognise that with Cadent's recent refinancing at historically low rates, this could inappropriately reduce the Sector average cost of debt if appropriate consideration isn't made to consider the costs that were incurred to secure this debt.

It is important to note that this analysis is based on the expectation that credit ratings are sustained, if there is an overall reduction in the credit quality of the price control and credit ratings for the sector are allowed to deteriorate then it is important that the cost of debt index should be recalibrated to take account of this.

Finally, in section 3.2 we also present evidence that demonstrates the absence of a halo effect, and therefore that in RIIO-2 the full allowance should be made for transaction costs, liquidity costs and the cost of carry.

Cost of Equity

In our response to the Framework Consultation Response the ENA submitted a report by Oxera that set out a proposed cost of between 5.5% and 6.3% on a real post tax RPI deflated basis and we still consider this to be an appropriate range.

With equity indexation we recognise Ofgem's minded to position to index the cost of equity and agree that the best approach is to index the risk free rate only on the basis it makes full allowance for the long term stable TMR and not be unduly distorted by current market conditions.

Our major concerns with Ofgem's methodology include;

- Adjustment for allowed vs expected returns. We believe that this an unjustified subjective adjustment that is applied to a CAPM model which already has a degree of subjectivity
- Long Term Historical TMR. We believe that the historical data that supports this figure has been incorrectly deflated and averaged. This artificially depresses the TMR.
- Equity Betas. We have significant concerns with several parameters. These include the methodology for leveraging the asset beta, the frequency of sample data, and the lack of international comparators.
- Risk Free Rate. Inconsistent application of deflation to the versus cost of debt

Financeability

In section 3.4, we highlight that we need to ensure that overall RIIO-2 is financeable and welcome the continuation of the link of financeability with the fact that an investment grade credit rating indicates that a company should be able to meet its obligations and liabilities. This is very important as it supports efficient debt issuance helping to keep the cost for both current and future customers down.

In demonstrating that the RIIO-2 package is financeable it is important that appropriate down-side scenarios and stress tests are implemented to ensure that there is sufficient financial headroom between the credit metrics of an efficient notional company and the investment grade rating boundary. We consider it very important that this should be completed in the absence of the cashflow floor.

Regarding the cashflow floor, we have significant concerns about why such a mechanism should be required. We do not think that liquidity and creditworthiness should be considered as substitutes for each other, and this, together with a move to CPIH, risks masking a more structural issue in the price control package. We have further concern regarding the impact of the cashflow floor on debt and equity control rights and the respective allocation of risk between them.

Indexation of the RAV

In section 3.6 we set out that we believe that it is important to have a transition to CPI(h) indexation. We consider this is important to mitigate some of the consumer bill impacts of an immediate switch from RPI to CPI(h), and to offset some of the costs of associated with market illiquidity whilst the CPI based market develops. Transition would also maintain the trust and confidence of investors and recognise the historical investments which constitute the majority of the RAV that would have been financed or invested in on this basis supported by previous regulatory guidance.

It is also important that a full impact assessment is carried out to demonstrate the move to CPIH is value neutral.

Revenue adjustment mechanisms

Whilst we acknowledge Ofgem's concerns that returns in RIIO-1 have been higher than anticipated, we consider the solution is the appropriate calibration of the price control through a transparent and predictable ex-ante based regulatory structures rather than the introducing new structures that introduce interdependencies between companies and ex-post adjustments.

In the lead into establishing the RIIO principles Ofgem undertook an indepth review of how energy markets should be regulated, the RIP-X@20 review. The promotion of cost efficiency and need to avoid ex-post adjustments were key themes of this review. We consider the introduction of RAMs which involve an ex-post adjustment to be a clear departure from these principles and that they risk constraining the promotion of cost efficiency.

As we set out in our response to the Framework Consultation, we consider there to be sufficient and appropriate tools within the existing RIIO toolkit to address Ofgem's concerns without the need to introduce new structures. These tools include the shortening of the price control period to 5 years, the indexation of costs, stronger links to delivery, greater use of uncertainty mechanisms and volume drivers, reopeners, tougher targets and allowances.

In the Framework consultation response we recognised Ofgem's concerns and proposed that this could be resolved through a company specific sculpted sharing factor. We still think that this is the most appropriate mechanism and are not aware of any substantive assessment to indicate why Ofgem's preferred approach of anchoring has been selected, or the impact of ex-post adjustments on investor confidence.

Looking at the three mechanisms we disagree with the proposed application of anchoring to GDNs we think that all three risks company blunting the incentive for continuous improvement and the sharing of best practice through collaboration. We believe that individual sculpted sharing rates preserve incentives and enable predictability, whilst meeting Ofgem's policy aim of restricting the likelihood of extreme outcomes.

Finally, we would note that the reasoning for keeping ET with class 1 approach – sculpted sharing – also applies to the gas distribution network sector with Cadent having approximately a half of the GDN RAV, and the remaining half is split between SGN and the CKI Group (WWU and NGN).

Revenue adjustment mechanisms interactions

We are not clear on the rationale about why debt out/under performance should be considered in the revenue adjustment mechanism as being appropriate to be shared, whilst in the questions on the cost of debt mechanism (FQ 02) there appears to be a minded to position that shared debt out / under performance should not be shared. We believe that at the moment and without further clarity on the structure of the debt benchmarking then it is too early to clarify which is the correct approach.

A second important interaction is with the proposal for an expected return adjustment to be factored into the setting of the cost of equity. Without prejudicing the points that we have made on the expected return adjustment, there appears to be a risk that if the revenue adjustment level is exceeded in RIIO-2 then the consumer receives a higher share of returns. When the returns are then considered for setting an expected return adjustment wedge in RIIO-3 then the same adjustment will materialise as a higher adjustment and lower cost of equity. As such the network company risks being penalised twice.

Return adjustment mechanism levels

Given the benefits of ante incentivisation in terms of encouraging companies to strive and improve efficiency and service for current and future generations, we believe a threshold of up to 500 bps is a more appropriate RAM threshold. In our

response we have demonstrated that this range is consistent with the water sector and evidence from the wider UK economy.

Actual vs Notional Gearing

Within the sector specific methodology consultation there is an apparent move towards the use of actual gearing for assessing ROREs and company reporting. We are specifically concerned, that this is not a move that can be considered in isolation, rather it is a complex area that can have potential unintended consequences for multiple parties, it is very important therefore that this should be considered in the round, and a full consultation and impact assessment should be undertaken.

In principle we do not believe that actual gearing is an appropriate measure for measuring performance, as we consider it important that shareholders are able to define a structure that is appropriate for their perception of risk. Unless it is taken to an extreme, we do not believe there to be a consumer consequence of differing capital structures. The use of notional capital structures as a principle for regulatory assessment and the reluctance of Ofgem to be entering into the corporate structures pre-dates RIIO-1 and is a principle that we think should be retained.

The use of notional capital structures enables direct comparability between network companies in a transparent and consistent manner. By moving to an actual structure basis, we remove that direct comparability as we introduce the shareholders risk preferences. By reporting on and basing revenue adjustment mechanism on actual company structures Ofgem starts determining company capital structures, an extension that we disagree with.

We acknowledge that there are boundaries on the corporate discretion in this instance, and that there are extremities where it may be harmful to consumer outcomes. We are not aware of such an instance in the energy networks and if there was such a concern then we would encourage Ofgem to consider applying ranges in which corporate structures can vary rather than Ofgem promoting what it considers an optimal structure.

Response to consultation questions:

CSQ81. Do you agree with our comparative assessment of RAMs set out in Appendix 4?

Firstly, we do not feel there has been an adequate assessment of why RAMs need to be introduced in the first place. Their implementation will reduce incentives to drive efficiencies and service which benefit customers in future price controls, via the rebasing of allowances and output targets. It will also signal to investors a clear step from ex ante regulation towards ex post rate of return regulation. There was an in-depth review into how the energy markets should be regulated (the RPI-X@20 review) before the establishment of the RIIO principles.

The promotion of cost efficiency and need to avoid ex post adjustments are mentioned throughout the RIIO Handbook. For example, Chapter 10 is dedicated to “cost incentives”. A core element of this is to set an ex-ante efficiency incentive, and avoid ex-post true-ups, e.g.:

‘...we will seek to avoid any retrospective/ex post adjustments to the package agreed in final proposals and licence modifications as this could undermine regulatory commitment.’ Ofgem (2010) RIIO Handbook, p. 29) “

‘...we will commit to not making retrospective adjustments to revenue in the event that costs turn out to be different to what was assumed in the price control itself, save through the application of the efficiency incentive rate. We will only consider using such ‘ex post adjustments’ if outputs are not delivered or if we have a concern that a company has manifestly wasted money.’ Ofgem (2010) RIIO Handbook, p. 83, para 10.3.

Academic studies have compared ex-ante and ex-post approaches across a range of regulatory objectives such as protection against monopoly power, innovation and efficiency and minimising the regulatory burden. Indeed, price cap regulation was first proposed in the ‘Littlechild report’ (Regulation of BT’s Profitability, 1983) as approaches similar to US-style rate of return regulation scored badly against these criterion.

Beesley and Littlechild (The Regulation of Privatised Monopolies in the United Kingdom, 1989) further examined the UK's experience of regulating privatised monopolies and found that in addition to its superiority in terms of incentives and efficiency, RPI-X provides more flexibility and is more straightforward to implement. Furthermore, Mayer and Vickers (Profit Sharing Regulation – an economic appraisal, 1996) found that the advantages claimed for profit-sharing regulation could be better achieved by modifying existing price cap regulation.

Finally Black, Harman and Moselle (The case for ex post regulation of energy networks, 2009) assessed the application of ex-post and ex-ante regulation to energy networks in Great Britain and found the ex-ante approach most effective at achieving the regulatory objectives in the sector.

Importantly it should be recognised that RIIO-1 was seen as a gold standard approach whose template has been adopted internationally. To then move towards ex post regulation without a detailed review is not good regulatory practice and could undermine this reputation. This reduction in quality will lead to higher costs for all consumers as it becomes more costly to secure attractive financing.

However, to address Ofgem's perceived issues of the high returns earned in RIIO-1 we have previously communicated several mechanisms from the existing RIIO toolkit which would address these concerns, including indexation of costs, stronger links to delivery, greater use of uncertainty mechanisms and volume drivers, reopeners, tougher targets and allowances.

Notwithstanding these points we suggest targeted mechanisms to control under/over performance in different parts of price control package as an alternative to RAMs, offering even further protection from the perceived issues above. Importantly these targeted mechanisms still provide some degree of ex ante incentivisation. Therefore, the investment and risk taken to strive to improve efficiency and service would be rewarded but also simultaneously benchmarked and built upon in future price controls for the benefit of future customers. This seems a far more efficient approach than the blunter instrument of RAMs. And it should be noted that in water outturn RORE ranges have been kept somewhat tighter than in RIIO-1 and Ofwat have not felt it necessary to introduce RAMs in PR19.

We propose that where performance is easiest to measure and there are clear long-term benefits to consumers (for example in the area of cost efficiency), that incentive rates are more open ended. Whereas where outcomes are harder to measure and there is a greater degree of uncertainty, sculpted incentives and even caps and collars should be introduced to protect from unacceptable levels of over/under performance. This may be applicable, for example, in the area of new incentives where its calibration has not been trialled before. This would give the companies the incentive to improve performance in each area of the price control but would provide Ofgem with the ability to control how under/over performance is penalised/rewarded in the context of the certainty of the benefits, and impact of the results, in each area.

Looking at the comparative assessment of RAMs in Appendix 4 of the sector methodology doc we don't believe Ofgem's assessment has taken into account the impact on business/investor risk of the potential for significant RORE adjustments over which SGN has little control, meaning all company stakeholders would struggle to have a meaningful view of company performance.

This disruption would extend beyond business/investor risk to;

- Credit ratings – rating agencies will take a pessimistic view of the potential impact of RAMs on predictability of cashflows, which is unlikely to be zero sum in relation to competitive effects (i.e. rating agencies will take a pessimistic view of likely RAMs and expect all companies to have sufficient headroom to absorb negative RAMs);
- Financing - it may be difficult for companies to raise debt finance or raise financing efficiently given the uncertainty over company performance, which will only be known at the end of the review period, and once Ofgem has reviewed (and adjusted) each individual companies' performance.
- Dividend payments – companies may be unable to make dividend payments until RAMs are known.
- Executive remuneration and retention of other skilled staff – it will be hard to assess performance until the impact of RAMs is known at the end of the price control. This would lead to problems of retaining staff for whom performance related pay is common place across most industries, at a time when significant skills shortages in energy networks are being identified.

Each of these impacts has a potential cost, either through the cost of finance (credit ratings), cost of liquidity, cost of equity (dividend payments) or costs of remuneration. By understating the impact on business risk, Ofgem has incorrectly concluded on the anchoring is its preferred option. Furthermore, we strongly disagree that the impact on collaboration is neutral for average sector sculpting and anchoring. This is because the increased competitive rivalry will exert a disincentive on any collaboration activity which may benefit another network's RoRE performance.

We believe Ofgem's proposed approach to anchoring with proportional adjustments and additional protections is complex and offers little difference to simpler individual sculpted sharing rates. The anchoring approach risks damaging incentives, particularly in the case of high performing companies. It risks company bunching as it blunts the incentive for continuous improvement.

The anchoring approach is also the least predictable in terms of company outcomes – having the most significant potential ex post adjustments which are completely independent to a company's actual performance. The scale of the potential ex post adjustment and the consequent uncertainty for investors and company decision making processes is Ofgem's justification for giving no further consideration to discretionary adjustments. However, the same logic applies as to why anchoring should not be given any further consideration.

Individual sculpted sharing rates preserve incentives and enable predictability, whilst meeting Ofgem's policy aim of restricting the likelihood of extreme outcomes. In a sector with four companies (of which two have a joint ownership structure) it is possible that all four companies perform well and this should not be considered a failure of the regulatory regime. Sector average sculpting is in between individual sculpting and anchoring in terms of predictability and incentivisation.

Finally we are concerned that a review of the need for and impact of the double application of sharing mechanisms has not taken place. As well as proposing potential ex post adjustments to sector returns averaging above and below a Cost of Equity by +/- 3%, or the sculpting of individual returns above or below such a level – Ofgem are also proposing to already share 50-85% of any under/over performance with customers (based on 15-50% sharing factors). To then potentially remove outperformance on top of these mechanisms, or customers fund further underperformance, is a serious signpost to investors of the move towards ex post regulation and a disincentive to drive efficiencies and performance for the benefit of current and future customers. This is even before considering the appropriateness of the Allowed Vs Expected Return adjustment in terms of clawing back any outperformance in future price controls on top of the benchmarking process.

When cumulative incentive rates become very low, there becomes a commercial incentive to defer potential efficiency gains into the next price control where the cumulative incentive rate may be higher. This is clearly not in the interests of consumers. In contrast the regulatory regime should seek to align the interests of consumers and companies/investors. Also when investments/expenditures in potential efficiencies are risky (i.e. uncertain outcomes), then cumulatively low incentives rates reduce the risk threshold for investing making such expenditure. This means that higher risk expenditures will not be incentivised and customers will lose the benefit from more innovative, but risky expenditure.

CSQ82. Do you agree with our proposal not to give further consideration to using discretionary adjustments?

Discretionary adjustments would require Ofgem to define the circumstances under which they would make an adjustment, which adds additional complexity to ensuring fair returns. In addition, if the definition around what could trigger an adjustment and the extent of any adjustments is not clear, then this could contribute to further regulatory uncertainty.

Notwithstanding our concerns on the impact of implementing RAMs and the move towards ex post regulation, as highlighted in the response to CSQ81, in our view discretionary adjustments would be even less desirable.

CSQ83. Do you agree with our proposal to introduce an individual performance-based adjustment approach (Class 1) for the transmission sectors?

We believe this mechanism can equally be applied to the gas distribution sector as it would preserve incentives on GDNs to drive outperformance, and provides some predictability of revenues, whilst meeting Ofgem's policy aim of restricting the likelihood of extreme outcomes. The sculpted sharing factors, and their inflexion points, need to be calibrated and consulted on when the overall RIIO-GD2 package is known.

CSQ84. Do you agree with our proposal to introduce a sector average-based adjustment approach (Class 2) for the GD sector?

As detailed in our response to CSQ81 sector average sculpting and anchoring weaken the incentives to drive performance for the benefit of current and future customers, and have less predictability of revenues, relative to sculpted sharing. Anchoring has a more detrimental impact on the incentives to drive performance and predictability of revenues, than sector average sculpting.

Regardless the sharing factors under sector average sculpting need to be calibrated and consulted on when the overall RIIO-GD2 package is known.

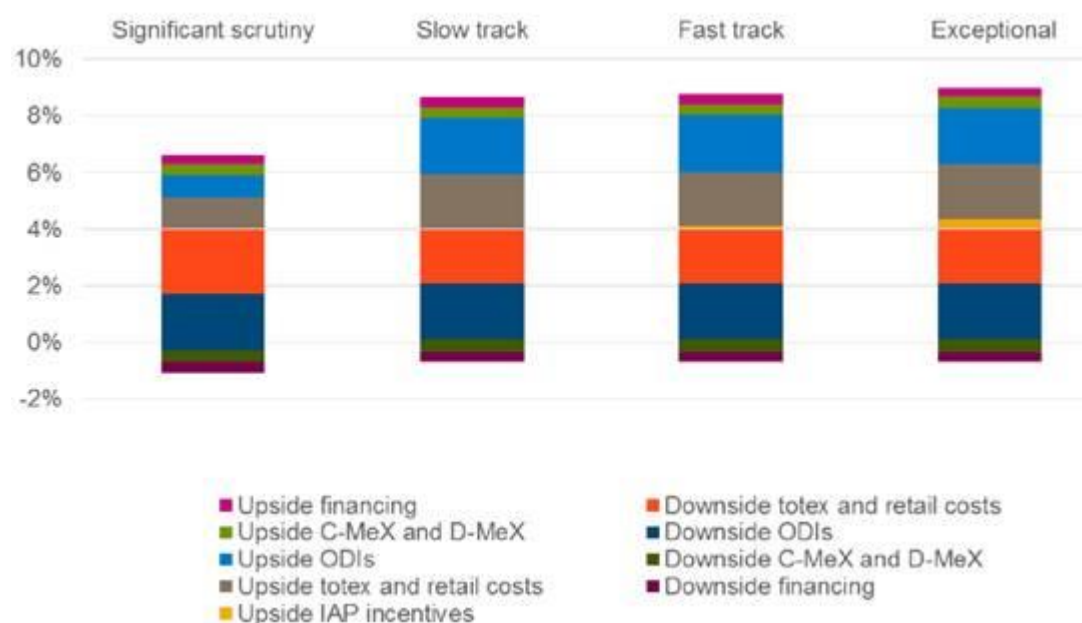
CSQ85. Do you agree with our proposal we should not adjust companies downward if they perform below their base cost of equity or upwards if they perform above their base cost of equity?

Without prejudice to the points we have made in response to CSQ81 questioning why RAMs need to be introduced and alternative mechanisms, we accept the logic of this proposal. We also don't believe a company's returns should be forced below the cost of equity if it is on the cost of equity or above pre-adjustments. The returns for an efficient/outperforming company should not be driven below the cost of equity as this is the benchmark return for an efficient company. On the same logic, the returns for an inefficient company should not be driven above the cost of equity.

CSQ86. Would a return adjustment threshold of ± 300 bps RoRE achieve a good balance between providing scope for companies to outperform and ensuring return levels are fair?

Given the benefits of ex-ante incentivisation in terms of encouraging companies to strive and improve efficiency and service for current and future generations, as highlighted in our response to CSQ91, we believe up to a +500bps threshold is a more appropriate RAM threshold. This range would also mean that equity can and should bear risk down to at least zero RoRE. At this point paying for (efficient) debt service is secure, as well as all other efficient costs.

This threshold is supported by a number of factors. Firstly this is the range reflected in tOfwat's proposed RORE range ('Our Final Methodology for the 2019 Price Review', p167);



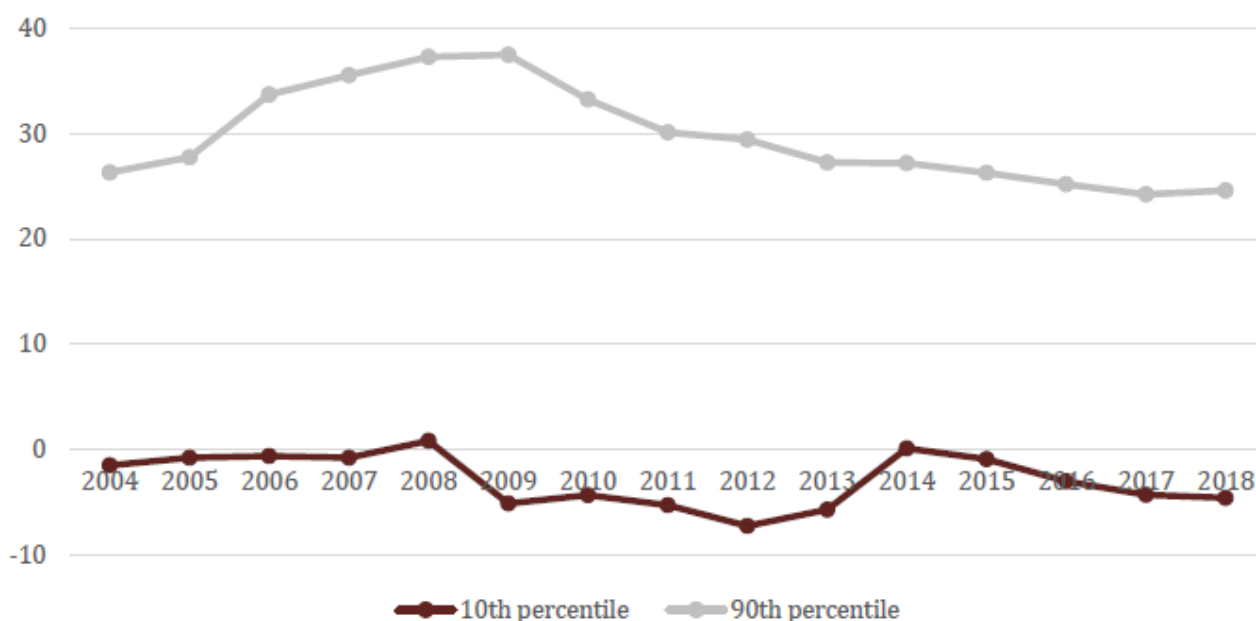
Insofar as return adjustment thresholds should apply to performance outcomes that are reasonably extreme, this evidence suggests that a ± 300 bps threshold is too narrow for the gas distribution sector. A ± 300 bps would arguably undermine the purpose of return adjustments as a failsafe mechanism.

Ofwat have actually suggested that the RORE range could be higher than they represent in their chart above, mainly due to stating a higher ODI range of $\pm 3\%$ in their summary of financial incentives in table 10.1 of the Final Methodology doc (p163). Ofwat expects companies to provide additional protection to customers at the top end of this range – suggesting that the upper and lower limits of their chart are then a good indication of where RAMs could kick in.

Additionally, there is further evidence from the wider UK economy to support the case that a 300 bps threshold may be too narrow. Notwithstanding our fundamental concerns with the calculation and sense check of the cost of equity – as set out in section 3.3 below, Ofgem's proposed 4% cost of equity (real, CPIH) and a ± 300 bps RAMs threshold implies a RORE range of +1% to +7%.

Evidence from the competitive benchmark of the FTSE All-Share index, which is used to derive the long run historical TMR, shows that significantly wider ranges of returns can be earned including -ve returns over sustained periods of time, i.e. a 5 year time period. The chart below shows historical five-year trailing average of return on equity for the current constituents of the FTSE All-Share²², with a 10% probability of occurring on the upside or downside. This means they are not the most extreme outcomes but they are still a plausible outcome. We observe that at the 10th percentile, return on equity is below zero on thirteen out of the fifteen years considered, providing clear evidence that equity invested in competitive benchmarks bears the risk of negative five yearly returns. This, and the range shown, clearly supports a wider RAM threshold than the proposed +/- 300bps – and show our proposal of up to +/- 500 bps RAMs range to be an appropriate one.

Historical five-year trailing average Return on Equity for FTSE All-Share companies excluding investment trusts, financial services firms, and businesses with low levels of equity (%)



Source: Capital IQ, PwC analysis

The competitive benchmarks seems a far more rational approach than putting a collar around the cost of equity based on the average stock market return, as implied by para 10.81 of the Sector Specific Methodology Consultation. There is no rationale given to why the differential between cost of equity and the perceived average stock market return, 'plus a certain margin of error', should be the derivation of the +/-300bps range. This differential is purely due to Ofgem's interpretation of how to establish a TMR in the first place and its difference from the cost of equity due to Ofgem's estimation of the risk free rate and the equity beta and does not appear to be an appropriate basis for a RORE range. Importantly regulatory precedent from PR19, as highlighted above, in addition to previous energy network price controls suggests range of up to +/- 500 bps around the cost of equity is not an unreasonable approach.

Finally, RAMs should not be a substitute for good price control operation and ex ante regulation – the benefits of which are highlighted in our response to CSQ91.

CSQ87. What are your views on the proposed use of RoRE as a return adjustment metric? Would it be suitable for the gas and electricity transmission sectors and the gas distribution sector?

There are various alternative measures to RoRE and we consider Return on RAV to be a more appropriate measure of returns, and more reflective of the overall performance of the company that is more transparent and comprehensible. Return on RAV can be compared directly to the Cost of Capital and thus give a much more balanced view of overall returns for a company – not just the return on equity.

²² This excludes investment trusts and financial services firms because they are subject to different account regulations, as well as companies with relatively low levels of equity because this reduces the denominator in the return on equity equation, which increase the measured returns.

However, before a decision is made on the appropriate measure of returns for RIIO-2, there needs to be a full assessment of the various alternatives including the implications of adopting their use for all stakeholders.

CSQ88. Should we include financial performance within the scope of return adjustments? If not, what is the rationale for excluding financial performance?

Historical debt performance is the most significant driver of any debt performance component of RoRE, due to the significant proportion of debt which is embedded (potentially circa 75% at the start of RIIO-GD2). RORE is meant to measure the value earned within the price control – however in terms of debt performance the actions of previous price controls would have far more impact on debt performance RORE than the current price control. Therefore it should be excluded from the RORE calculation. If it is included the past performance of companies may have significant impact not only on their deemed performance for RIIO-2 but also on the financial performance of other networks, and their incentivisation.

Furthermore, there needs to be strong consideration of how the inclusion of debt performance in the measurement of RoRE for use in RAMs would tie in with the question of whether there should be sharing of debt outperformance (FQ2). The concerns that Ofgem highlights in Sector Specific Methodology consultation (para 2.12) in relation to cost of debt sharing surely apply to whether debt performance should be included in the RAMs.

This is because not only will these considerations impact your own company's level of returns they can also potentially impact other companies through average sculpting or anchoring. Para 2.12 only seems to assess the impact that debt sharing via the RAMs may have on customers, and not the impact it may have on other companies. Again this highlights the need for a full impact assessment of the RAMs and a number of other significant departures from regulatory precedent that are currently proposed.

The Sector Specific Methodology consultation (Para 10.58 & 10.88) explains that the intention of RAMs is to protect consumers against the costs of ex post overall returns from RIIO-2 deviating greatly from ex ante expectations. Therefore whilst there is no specific reference to a fundamental change from using a RORE measure based on notional gearing, to one based on actual gearing, given the analysis in the recent RFPRs we thought it relevant to point out that actual gearing being at a different level to notional gearing does not mean that there are any extra costs to consumers. Indeed when actual gearing is higher than notional the costs to consumers decrease due to the lower tax liabilities with higher leverage – and the ring fencing arrangements securing that networks remain on a stable footing.

Furthermore assessing RORE and WACC at the notional level means that companies are responsible for the financing of their regulated activities and bear the risk of financing costs being more or less than the notional financing cost allowance. Equity holders are the final claimant on a companies' cash-flow, and by increasing the gearing they take on a higher risk exposure and are compensated for this through a higher return. The level of gearing represents a shareholder preference.

Also comparing performance on a notional basis means the RORE comparisons are done on a like for like basis, so that cost efficiency and standard of service can be directly compared and incentivised against the RAM mechanisms, maximising the incentivisation of these elements under the RAMs mechanisms bringing benefits to consumers in both current and future price controls.

When the RoRE is calculated on an actual basis the difference in how firms finance their activities becomes far more important in determining the level of RoRE performance. Firms that are more highly geared can achieve a higher RoRE because their equity base used in the RoRE calculation is lower. Financing impacts therefore become the driver of RoRE performance, swamping other performance effects from totex and other incentives.

Also Finance theory shows that a higher level of gearing increases the share of relatively cheaper debt in the weighted average cost of capital, but this is offset by the increase in cost of equity due to higher equity risk from higher financial leverage. As a result of these two offsetting effects, the overall cost of capital broadly unchanged.

Therefore, as the cost of capital remains broadly constant, there is no benefit in the form of higher returns for companies with actual gearing above notional and indeed no corresponding additional cost to customers, given the cost of capital is assessed on a notional basis. Indeed, there is likely to be a benefit to customers from higher leverage from a lower tax liability and corresponding allowance.

Also the RORE calculation based on actual gearing, as per the recently published 2017/18 Ofgem Annual Reports, does not fully account for the impact of higher leverage on the cost of equity. Higher leverage increases the risk for equity investors and this should be captured in comparison of ex-post RoRE and ex-ante cost of equity. One way to do this is to recalculate the allowed cost of equity, using the higher actual gearing, but this would result in different cost of equity allowances across companies. A better alternative would therefore be to apply a separate capital charge for the incremental cost of higher

equity capital at higher leverage. This adjusted RoRE can then be compared to the original cost of equity allowance, which is the same across all companies.

It needs to be considered what is the motive behind a possible move to measuring actual RORE, given that the emphasis in the financeability test is on a notional company and that is what the price control is calibrated on. It has been suggested that legitimacy issues are driving this consideration due to concerns on the levels of returns on an actual basis, despite the fact that in all sectors actual gearing is below notional (Regulatory Financial Performance Annex to RIIO-1 Annual Reports – 2017/18, p13). Furthermore it's worth noting that this higher return, if a company is outperforming, from actual gearing being higher than notional is due to the greater risk on the equity holder and the customer is actually reimbursed through the tax clawback mechanism as highlighted above.

If the regulator still thinks there is a legitimacy issue then there needs to be consideration of a separate mechanism to consider higher gearing, as is being implemented in the water sector. This would have appropriate headroom above the notional level to allow companies to make efficient choices as to their capital structure.

Based on established regulatory practice, we therefore consider that consideration of performance, and the operation of any "fail safe" mechanisms, e.g. sculpting incentives, must be undertaken on a notional rather than actual financial balance sheet basis. Companies should be able to choose what capital structures to adopt and this should be outside the remits of regulatory reporting. Ofgem has previously stated that they do not consider it to be their role to interfere with corporate structures and we believe that this should be maintained.

CSQ89. Should we implement adjustments through a 'true-up' as part of the annual iteration process or at the end of the price control as part of the close-out process?

Ofgem consider that RAMs should look at returns earned over the five-year control period as a whole, rather than at performance during individual years within the price control period. Notwithstanding our objections outlined above, we agree with the principle that returns should be assessed over a five-year period, as there may be annual variation which smooths out over a five year period.

The drawback of implementing adjustments at the end of the price control is that the adjustment could be sizeable and may have a detrimental impact on the actual financeability of the business (during the subsequent price control).

We therefore consider in principle an annual adjustment based upon expected RoRE five-year performance allows returns to be closely aligned to performance, and reduces the size of potential ex-post adjustments.

1.11 Achieving a reasonable balance in RIIO-2

Observations and overview:

In the opening of this chapter Ofgem make the point that the price control is complex with a large number of moving parts with each one designed to perform in a particular way. We are very concerned that with the introduction of multiple new regulatory structures, that it is very difficult to establish what each of these moving parts will actually deliver in practice, and there is insufficient clarity on the structure of many of them to determine whether or not it will actually deliver what it is intended to deliver.

Coupled with a very compressed delivery timeline with full business plan submissions being bought forwards to July, and a short consultation period given the length of the document, the breadth of the issues covered and the number of questions that have been posed and the lack of an impact assessment we are very concerned that it is not possible at this point in time to determine whether the right balance has been struck or not.

Achieving a reasonable balance between accuracy and simplicity

To be clear we do not think that this price control has achieved any level of simplification, rather the complexity of the submission and the data templates to be completed that are directly arising from the proposed changes in the regulatory structure are substantially greater than anything that has proceeded it.

We ask that this is recognised, and we fully acknowledge that it may be important for consumer confidence that Ofgem has greater visibility on each aspect of the company's business. However, we need to be clear that the current price control

structure does not look on course to achieve its objective of ‘simplifying the price control by focusing on items of the greatest value to the consumers’. Rather the price control structure appears to be focusing on all possible items out of concern that one could give rise to value for the network company.

Risk vs Return

We do not consider that the Sector Specific Methodology consultation provides an appropriate balance of risk and return. We consider the package to be very low powered, to have low returns and to have relatively high risk for those returns. This is due to the introduction of new operating risks and new regulatory risks, and the continued existence of macro-economic risks which we do not believe have been taken into account. The new operating risks include the introduction of relative and dynamic targets, cashflow floors and the level of penalties, and the tightening of licence obligations. These create less predictable and transparent cashflow forecasts. The new regulatory risks are directly related to the new and untested regulatory structures and methodologies such as some of the lowest sharing factors seen in price controls, the revenue adjustment mechanism, the business plan incentive and its asymmetric risk profile, and unprecedented low returns.

Response to consultation questions:

Balance between accuracy and simplicity

CSQ90. Do you agree with our assessment of the measures we have identified to make the price control more accurate?

We do not think that there is sufficient clarity in the approach to identify whether or not the price control will be more accurate or not. Each of the measures identified by Ofgem in its assessment of achieving a reasonable balance should have a detailed and thorough impact assessment associated with it so that an actual review of the component parts can be evaluated both in isolation and in interactions with other measures.

Without this, it is not clear that an appropriate assessment has been undertaken of the measures Ofgem has identified to make the price control more accurate. We remain concerned that there are multiple layers of control that are being placed on companies, that these layers of control introduce asymmetry of risks and could give rise to unanticipated outcomes

WE have provided initial observations on each of the mechanisms identified by Ofgem below;

- **Uncertainty mechanisms and indexation.** We do not advocate reducing the uncertainty mechanism or moving away from indexation. However, we need to recognise that there is currently insufficient detail surrounding the proposals to determine whether or not it will improve accuracy. A poorly defined index can be as inaccurate and potentially more damaging as an ex-ante forecast.
- **Cashflow Floor.** We don’t think that it is correct to characterise the cashflow floor as a simplification, and we do not think that it is correct to say that the alternative is to put the onus on companies to address any financeability concerns (para 11.11). Ofgem have a duty to ensure that the price structure supports the long-term interests of all customers and a part of this is ensure that companies are able to support themselves financially. The cashflow floor adds significant complexity into this process, by masking whether the underlying package is financeable or not.
- **Price control deliverables.** We accept that the role of price control deliverables however we also have to recognise that that by tightly defining the output rather than the outcome, then there is substantially less opportunity for innovation and that this will be detrimental to consumers as well as network companies.
- **Dynamic targets.** We do not accept that it is correct to characterise dynamic targets as a trade-off between accuracy and simplification. In order to achieve accuracy, they require an accurately calibrated baseline and targets. They operate against consumer interest by deterring collaboration and only promoting marginal changes in behaviour and as such the consumer achieves a worse overall outcome. As well as delivering a worse consumer outcome they also significantly increase the complexity of the price control.
- **Network Resilience Measures.** We fully accept that network resilience measures are appropriate for network companies to deliver. It is however important to have an appropriate balance of risk in the manner in which a network resilience measure is calibrated and that the consumer benefit achieved by delivering a higher level of output should be recognised.

- **Innovation Stimulus.** We fully accept the recognition that without an innovation stimulus then companies may reduce their investment in innovation, particularly in a shorter-term price control, and the consumer may not secure the appropriate benefit from these measures. As such we continue to recommend that the sector specific methodology should introduce an effective innovation stimulus that targets these aspects of innovation.
- **Return Adjustment Mechanisms.** We do not accept that the RAMs are a necessary additional layer of complexity within the price control and they clearly undermine both the simplicity and the transparency of the of end outcome. We think that there are sufficient layers of control across the proposed price control structure that the RAMs adds a further level of complexity that will discourage investment in the sector and as a result be detrimental to consumer outcomes.
- **Competition.** As with dynamic targets do not accept the characterisation of competition between network companies though incentives as a trade-off between accuracy and simplification. We believe competition in incentive structures operate against consumer interest by deterring collaboration and as such the consumer achieves a worse overall outcome.
- **Business plan and sharing factor.** We agree that these can work if they are appropriately calibrated and actually incentivise the submission of good business plan. As they stand they probably add significant complexity without providing a strong incentive and as such we think they probably increase in complexity unnecessarily.

CSQ91. Are there other measures we should take to improve the accuracy of the price control?

Rather than additional measures we are concerned with the cost to the consumer of implementing the current proposed measures. Without an impact assessment it is not possible to ascertain the costs and/or benefits to the consumer.

CSQ92. Are there other steps we could take to simplify the price controls, without significantly affecting the accuracy of the control?

We disagree that the price control has been simplified. There are significant new and complex properties for RIIO-2 that risk creating a regulatory burden that will adversely impact consumers. As a result, we do think there are significant steps which Ofgem could take to simplify the price control without materially impacting its accuracy.

Risk vs Reward

CSQ93. Do you agree with our consideration of the risks facing these companies? Do you think the measures we are proposing will mitigate these risks? Does the expected level of return indicated by our proposals reflect these risks?

In the Sector Specific Methodology Consultation Ofgem suggest that networks are protected from demand risk. We do not accept that this is the case. There is a correct focus on decarbonising the energy sector which will have material impacts on the level of demand faced by our networks (whether gas or electricity) and the complexity with which we have to manage a changing demand characteristics. We therefore do not accept that this therefore protects against demand risk, rather we have to balance the need to invest with a changing demand landscape.

Secondly Ofgem point to delivery risk associated with over spending allowances or failing to meet service targets, the risks associated with this may increase substantially if the RIIO-2 regulatory structure follows the structure proposed in the sector specific methodology. The introduction of dynamic and competitive incentive structures, asymmetric risks surrounding the deliver of outputs and associated penalties, and the raising of licence obligations all demonstrate a substantial increase in the delivery risk associated with the price control structure.

In addition to demand and delivery risk, it is also important to note that there is a much higher level of regulatory and political risk now associated with this price control. Political risk associated with the proposal of one of the major parties to nationalise the network companies is something that is unique to the sector and not reflected elsewhere in the market.

Regulatory risk is also more extensive at this point in time with new regulatory structures which have not been appropriately defined, an apparent reluctance to define things prior to the final submission and a lack of definition around key structures such as the business plan incentive. This lack of clarity and transparency significantly increases the regulatory risk associated with the price control period

There is currently insufficient detail to consider the full extent of these risk and how they interact. Our initial assessment is that there has been a significant shift of risk to network operators/owners through the increased use of asymmetrical risk allocation models and dis-incentive based incentive regimes.

We also consider the cashflow floor to significantly increase the risk to equity which is currently un-compensated for. We do not accept the notion set out in para 11.26 that investors in the network default or insolvency risk is mitigated by the credit rating requirement in the licences or the introduction of the cashflow floor. It is mitigated by the regulatory structure enabling investors to maintain an appropriate credit rating by providing an appropriate level of return.

CSQ94. Have we achieved a reasonable balance with our proposals in seeking to achieve an accurate price control with return adjustment mechanisms only being used as a failsafe? Should we instead have a simpler price control and put more reliance on return adjustment mechanisms?

The proposed price control structures overlays so many points of control and adjustments that it undermines the transparency of the price control itself. We expressed this concern in our Framework Consultation Response and we do not consider it to have been properly addressed.

CSQ95. Have we achieved a reasonable balance in our proposals in considering return adjustment mechanisms alongside the expected-allowed return wedge? Should we instead only rely on one mechanism? What additional value would this bring?

We are disappointed that this is the only trade-off that Ofgem is asking about when we have identified so many potential trade-offs between different components of the price control. It is impossible to answer the questions that is being asked with-out more information about what the impact of moving to one mechanism would be and the justification for why that single mechanism is calibrated correctly.

Efficiency vs Fairness

CSQ96. Have we got the right focus on the areas that are of most value to consumers?

We do not believe the focus is right, our consumers repeatedly tell us that keeping costs down is important, but so is reducing our environmental impact, being socially responsible and doing the right thing for the customer. The Sector Specific Methodology has very little consideration of either of these last two components that are important for our customers.

Secondly, we believe that our consumer value is delivered most effectively through an incentive-based regime. The proposed structure is based on penalties and disincentives we think that this lack of aspiration detracts from what is most valued by customers – a response company that seeks to improve customer service quality and reduce costs and reduce its environmental impact at all times.

CSQ97. Are we proposing a methodology that allows us to achieve a reasonable balance between the interests of different consumer groups, including between the generality of consumer and those groups that are poorly served/most vulnerable? Are we missing any group?

We do not think that the balance between the interest of different interest groups is inappropriate.

CSQ98. Are we proposing a methodology that allows us to achieve a reasonable balance between the interests of existing and future consumers?

We do not think that there is a reasonable balance as the interests of the future consumer are in driving innovation to increase efficiency and to reduce environmental impacts. The current structure places too great a focus on reducing costs today and places a limited focus on continuing to reduce costs through the price control period through applying innovative techniques and process or minimising methane emissions.

1.12 Preliminary impact assessment

High level points / Strategic issues that need to be set out in response:

Each of the measures identified by Ofgem in its assessment of achieving a reasonable balance should have a detailed and thorough impact assessment associated with it so that an actual review of the component parts can be evaluated both in isolation and in interactions with other measures.

Response to consultation questions

CSQ99. What are your views on the approach we are proposing for assessing impact of our RIIO-2 proposals?

We are very disappointed that a more formal impact of these proposals has not been published. Such an impact assessment would have helped all stakeholders understand the proposals with greater clarity in terms of the design, the risks and benefits that Ofgem has taken into account and a preliminary quantification of those risks and benefits.

CSQ100. What are your views on the assumptions we have made in our assessment to date

The assumptions made have not been clearly stated, so we cannot provide a view on them.

CSQ101. What are your views on the uncertainties we have identified for the purpose of this assessment

The uncertainties have not been clearly stated, so we are unable to provide a view on them.

CSQ102. What additional evidence should we consider as part of our ongoing assessment?

In order to answer this question, it would be helpful to have clarity on what evidence has been taken into consideration to-date.

2 GD2 Sector Specific Consultation Questions

2.1 Context

Observations and overview:

We broadly support the observations set out by Ofgem in this section. We would however, like to place a greater focus on the benefits that have been delivered for consumers as a result of the RIIO-GD1 process. Not only have customer services improved dramatically, but network companies have changed culturally and delivered much greater efficiency benefits than anticipated.

Customers have shared these efficiency benefits during RIIO-GD1 and will fully capture the majority of these benefits going forward into RIIO-GD2 and beyond. It is important to recognise that for an efficiency saving delivered at the very outset of RIIO-GD1, the benefit to the consumer²³ will have exceeded the benefit to the network within the RIIO-GD2 period. If the efficiency gain is secured in year 4 of RIIO-GD1 then the benefit to the consumer will have exceeded the benefit to the network company by year 2 of RIIO-GD2. By incentivising network companies to deliver greater efficiency RIIO-GD1 has benefited all stakeholders.

Looking forward to RIIO-GD2 we agree with Ofgem that RIIO-GD2 could see an increased rate of change for gas distribution. We recognise that as networks we have an important role to support change and the rate at which change occurs. To do this it is important to continue investing in innovation, to continue incentivising companies to deliver above and beyond their core business plan and to have appropriate discretionary funding and re-opener mechanisms to enable network companies to respond to change in a positive manner.

As a network we are disappointed by the apparent lack of ambition in both the sector specific methodology and in the gas annex. The focus appears to be placed on penalties rather than incentives and the aspirational objectives set out for RIIO-GD2 by Ofgem do not appear to penetrate deeper than the executive summary.

As a general observation we encourage Ofgem to be as transparent as possible in their expectations for the RIIO-GD2 price control. Network companies want to be ambitious and to deliver the expectations of their stakeholders, to do so we need to have appropriate incentives and to know that the ambition will be rewarded in an appropriate manner. The current proposals indicate that Ofgem are looking to move towards rate-of-return regulation in all but name. As such we ask for much greater transparency regarding Ofgem's objectives so that we can frame our stakeholder engagement within this context.

Finally, we would like to highlight that Ofgem's representation of the gas distribution networks, Figure 2, is not as straight forward as suggested. It is important to recognise that whilst Wales and West Utilities and Northern Gas Networks operate under different brand names since the end of 2012 – just before the start of RIIO-1 - they have a high degree of commonality in their ownership structure²⁴. Whilst during RIIO-GD1 this has been of limited consequence, as competitive structures are considered for RIIO-GD2 it is of direct consequence and we would encourage Ofgem to take appropriate consideration of standard metrics surrounding the competitiveness of markets as recognised by competition authorities and how materiality may differ according to the point of competitive tension.

We look forward to continuing positive engagement through the working groups.

²³ Expressed on an NPV basis at a 6.5% discount rate, social discount rate would give a faster cross-over point.

²⁴ https://www.cki.com.hk/english/PDF_file/news/2012/20121014_1.pdf

2.2 Outputs: Meet the needs of consumers and network users

Observations and overview:

We welcome the additional focus that Ofgem has placed on support for vulnerable customers which is in tune with the ethos of our business. Our people are proud of their commitment to helping customers in vulnerable circumstances. We are very supportive of the drive to ensure that networks innovate in the way that we support vulnerable customers and believe that a flexible vulnerable customer allowance will enable us to meet the new licence obligation proposed.

The energy industry is in a time of significant change and we anticipate government policy decisions on the decarbonisation of heat will be made during the price control period. This context is very important for at least two of the outputs within this category:

- Firstly, the Fuel Poor Network Extension scheme is rightly linked to other fuel poverty and energy efficiency schemes and will clearly be impacted by any policy decisions or heat sector innovations. We suggest that fuel poor connections are therefore subject to a volume driver with a separate incentive to encourage greater effectiveness in targeting and potentially whole house energy efficiency improvements.
- Secondly, the Stakeholder Engagement Incentive should be retained at its current level to support gas networks as they participate in the long term, complex engagement that will drive the best cross sector decision making for the UK during this time of great change. The incentive also supports innovation targeted towards the empowerment of a broader range of stakeholders in decision making and co-creation of solutions.

We support a continuing role for the CEG chairs, acting as an assessment panel for the Stakeholder Engagement Incentive, and as a selection panel for a best practice showcase event for vulnerability innovations which we believe would be a very valuable way of spreading cross sector learning and achieving better outcomes for vulnerable customers overall.

We know that customer expectations continue to increase, influenced by innovation, new technology and experiences within other sectors. We must continue to invest in order to maintain our leading customer service levels and to provide the experience that our customers want. We cannot stand still, we need to retain our relentless focus and investment on the areas that customers prioritise. The customer satisfaction incentive is an essential tool for us to be able to keep pace with these increasing expectations. We believe that the scale of the incentive should be retained for RIIO-GD2 – customer expectations are likely to increase further during this time of energy transition and continued investment is vital.

Response to consultation questions:

GDQ1. What are your views on the overall outputs package considered for this output category?

We are concerned that additional obligations – licence conditions, strengthened GSOPs, unplanned interruptions – are all based on financial penalty only. At this stage it is not clear whether any positive financial incentives will be retained for customer satisfaction or stakeholder engagement. We know that customer and stakeholder expectations continue to increase, and that investment is needed to keep pace with technology and innovation to deliver our leading levels of customer and stakeholder experience.

While the consumer vulnerability allowance will allow us to focus on better outcomes for vulnerable customers, the extent to which we are able to drive those outcomes will depend on the scale of the allowance. If it is fixed at the lower end of the scale at £15m across all networks, then the impact in any region will be limited.

GDQ2. For each potential output considered (where relevant):

a) Is it of benefit to consumers, and why?

b) How, and at what level should we set targets? (e.g. should these be relative/absolute)

c) What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

d) Where we set out options, what are your views on them and please explain whether there are further options we should consider?

Consumer Vulnerability Minimum Standards

a. Is it of benefit to consumers, and why?

The introduction of a principles-based licence obligation would provide additional assurance to customers in vulnerable circumstances. It is important to ensure that there is an allowance to accompany this new obligation. The vulnerability use it or lose it allowance provides this funding mechanism and we see the two as intrinsically linked.

Consumer vulnerability Incentives

a. Is it of benefit to consumers, and why?

We do not believe that a reputational incentive is of significant benefit to consumers given the difficulty in making objective comparable assessments between different networks. The resource required to create, administer and respond to a reputational incentive would be disproportionate to the level of customer benefit delivered.

However, we do believe that consumer benefit can be obtained by a best practice showcase event and report, such as that organised by Sustainability First in 2018 to highlight innovations that benefited customers in vulnerable circumstances.

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

We would welcome greater clarity about how the networks' proposals to support vulnerable customers will be assessed as part of the Business Plan Incentive.

We do not support a reputational incentive around vulnerability, other than a best practice sharing showcase.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

We suggest that an organisation with expertise in consumer vulnerability is asked to run a showcase event every two years. An amount of money could be reserved to do this from the consumer vulnerability allowance. The CEG chairs could form a judging panel to select the initiatives to be showcased. The showcase could include all energy players, driving cross sector knowledge exchange.

Consumer Vulnerability and CO safety awareness – use it or lose it allowance

a. Is it of benefit to consumers, and why?

We believe a dedicated allowance would be of benefit to consumers, ensuring funding is available to support those in vulnerable circumstances and deliver positive outcomes. We are also strongly supportive of including consumer vulnerability within the criteria for an innovation stimulus.

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

The allowance should reflect Ofgem's level of ambition in supporting vulnerable customers. We have received very positive feedback from stakeholders about the allowance, which leads us to suggest that it should be set at the upper end of the range at £30m or higher.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

We (and our CEG) believe that the allowance should be set on a flexible basis, option 1. The alternative fixed option 2 would require networks to specify all plans up front for a five-year period. We believe this would stifle creativity, ambition and innovation, and reduce the positive impact for customers that we can generate.

Fuel Poor Network Extension Scheme

a. Is it of benefit to consumers, and why?

The FPNES provides significant benefit to the fuel poor customers who qualify for the scheme, providing them with a free gas connection and allowing them to heat their homes at an affordable cost

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

There is an inherent difficulty in setting targets for the FPNES, due to the reliance of the scheme on the availability of funding for first time central heating systems. The situation is very different in Scotland, England and Wales, with funding

much more readily available in Scotland and Wales. Any targets should therefore be specific to each network's local circumstances.

We know that the Energy Company Obligation (ECO) scheme will be revised or replaced mid-way through the price control period, this will impact on the ability of the networks to achieve any targets set up front – either overachieving or underachieving dependent on the changes implemented. There may also be changes to government policy on decarbonisation which could impact the scale of ambition for additional gas connections. If the UK Government were to announce a move away from utilising the gas networks or towards a hydrogen solution to support decarbonisation, that would either decrease or increase the suitability of a natural gas connection.

We suggest two ways of overcoming this uncertainty

1. Fuel poor connections could be subject to a volume driver, with no targets set. The volume driver could be accompanied by an additional incentive focusing on targeting as suggested by Ofgem. If the size of this additional reward/penalty incentive were proportional to the number of connections achieved, that would provide an incentive for gas networks to provide as many well targeted connections as possible. This targeting incentive could be administered as part of the Stakeholder Engagement Incentive. It could also be combined with an additional incentive to drive coordinated whole house energy efficiency solutions through partnerships with other organisations. Separating the volume driven cost of fuel poverty connections from the incentive for targeting and energy efficiency works is important to ensure that the added complexities of additional scheme requirements do not lead to lower volumes of connections for fuel poor households in an uncertain policy context.
2. Or a mechanism could be added to reopen FPNES targets when triggered by policy changes, changes to other government schemes, or changes to FPNES qualifying criteria

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

We propose a volume driver for fuel poor connections, with an incentive for improved targeting and whole house energy improvement partnerships. The size of the incentive would be linked to overall volumes, thus promoting ambition and helping as many households as possible with a well targeted, joined up approach. We suggest that the additional incentive mechanism could be developed during the initial period of RII0-GD2 and come into effect during the price control following discussions and co-creation with expert stakeholders.

If Ofgem decides that targets must be set up front, then we believe a re-opener as described above would be essential given the level of policy uncertainty.

If targets are set we do not think it is appropriate to penalise or reward networks for under or over achieving those targets, given the circumstances that are completely outside of networks' control, such as availability of funding for first time central heating, or government policy on future heating systems.

Stakeholder Engagement Incentive

a. Is it of benefit to consumers, and why?

The Stakeholder Engagement Incentive has driven significant culture change in SGN to begin to embed stakeholder input into our decision-making processes. This increases our responsiveness to our customers and stakeholders, helping to ensure that their needs are met.

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

We suggest that a minimum standard of compliance with the Accountability 1000 Stakeholder Engagement Standard (AA 1000 SES) could be set.

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

Above the minimum standard of compliance with AA 1000 SES, networks should continue to be financially incentivised to engage effectively with stakeholders on complex topics of benefit to the UK including decarbonisation, future energy systems, fuel poverty and joined up cross utility solutions for vulnerability. These complex engagements can lead to long term benefit but require significant long-term commitment by the gas networks. The current incentive of 0.5% of allowed revenue would continue to drive positive behaviours and ensure deeper engagement mechanisms to further empower customers and stakeholders in decision making on complex topics.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

We would welcome greater clarity around how stakeholder engagement will be taken into account in the Business Plan Incentive.

We do not support the removal of the Stakeholder Engagement Incentive, nor a reputational only incentive. We believe that there is significant customer benefit in incentivising more complex, long term engagement to encourage networks to facilitate and drive positive change at a time of significant energy transition.

We recognise the challenge of objective assessment of stakeholder engagement and suggest that the CEG chairs would form a suitable assessment panel, given their collective knowledge of each company and the customer and stakeholder commitments being made in RIIO-GD2 business plans.

We do not support an end of period assessment against relative targets. We believe that the real benefit of an enhanced level of stakeholder engagement is delivered in collaboration with a broad range of stakeholders (including other gas networks) for the benefit of UK society at a time of significant change in the energy industry. This benefit to the UK will not be realised if networks are in competition with one another for the full five-year period, without regular feedback on progress.

Customer Satisfaction Survey

a. Is it of benefit to consumers, and why?

Measurement of customer satisfaction enables us to keep focused on the things that matter to consumers

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

Customer expectations are not static. They increase over time, influenced by developments and innovation in other sectors. We know therefore that to continue to achieve high levels of customer satisfaction we must continue to prioritise customer needs, to innovate and to continue to invest in new technologies that will raise our game. Given the dynamic nature of customer expectations, we believe that an absolute target is appropriate, since we have to continually improve our performance in order to meet the target. An absolute target is easily understood and communicated both to customers and also to our people, who engage with and deliver for our customers.

We do not believe that dynamic relative targets would provide the certainty we need to plan and execute an ongoing programme of customer excellence.

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

We believe that the current customer satisfaction scheme has been proven to work well, incentivising networks to achieve high levels of customer satisfaction. We propose that the existing scheme be maintained, with some changes to the survey methodology and question set as discussed in Ofgem's Customer and Stakeholder working group.

We do not believe that zero sum incentives are fair – if all customers are provided with a good service, then we do not think they would expect their network to be penalised, simply because other networks have provided a slightly better service.

Evidence from the Institute of Customer Service demonstrates that there is some variation in the way that all customers in different regions rate their satisfaction across all industries. The data in the Institute of Customer Service annual [State of Customer Satisfaction Report](#) does not cover gas networks, but does cover a wide range of utilities, financial services and retailers. Results over two years (2017 and 2018) showed that customers in the North East consistently rated their satisfaction as the highest in the country (79.2 out of 100), with customers in Scotland rating their satisfaction across all industries as the lowest (76.8). Customers in the south east rated their satisfaction as the second lowest (77.1). Although not definitive, this indicates that there are regional differences in the way that customers rate their own satisfaction in surveys, which may make regional comparisons across networks more difficult. This could imply that it would be more costly to achieve the same level of satisfaction in some areas than others, a circumstance in which penalty only financial incentives or dynamic relative targets would unfairly disadvantage some networks.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

We do not support dynamic relative targets for the reasons described above.

Of the options for the financial incentive, we support Option 1, retaining the current incentive. We do not support Option 2 – zero sum, because if all companies perform well, four companies will still be penalised. We do not support Option 3 penalty only, since we do not believe it takes account of rising consumer expectations and the need to continue to focus

resource and invest. Option 4 is designed to drive competition, which we believe hinders collaboration and produces a worse outcome for customers overall. In RIIO-GD1, SGN has the leading customer satisfaction score for our Scottish network and we have hosted a number of visits by other networks and utilities to share our best practice. Clearly if the incentive amount were part of a competed pot, we would not wish to share our success with competitor networks.

Complaints Metric

a. Is it of benefit to consumers, and why?

The complaints metric, although complex in calculation, focuses networks' actions on resolving complaints effectively. This is clearly of benefit to consumers. It works in tandem with the customer satisfaction measure – by focusing our effort on customer satisfaction there is a corresponding decrease in complaints.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

We agree with Ofgem's view that the complaints metric has worked well, and we propose that it continues as a static target penalty only incentive. We do not believe that dynamic targets are appropriate, since it does not allow us to plan and operate an efficient complaints resolution system due to the built-in uncertainty. Clear and consistent communication with our front line staff is key to delivering a high quality customer service. Constantly changing targets will undermine our communication, planning and effectiveness. Complaints levels to SGN are already low, we suggest that the existing incentive does not need reform.

Guaranteed Standards of Performance (GSOPs)

a. Is it of benefit to consumers, and why?

Guaranteed standards form a backstop of minimum performance levels that all customers can expect.

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

We agree that target pass rates of 90% for connections GSOPs should not be changed and no additional target pass rates should be imposed.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

We agree that raising payments on existing GSOPs by a measure of inflation is appropriate.

Automating GSOPs 3 and 13 would require system changes for SGN and will therefore have to be costed in the business plan. We have not yet tested the willingness of our customers to pay for this automation.

We discussed with stakeholders the tightening of the standards proposed by Ofgem and found there was more support for strengthening GSOP1 than for other GSOPs.

We do not agree that the payment caps should be removed since removing the cap altogether, in certain circumstances, would not be a good use of customer's money. For example, there can be occasions where customers are not at their properties for long periods of time hence entitling them to large payment amounts.

We have discussed the possibility of a new GSOP around vulnerability with a broad range of stakeholders as well as with our Stakeholder Advisory Panel and our CEG. We have received consistent feedback that stakeholders cannot envisage a package of enhanced services which would be offered to all vulnerable customers, since the circumstances and needs of all our customers will be different. Not everyone will require alternative accommodation for example, or enhanced cooking or heating. Stakeholders have suggested that creating a minimum standard with guaranteed compensation would not be a cost-effective approach.

We are investigating the cost of the proposed new GSOP around timed appointments for re-connection for those who are not at home at the end of planned work. We are also testing the willingness of all our customers to pay for this additional service, and testing preferences with those whose supply has been interrupted recently. The operational staff who currently carry out the reconnections are the same engineers who respond to emergency call outs when members of the public report that they can smell gas. It would not be possible for these engineers to commit to appointments at specific times without impacting our emergency call out service.

Setting up a separate team of engineers to carry out booked appointments would of course be costly, and we are therefore further investigating alternative solutions, as well as exploring customer appetite for the service and corresponding cost.

Unplanned Interruptions - average restoration time incentive

a. Is it of benefit to consumers, and why?

There is an existing package of measures which addresses the need to reduce the length of time that supplies are interrupted to a safe minimum. This package includes GSOP1 (which Ofgem is proposing to strengthen) and the customer satisfaction and complaints measures which are designed to ensure a high-quality experience for all customers, including those interrupted by unplanned works.

Although we support the principle of restoration of supplies for customers as quickly as possible, we question whether an additional financial penalty incentive is required to tackle the issue of worsening performance in a small number of licence areas.

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

We are not convinced that all gas networks measure interruptions in the same way. Specifically, we believe that there are differences in the way that networks categorise planned and unplanned work and we also believe that there are differences in the way that networks 'stop the clock' during an interruption.

We believe that setting targets will therefore be a complex process. Ofgem suggests that targets be set on a combination of historic performance and relative benchmarking. We believe that a potential penalty of 0.5% of allowed revenue is too high to be set based on comparative data which may not be consistently recorded. We believe that fair targets can only be set based on historic performance. There are also significant differences between networks, for example in the number of multiple occupancy buildings, which require complex engineering and planning and permissions.

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

When a large event occurs, the gas supply to more than 250 properties is interrupted. If the event is caused for example by third party damage leading to water ingress, the length of time required to restore supplies can be significant because of the engineering challenge of finding and removing water from all parts of the network. In any one year, one or two large incidents could therefore lead to significant volatility in the average restoration time, with the network unable to influence the measure.

We therefore believe that large events should be excluded from any measure of average restoration time.

In addition, if targets were to include any form of relative comparison between networks, it will be essential to exclude large events in order to ensure collaboration between networks continues during large outages. Currently gas networks will provide mutual aid for large events, sending additional engineers to support other networks during incidents. Without this collaboration and mutual support, impacted customers will receive a poorer service and longer interruption.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

For the reasons given above about volatility between years caused by large events, we believe that if large events are included, then targets must be static rather than dynamic.

Emergency Response time

a. Is it of benefit to consumers, and why?

Timely response to reported gas escapes is essential to ensure the public's safety

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

We support no change

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

SGN has supported the provision of the emergency service by finding de minimis metering work for our engineers to carry out during the time that they are not attending emergency calls. The roll out of the smart meter programme means that this metering work will come to an end in RIIO-GD2, and this will need to be addressed.

Emergency Response and enquiry service

a. Is it of benefit to consumers, and why?

We agree with Ofgem that the provision of a gas emergency phone line for the public is very important.

GDQ3. What other outputs should we be considering, if any?

Bespoke Outputs

- Impact of our works: Customers and stakeholders continuously tell us that it is very important for us to minimise the impact of our works on them and to reduce any disruption that we cause to their lives. We note that Ofgem takes a restricted view of its responsibilities in this area, however Ofgem's view does not meet the expectations that our customers have that we will prioritise their concerns and take proactive action.
- Open data: We know that transparency is important to our stakeholders and it forms one of the key principles of our approach to stakeholder engagement. One practical way in which this transparency can be demonstrated is by creating open data sets which other organisations, partners and stakeholders can use in order to create outcomes that are valued by customers.
- Satisfaction of non-domestic connections customers to include developers, Independent Gas Transporters, Utility Infrastructure Providers, Short Term Operating Reserve operators, biomethane producers etc: By broadening the types of customer whose satisfaction we measure, we ensure that all customers are receiving a good service, which is particularly important at a time of energy transition.

GDQ4. What are your views on the RIIO-GD1 outputs that we propose to remove?

We are concerned that in removing the Discretionary Reward Scheme, Ofgem has reduced the incentive for gas networks to focus on their environmental impact. This is a priority for our customers who have told us that they want us to focus on our business carbon footprint, on reducing air emissions and on leading the way for smaller businesses and consumers to follow.

Response to consultation questions:

Consumer vulnerability

GDQ5 What activities beyond those outlined in Paragraph 3.12 should we be consider when defining the role of the network companies in supporting consumers in vulnerable situations?

The activities listed are all related to our areas of competence and activity – stakeholders tell us to stick to what we are good at, so we would not wish to add any additional activities to the list in para 3.12.

GDQ6. Can you provide any evidence that shows how the boundary we have set out for the networks' role in consumer vulnerability could impact the benefits received by consumers in vulnerable situations?

We have no evidence to show this.

Consumer vulnerability – use it or lose it allowance

GDQ7. What is your preference on the two approaches we have outlined to implement the allowance, and why?

Our preference for implementation of the use it or lose it allowance would be Option 1 a flexible strategy – this enables the GDNs to include a consumer vulnerability strategy with their business plans, have this tested and endorsed by stakeholders and CEG at that time. Our plans may alter due to the assessment of the success of initiatives and option 1 enables changes and improvements to take place. We anticipate during the period we would be innovative and find new initiatives for funding and collaboration. Option 2 restricts the ability to add in projects that would have significant impact on consumer groups as and when we develop additional initiatives.

GDQ8. What examples can you provide of initiatives that could be funded through the allowance, and please explain why these activities would not go ahead without specific price control funding?

Our stakeholders have suggested many additional initiatives including:

- Referral network: the opportunity to signpost vulnerable consumers to a variety of trusted partners, for example to access funding for repair of appliances disconnected for safety reasons during winter months.
- Energy advice: use of energy and switching advice
- CO related appliance servicing

We believe that the most effective initiatives with the strongest outcomes for vulnerable customers will be those that involve significant partnership working. To achieve these outcomes, we will need to fund partnership initiatives. It's not possible to specify up front how they will develop and iterate. We support Ofgem's proposal that we establish initiatives to deliver specified outcomes, rather than specifying and funding activities up front.

Consumer vulnerability – package**GDQ9. What is your preference on the three potential options we have outlined for a consumer vulnerability package, and why?**

Option 3 is our preferred option. This provides the GDNs with opportunities to develop innovative and sustainable support for vulnerable customers and the functionality to embed these. However, we do not believe that a reputational incentive is of significant benefit to consumers given the difficulty in making objective comparable assessments between different networks. The resource required to create, administer and respond to a reputational incentive would be disproportionate to the level of customer benefit delivered.

We do believe that consumer benefit can be obtained by a best practice showcase event and report such as that organised by Sustainability First in 2018 to highlight innovations that benefited customers in vulnerable circumstances.

We propose therefore that Ofgem pursue Option 3 but replace the reputational incentive with a best practice showcase event.

Fuel Poor Network Extension Scheme**GDQ10. What should we include in the FPNES eligibility criteria in RIIO-GD2 to facilitate a well targeted, but effective scheme?**

In order to achieve an effective FPNES and turn connections into a means of affordable heating, fuel poor households must also be given access to funding for a first-time central heating system to address the needs of the most deprived. This is not a targeting or eligibility issue but one that needs to be addressed in order for targeting and eligibility to work correctly.

In addressing FPNES eligibility and targeting, the following criteria should be considered:

- **Targeting by property:** energy efficiency addresses the needs of the low-income household and future proofs the property for future inhabitants. Eligibility example all F and G EPC rated properties could be considered eligible if less than 4 bedrooms.
- **Targeting to reach the most deprived:** all recipients of income related benefits should be eligible.
- **Eligibility criteria** could be factored using a similar scoring matrix as with the SHINE project in Islington where the eligibility scoring put those in greatest need as priority for funding. If a household is marginally over the line of ineligible there could be multipliers to take into account the cumulative effect of compounding circumstances.
- **Health and wellbeing** and risk factors such as age, depression and cardio vascular conditions.
- **Level of fuel poverty** as calculated by low income and high cost.
- **Number of children or old age.**
- **SAP rating.**

For targeting to have greatest impact, it needs to be synchronised with eligibility but not co-dependent. Not all fuel poor households live in areas of high deprivation. However, by using an “in-fill” eligibility similar to the ECOflex in-fill for solid wall, more households who are at risk could be included and the economy of scale could make gas connections possible in a street where connecting a single inhabitant would make the cost after the voucher value prohibitive.

Targeting by geographical location based on data sets and socioeconomic markers or indicators such as Indices of Multiple Deprivation should be encouraged. However, this requires very granular data sets which are difficult to align with GDPR compliance.

The churn rate of fuel poor should also be taken into account, as referenced by BEIS in their recent report. Households in fuel poverty or at risk of falling into fuel poverty could be used to define eligibility. This would future proof the property from being the cause of fuel poverty for other households. Low income households live in the cheapest accommodation, if this is expensive to heat, the likelihood of fuel poverty impacting the residents, or next occupants, is high. Cheap private rented accommodation has a high churn rate.

GDQ11. How should we incentivise the GDNs to improve the targeting of the FPNES?

We propose a volume driver for fuel poor connections, with an incentive for improved targeting and whole house energy improvement partnerships. The size of the incentive would be linked to overall volumes, thus promoting ambition and helping as many households as possible with a well targeted, joined up approach. We suggest that the additional incentive mechanism could be developed during the initial period of RII0-GD2 and come into effect during the price control following discussions and co-creation with expert stakeholders.

To support improved targeting, we propose that the use of a GDN-specific model is adopted for the following reasons:

- Practically, a tool only in use by one GDN will be easier to use when considering technological limitations.
- It would ensure manageable compliance with GDPR.
- Different regions have different profiles to one another as well as a number of different area profiles within them and these could be easier to pick up on if working with data on a smaller scale (e.g. on a local level in towns). This is necessary if we are to ensure we work in a manner that is sympathetic to the area we focus on for any given scheme.
- We need to have the flexibility to add in layers to assist councils with identifying those who would qualify under Flex. While there are similarities between councils, there are also significant differences.

However, Ofgem should set clear rules to ensure a suitable level of consistency in relation to targeting and measurement of benefit. To ensure continual collaboration and best practice sharing, we propose that GDNs develop regional level partnership networks. Developing regional partnerships could also be a way of offering households a more joined-up service.

It should be highlighted that mapping tools are hindered by the need to meet GDPR, which limits the use of available information in a granular, meaningful way. The energy companies and network operators are currently negatively impacted on targeting methods by GDPR. The digital economy act is available for the energy companies and could be utilised to make some vital information usable, but the network operators are not currently included in the legislation. Addressing this and increased use and understanding of the digital economy act by energy companies with a few amendments, such as including network operators, could address many of the problems with targeting. For example, the PSR could be used as one of the data sets to improve targeting.

The development of a single PSR and linking it with the associated data sets of income and EPC data as an advanced mapping tool available only to network operators with restrictions on the use and distribution of the information, could be the optimal solution. This could be developed for addressing fuel poverty and mapping of vulnerability. All utility operators should have appropriate levels of access, as well as health and social care (or as a minimum, emergency services such as ambulance and fire services). The information on vulnerability – for example information on hearing or sight impaired could be vital.

GDQ12. How can we ensure that the FPNES is better coordinated with other funding sources to provide a whole house solution for the household?

We believe a more consistent, government-led programme to advise on, assess and install appropriate in-house measures should be adopted. This could be delivered through the development and funding of a national body i.e. following the existing Scottish Government funded model – Home Energy Scotland/Warmer Homes Scotland, implementing this expanded approach across the country.

Alternatively, as a minimum, a government-led national Fuel Poverty Partnership should be formed

Adopting the Scottish Government Fuel Poverty partnership model - to provide a stronger, more coordinated national approach to addressing fuel poverty. Within this partnership, regional sub groups should be formed to ensure a more coordinated approach to additional funding and signposting/referrals to other beneficial support.

The NICE (National Institute for Health and Care Excellence) guidance [NG6](#) gives recommendations on single point of contact and coordination of services to properly address the needs of fuel poor (similar model to the Scottish Home Energy Scotland). This should be co-ordinated with funding that makes the necessary measures to improve a property affordable for those who do not have enough money to adequately heat their homes. The Home Energy Scotland and the Retrofit works models are in line with the incoming PAS2035 BSI standard for retrofitting energy measures that will ensure whole house is taken into account. PAS 2035 will ensure that measures are coordinated and balanced.

A central point of contact and support is badly needed for fuel poor households, particularly now that the Energy Savings Trust advice line in England has been closed leaving only the website for advice and support. This has the effect of precluding vulnerable households with limited internet access or skills, those with reading or language difficulties and those who are unfamiliar with the concepts without proper support. If a household is unaware of the economic effect of changing to gas central heating and the possibility of funding, it would seem unlikely they would access this information on line. However, if proactive targeting similar to the Home Energy Scotland service existed, there is a higher chance that vulnerable households would be able to access the FPNES and wider support available.

We believe every area of the country needs the same level of access to an appropriate proportion of nationally available funding for measures, followed by associated education and advice.

GDQ13. What are your views on us requiring or incentivising the GDNs to ensure that households receiving FPNES connections also achieve a target level of energy efficiency?

As mentioned in our response to GDQ 11, we believe that whole house energy efficiency and targeting should be incentivised separately from the volume of fuel poor connections achieved. This would ensure that the greatest number of connections are achieved, helping as many households out of fuel poverty as possible.

Improving the energy efficiency of housing stock in deprived areas has a positive effect, however without a separate financial incentive, it is likely that the requirement to coordinate energy efficiency measures will simply reduce the number of fuel poor connections possible, particularly in the south of England.

There would also need to be special consideration and greater flexibility in addressing hard-to-treat properties e.g listed buildings where insulation measures can be challenging to install. For example, a new central heating system may show an improvement of E-D but the property would still be below the minimum target of a C rating (the government target for fuel poor properties by 2030).

We therefore propose two options:

- Develop a means of registering exemptions where as much work has been done as possible and a property physically cannot be brought up to a C (this would need to be done based on what measures can be applied, not to do with costs the way PRS MEES has been); or
- GDNs could be incentivised to achieve a certain improvement in SAP score, even if we cannot ensure that the property makes it to a C.

GDQ14. Do you think the value of the FPNES voucher would need to be amended if the targeting of the scheme is increased? Please provide any evidence to support your view.

A more targeted approach to identify and define eligibility could result in lower economies of scale and therefore increased costs per connection. It's therefore important to adopt a well targeted approach which at the same time remains cost-effective. There should be flexibility applied to address those customers that are most in need if costs of connections are higher.

We also suggest that Ofgem considers again the way that the scheme incentivises district heating projects. One district heating project can bring many households out of fuel poverty, can be a lower carbon option and can take significant resource to coordinate and bring to fruition.

Guaranteed Standards of Performance

GDQ15. What is your preferred option for revising customer payment caps?

Our preferred option would be to increase payment caps in line with customer payment levels as we agree this keeps the link between payment and cap and is a good approach. Removing the cap altogether, in certain circumstances, would not be a good use of customer's money. For example, there can be occasions where customers are not at their properties for long periods of time hence entitling them to large payment amounts.

GDQ16. Where, within the consultation ranges, do you think the standard and payment levels should be set?

We agree that raising payments on existing GSOPs by a measure of inflation is appropriate.

We discussed with stakeholders the tightening of the standards proposed by Ofgem and found there was more support for strengthening GSOP1 than for other GSOPs. We have commissioned research among our customers to reveal their willingness to pay for additional service levels to meet an 18-hour standard for GSOP1. We do not yet have the results of this willingness to pay research.

There was little support among stakeholders for a tightening of GSOP2 for reinstatement.

GDQ17. Should any existing GSOP exemptions be removed or changed and should any additional exemptions be considered?

We would suggest an exemption for water ingress be considered, as this is generally caused by burst water mains and not due to the maintenance of our network. Any new GSOPs would need to be reviewed for the appropriate exemptions.

GDQ18. Do you support the proposal to make all GSOP payments automatic for RIIO-GD2 and why?

Although in principle we would support the move to make all GSOP payments automatic removing the necessity for customers having to claim, we highlight that funding would be required to systemise this process.

GDQ19. Are new GSOPs (or amendments to existing GSOPs) required and what might these look like?

We have discussed the possibility of a new GSOP around vulnerability with a broad range of stakeholders as well as with our Stakeholder Advisory Panel and our CEG. We have received consistent feedback that stakeholders cannot envisage a package of enhanced services which would be offered to all vulnerable customers, since the circumstances and needs of all our customers will be different. Not everyone will require alternative accommodation for example, or enhanced cooking or heating. Stakeholders have suggested that creating a minimum standard with guaranteed compensation would not be a cost-effective approach. We are carrying out customer research in collaboration with the other GDNs to further clarify our understanding of the needs of those in vulnerable circumstances.

We are investigating the cost of the proposed new GSOP around timed appointments for re-connection for those who are not at home at the end of planned work. We are testing the willingness of all our customers to pay for this additional service, and also testing preferences with those whose supply has been interrupted recently. The operational staff who currently carry out the reconnections are the same engineers who respond to emergency call outs when members of the public report that they can smell gas. It would not be possible for these engineers to commit to appointments at specific times without impacting our emergency call out service.

Setting up a separate team of engineers to carry out booked appointments would of course be costly, and we are therefore further investigating alternative solutions, as well as exploring customer appetite for the service and corresponding cost.

We would also propose the removal of GS14 as superseded by complaints metric and therefore not required for RIIO-GD2.

GDQ20. Should there be a licence condition to prevent standards for the restoration of unplanned interruptions deteriorating (GSOP1)? If so, how should we set the target, and should we take into account geographical differences. Please consider alongside our wider proposed interruptions package.

We do not see the requirement for a licence condition against GSOP1 as the proposed restoration time incentive and changes to increased payments for GSOP1 would negate the need for a pass rate/licence condition. If a licence condition was to be added further reviews would need to be undertaken around consistency of reporting, MOBs and incidents > 250 customers.

GDQ21. Is the existing 90% target pass rate for connections GSOPs still appropriate, if not how should it be revised?

We feel 90% is a strong target to achieve in any industry and should be maintained

GDQ22. Should licence conditions with target pass rates be introduced for any other GSOPs?

We do not feel there is a requirement for licence conditions with target pass rates to be introduced in RIIO-GD2 as throughout RIIO-GD1 we have demonstrated we have performed well on all other GSOPs without this as a requirement. Introducing a licence condition could incur additional costs for our customers, as potentially more resource will be required to ensure that we can comfortably meet or exceed the licence requirement.

Unplanned Interruptions

GDQ23. What do you think of the proposed new output based on average restoration time for total unplanned interruptions?

Overall, we fully support the need to ensure that when customers lose their gas supply, which is an essential service, the GDNs continue to look for ways to minimise disruption.

We broadly support the proposed creation of a new output but feel that there are areas that would need to be addressed in the design and the scale of the penalty suggested which we believe is too high.

We would also look to seek clarity and consistency in aspects of GDN reporting on interruptions. It is our understanding that there is currently inconsistency between the GDNs on areas such as 'stopping the clock' on interruptions and when it is appropriate to apply exemptions. There is also clarity required around whether an interruption could/should move from an unplanned to a planned interruption depending upon timescales and circumstances; again, on this matter we understand there to currently be inconsistencies between GDN.

GDQ24. Should any interruption events be excluded from the average restoration time incentive for total unplanned interruptions, and why?

We fully support Ofgem's stance that customers interrupted during a large event should not expect to 'have their supplies restored on a slower timescale than any other customer' (Page 49 RIIO-2 Sector Specific Methodology Annex: Gas Distribution) and across RIIO-GD1 we have worked to increase our performance and care of our customers during any incidents that have occurred on our network.

However, we do not support the inclusion of large events (over 250 properties) as part of a financial penalty incentive as the occurrence of a single large incident will have the potential to impact performance. Ofgem cite in the OfWat document

'Reporting guidance for Supply Interruptions'²⁵ that 'the default position is that the water company manages the risk of supply interruptions and there are no exclusions'. However, on page 3 of the above document OfWat state that when defining supply interruptions 'Multiple-storey buildings shall be considered on a case by case basis and a floor by floor basis', which is an aspect that we would look to explore within this incentive. In addition, OfWat define the duration as being 'defined as the length of time for which properties are without a continuous supply of water. The duration shall only be considered in the calculation of the metric where the duration is 3 hours or greater'²⁶. This comparison does not appear to have been reflected in Ofgem's proposal but is an exemption that we would look to replicate. We would look to also understand the options around exemptions on incident types. Third party damages that cause water ingress to our network are particularly complex and consume great amounts of time to ensure the required levels safety, customer care and network security.

The current issues of inconsistency will also need to be considered. As discussed in GDQ23, the different approaches to 'stopping the clock' will have an impact on average restoration times and this will be amplified if large events are included within the incentive.

Based on the above we support Option 3, Page 50 of the 'RIIO-2 Sector Specific Methodology Annex: Gas Distribution'

In terms of target setting for unplanned interruptions, we would support Option 1, Page 49 of the 'RIIO-2 Sector Specific Methodology Annex: Gas Distribution' which would see Static targets that remain fixed throughout RIIO-GD2. This option, in comparison to the Dynamic Option delivers an increased service to our customers with a lower level of complexity and uncertainty for the GDNs.

GDQ25. What are your views on separating interruptions that occur in MOBs into a specific output?

At the present time we believe that inconsistencies in systems, processes, interpretation of the RIGS definitions and record keeping across the GDNs may create a separation that could not be relied upon to provide a meaningful comparison. However, recognising the specific level of interest in this area, we fully support a continued dialogue to understand how greater consistency can be achieved, but requiring sufficient time for GDNs to establish any new systems and processes that may be required to achieve the overall objective.

²⁵ <https://www.ofwat.gov.uk/wp-content/uploads/2018/03/Reporting-guidance-supply-interruptions.pdf>, Page 2

²⁶ <https://www.ofwat.gov.uk/wp-content/uploads/2018/03/Reporting-guidance-supply-interruptions.pdf>, Page 2

2.3 Outputs: Deliver an environmentally sustainable network

Observations and overview:

As a Gas Distribution Network, we take our environmental obligations seriously. Our stakeholders and customers give us strong feedback that this is an area that is important to them and that they would like to see us doing more. We are therefore disappointed that the tone of this section ‘delivering an environmentally sustainable network’ is not clearer in its ambition regarding the environmental measures and sending a stronger signal to network companies that this is an important area for them to be focusing on.

Shrinkage is of course a very important part of our environmental impact, primarily as rightly identified it so heavily dominates our carbon footprint. Despite the importance of Shrinkage however there are many other ways in which our operations, and the way we work will impact directly and indirectly on the environment. For this reason, having the only output target being Shrinkage risks missing other areas of impact.

Shrinkage

Shrinkage is defined as three components; leakage, own use of gas, and theft of gas.

Leakage: Of the three components reducing methane escapes through leakage is the most material impact on the environment. It is important to recognise that over the course of RIIO-GD1 companies have delivered a step-change in behaviour by delivering significant improvements in pressure management. Further improvements will be more difficult to deliver at an efficient cost due to the marginal returns available. Maintaining a low average system pressure will have to be carefully considered as we continue to drive high levels of mains replacement by insertion and changing consumer demand patterns. Driving the right behaviours remains an important area to incentivise and we are happy to support a review of the current incentive design to achieve an appropriate balance.

Theft of Gas: This is an important social and customer issue. Currently there is a cost recovery mechanism to minimise theft of gas but there no strong incentive to really target this as an area for improvement. We believe that an incentive that meets the costs of recovery in line with current practice and also shares the benefits of debt recovery will drive positive behaviours. This should build upon the excellent work we have completed in RIIO-GD1 to identify and recover costs for unregistered sites where gas has been used but not paid for, unknowingly or otherwise.

Own-Use of gas: We believe that the current arrangements are appropriate and that accurate flow measurement across all GDN sites would be cost prohibitive and inefficient.

Own environmental impact

We are continuing to make progress regarding carbon reduction (outside of Shrinkage) because we recognise that reducing our carbon emissions is a key part of reducing our environmental impact. This is why we are one of the first and pioneering companies (and the only GDN) to be a founding member of the Carbon Trust Climate Leadership Framework. This CLF should allow SGN to demonstrate internally and externally our commitment to reducing carbon emissions, as we are aware that meeting the 2050 targets for Carbon reductions will be onerous and will require many changes as the years roll forward to that point.

We have also completed a Science Based Targets initiative review with the Carbon Trust which has identified the levels of reductions required for SGN to achieve in order to meet the 2050 reduction targets. These are split into three main categories: Shrinkage, Buildings, and our Vehicle Fleets.

We are working with our customers and stakeholders to confirm their level of ambition in this area, if they support our level of ambition, and whether this is an appropriate point for a company specific output delivery incentive.

Decarbonisation of heat

We appreciate the uncertainty surrounding the decarbonisation of heat and the proposals that Ofgem is putting forward regarding low and no regrets heat decarbonisation projects, innovation projects and policy-based re-opener mechanisms. Whilst these are important we also consider them to be insufficient as we don’t think that they appropriately address either the challenge of discrete projects or encourage appropriate levels of responsiveness to change.

The first, the challenge of discrete projects, addresses the challenge that whilst we can identify projects at the start of the business plan that support whole systems and decarbonisation approaches, given the short business planning period and the length of the time horizon out to 2026, important projects may not be identified in time or may not be developed to an

appropriate standard to be included in the business plan. These projects should be enabled to progress in a timely manner. For these projects we propose a discretionary roll-out mechanism that supports the delivery of decarbonisation and whole systems projects.

The second, responsiveness to change, is then the responsiveness of network companies to make adjustment to existing processes and procedures to enable greater volumes of decarbonisation. It is our view that given the importance of decarbonisation it is important to incentivise good practice separately and that this good practice should extend across both decarbonisation and whole systems recognising that there is more that as networks we can do to become more responsive to changing technology and use patterns on our network. On this basis we would propose a Network Responsiveness Incentive.

- **Network Responsiveness Incentive.** We would support the introduction of a discretionary incentive that demonstrates facilitating good practice in supporting and promoting both decarbonisation and whole system approaches. This incentive recognises that good practice is currently undefined and recognises that business as usual approaches need to change across network planning teams to facilitate change and responsiveness to new policy and new technology. Measures that this could support include promoting changes to industrial standards, innovation and facilitation in new entry connections, co-ordination with local energy strategy teams and housing developers. We believe that without specifically calling this out and incentivising it, then it will remain challenging to address industry barriers to change and reductions in consumer costs are less likely to achieve their full potential.
- **Discretionary decarbonisation and whole systems roll-out mechanism.** Recognises that there are projects that support the decarbonisation pathway and whole systems strategy that are not fully definable at the point of business plan submission that may require network investment to facilitate and implement. As such we would suggest a use-it-or-lose-it funding mechanism through which projects that have not been identified at the start of the business plan are able to progress without having to wait until the next business plan period in-order to secure the respective funding. This would enable changes due to Future Billing and Real-time networks projects support changes to billing zones, rolling out the removal of processing requirements for Biomethane and BioSNG through new billing zones and the removal of constraints for embedded entry through smart controls & instrumentation or the provision of centralised entry for green gas.

Response to consultation questions:

GDQ26. What are your views on the overall outputs package considered for this output category?

We are disappointed that there is not a greater level of ambition being proposed in the output category 'Deliver an environmentally sustainable network'. The proposals appear to be more focus on retaining the status-quo rather than delivering improvements and incentivising improved behaviour. We appreciate that time for developing ambition is constrained with a first plan submission in July, but we would encourage Ofgem to keep the options open for developing ambitious incentive structures that drive a better customer outcome.

GDQ27. For each potential output considered (where relevant):

- a) Is it of benefit to consumers, and why?**
- b) How, and at what level should we set targets? (e.g. should these be relative/absolute)**
- c) What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)**
- d) Where we set out options, what are your views on them and please explain whether there are further options we should consider?**

We have set out our responses to each of these questions with respect to Shrinkage and decarbonisation of heat below;

Shrinkage

a) Is it of benefit to consumers, and why?

Yes, there are direct benefits to future consumers as result of reducing methane emissions to the atmosphere. These Shrinkage emissions dominate our carbon footprint and therefore heavily contribute towards climate change.

b) How, and at what level should we set targets? (e.g. should these be relative/absolute)

Shrinkage is made up of three component – Leakage, theft of gas, and own use gas.

Leakage: We believe that the target should be based on the current historical performance as a baseline and networks should be incentivised to reduce their emissions from that point.

The rate of leakage is very dependent on the pressure and points of demand that change the pressure requirements - such as the level of mains insertion and distributed generating capacity. As these are very locally specific and change over time, we do not consider it appropriate to have relative targets where performance is compared across networks companies.

Equally, the ability to manage pressures in a more responsive manner is becoming more challenging and requires more expensive interventions. Due to the high marginal cost of these interventions and the requirement for a payback period to be achieved to secure them, we do not think that this is appropriate for a dynamic target where the target is reset through the price control period on the basis of historical performance.

It is important that the current frontier performers who are achieving the best performance today in terms of reducing average system pressures are recognised for that, and that they do not face an asymmetric downside risk for having performed well in RIIO-GD1.

Theft of Gas: This is an important social and customer issue. Currently there is a cost recovery mechanism to minimise theft of gas but there is no strong incentive to really target this as an area for improvement. We believe that an incentive that meets the costs of recovery in line with current practice and also shares the benefits of debt recovery will drive positive behaviours.

Own Use Gas: We believe that the current arrangements are appropriate and that accurate flow measurement across all GDN sites would be cost prohibitive and inefficient.

c) What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

Leakage: We do recognise that whilst it is important to improve, it is equally important that standards do not slip. It is important that the current frontier performers who are achieving the best performance today are recognised for that, and that they do not face an asymmetric downside risk for having performed well in RIIO-GD1.

We believe that in order to support consistency that the value of the incentive should be based on the social cost of carbon as set out in government guidance.

Theft of Gas: We believe that an incentive that meets the costs of recovery in line with current practice and also shares the benefits of debt recovery will drive positive behaviours. This should build upon the excellent work we have completed in RIIO-GD1 to identify and recover costs for unregistered sites where gas has been used but not paid for, unknowingly or otherwise.

Own Use Gas: We would support a greater focus on increasing the efficiency within the use of gas and would support the introduction of an incentive of 'Own Emission Decarbonisation'. This is being asked of from customers as they are asking for information both on: how we as a business are responding to Climate Change, plus how they can reduce their wastage. Part of this may be borne from the fact that during RIIO-GD1 there appears to be more of an acceptance that climate change is a pressing challenge that we need to be able to respond to.

We would encourage Ofgem to place a greater emphasis on Business Carbon Footprint as currently reported to Ofgem as a structure through which we can broaden the number of ways in which we can improve our direct emissions - for example, reducing energy consumption through building efficiency through to incentivising the move to alternative fuel vehicles for a heavily dominant diesel fleet.

d) Where we set out options, what are your views on them and please explain whether there are further options we should consider?

Three options have been set out in Table 33.

Looking at these options we think that there may be some confusion regarding whether or not the repex mains replacement programme is included in the shrinkage baseline calculation. As set out in our response to the Framework Consultation the shrinkage baseline incorporates the forecast repex programme.

If this premise is accepted, then our proposal is closer to 'Option 2 – targeted reward / penalty' than it is to 'Option 1 – Status Quo'. Thus, we support Option 2.

We do not support 'Option 3 – Reputational' as we do not think 'shrinkage' as a concept is particularly high within the customer's frame of reference and as such this will maintain the administrative cost whilst removing the majority of the incentive properties.

We also propose that the roller mechanism is carried forward as it drives positive behaviours in each of the years of the price control.

Decarbonisation of Heat

a) Is it of benefit to consumers, and why?

We consider the decarbonisation of heat to be one of the most pressing challenges, as such we fully support the focus on the heat decarbonisation pathway and innovation in supporting the delivery of that pathway. That innovation funding in itself is insufficient, there is a significant body of projects which are not supported under innovation and too high risk (either technical, regulatory or commercially) to progress.

We think that networks have an important role to play in delivering these projects and are supportive of exploring how heat decarbonisation can be delivered in the best interests of the consumer.

b) How, and at what level should we set targets? (e.g. should these be relative/absolute)

At the moment no incentive is proposed, we think that this is important to incentivise and have set out our approach in our response GDQ31 towards a discretionary incentive and a roll-out mechanism.

c) What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

We have set out our approach in our response GDQ31 towards a discretionary incentive and a roll-out mechanism.

d) Where we set out options, what are your views on them and please explain whether there are further options we should consider?

n/a

GDQ28. What other outputs should we be considering, if any?

Below we have set out three additional outputs that we consider are applicable across the sector as they are related to the current shrinkage incentive and the decarbonisation of heat. We have also set out two potential company specific outputs which are directly attributable to our feedback from our customer and stakeholder base.

Sector Specific Outputs

Network Responsiveness Incentive. As set out in our response to GDQ31 we think that there is a strong case for companies to be demonstrating that they are being responsive to the changing needs and requirements placed upon them as we move towards a decarbonised energy system where responsiveness to whole systems solutions and thinking becomes more important for realising the best consumer outcome.

Discretionary decarbonisation and whole systems roll-out mechanism. As set out in our response to GDQ31 we think that there is a strong case for a discretionary funding mechanism that supports the roll-out of projects enabling and supporting decarbonisation and whole systems approaches. This is in recognition that it is not possible to identify with appropriate confidence today, the projects that will be implemented between 2021 and 2026, and that as networks we should not be placing a brake on progress until the next price review period.

Theft of Gas. As described above we think that theft of gas (along with own use gas) should be separated out from Shrinkage and incentivised separately.

Bespoke Outputs

SGN Decarbonisation Incentive. We recognise that reducing our carbon emissions as a key part of reducing our environmental impact as such we are a founding member of the Carbon Trust Climate Leadership Framework that should allow SGN to demonstrate internally and externally our commitment to reducing our carbon emissions. We would encourage Ofgem to place a greater emphasis on Business Carbon Footprint as currently reported to Ofgem as a structure through which we can broaden the number of ways in which we can improve our direct emissions.

SGN Direct Environmental Impact. Following clear stakeholder feedback that this remains important, we have completed a detailed review of the ways in which we could positively contribute and create positive environmental impact. We are now working with our customers and stakeholders to confirm their level of ambition whether they would support a company specific output delivery incentive.

GDQ29. What are your views on the RIIO-GD1 outputs that we propose to remove?

We broadly agree that reporting biomethane and connections studies should be removed along with the distributed gas connection guide and information strategies, we do however believe that this should be replaced with a broader incentive – a network responsiveness incentive – that demonstrates that network companies are promoting best practice and actively engaging to facilitate decarbonisation and a whole systems approach.

With environmental and safety related components of the discretionary reward scheme, we consider that this is still important and should not be removed

GDQ30. What are your views on the priorities we've identified for the gas distribution sector in delivering an environmentally sustainable network? Should measures proposed for electricity and gas transmission, such as BCF reporting and strategies for including in Business Plans, also apply to gas distribution?

Yes, as stated above Shrinkage is merely a calculation applied across the UK so it has no direct relevance to changes which we can make to become a more Sustainable business across many other areas of impact. You could consider the UN SDG framework, or incentivise other elements of BCF reductions such as a switch to EV from Diesel or reduce building emissions through efficiency drivers or the introduction of renewable energy into the network.

As it is the sole target of Shrinkage is too limited at a time when the public is asking and expecting to see more from big impacting business with respect to the urgency of reductions resulting from an acceptance of Climate Change.

GDQ31. Do you agree with our proposed approaches to funding GDN activities over RIIO-GD2 related to heat decarbonisation?

In the Sector Specific Methodology Consultation document Ofgem state that they would like GDNs to engage proactively with heat decarbonisation through

- a. **Low and no regrets heat decarbonisation projects:** We believe that there are a number of projects that could be funded under this structure and that proposed definition of 'projects that do not expose consumers to material asset stranding risk is appropriate. Whilst we can identify projects at the start of the business plan it is important to note that this is not a one-off point of decision and - particularly given the reduced business planning period – important projects may not be identified in time to include in the business plan with appropriate robustness. Rather than having to choose between a more constrained plan or including more speculative projects we think that it is important that this should be a discretionary roll-out mechanism for decarbonisation projects (described below).

Secondly, it is very important that projects that are sufficiently robust to enter the business plan then they should be separated out from core expenditure within the business plan data templates. If this is not the case then network companies that are put forward low and no-regrets projects risk being penalised under the business plan incentives efficiency test.
- b. **Innovation projects that support decarbonisation.** We support the inclusion of heat decarbonisation projects within the broader innovation stimulus to form both demonstration projects, and to provide technical and economic evidence to inform heat policy decisions. It is important, however, to recognise that decarbonisation projects occur at all scales, and that we consider it very important that innovation funding mechanisms similar to the NIA are in place to facilitate smaller and more discrete projects that support decarbonisation (along with other points of innovation focus).
- c. **Should enable GDNs to respond to changing demand.** We welcome the opportunity to propose an uncertainty mechanism based on changes in demand. We think that this is important for projects where the level and scale of deployment is heavily dependent on the level of policy support or regulatory structure, such as the renewable heat incentive or low emission zones.

We should note however that this is different from the discretionary roll-out mechanism that is referred to above, as the re-opener enables networks to respond to a change in policy, the discretionary roll-out mechanism supports the deployment of new technology as it crosses from innovation to independent commercial deployment.

- d. **Heat policy reopener.** We would support the use of a heat policy re-opener on the assumption that this would accommodate significant developments in government policy on a national level and regional level. Heat policy in Scotland is very different to Westminster and needs to be recognised as such. We do not think that this should be limited to 'Central Government' a term that we assume covers Westminster based departments only, as such we welcome Ofgem opening the opportunity to consider a bespoke uncertainty mechanism for heat policy across other points of government.

Secondly where the heat policy reopener is subject to a sharing factor, we need to recognise that this has to be recalibrated according to the new sharing mechanism structure. It is not appropriate that a company with low sharing factor should have a higher threshold for the same re-opener as a company with a lower threshold.

It is our view that given the importance of decarbonisation it is important to incentivise good practice separately and that this good practice should extend across both decarbonisation and whole systems recognising that there is more that as networks we can do to become more responsive to changing technology and use patterns on our network. On this basis we would propose a Network Responsiveness Incentive.

- e. **Network Responsiveness Incentive.** We would support the introduction of a discretionary incentive that demonstrates facilitating good practice in supporting and promoting both decarbonisation and whole system approaches. This incentive recognises that good practice is currently undefined and recognises that business as usual approaches need to change across network planning teams to facilitate change and responsiveness to new policy and new technology. Measures that this could support include promoting changes to industrial standards, innovation and facilitation in new entry connections, co-ordination with local energy strategy teams and housing developers. We believe that without specifically calling this out and incentivising it, then it will remain challenging to address industry barriers to change and reductions in consumer costs are less likely to achieve their full potential.

As we set out above, we also believe that whilst we can identify projects at the start of the business plan that, given the reduced business planning period, important projects may not be identified in time or may not be developed to an appropriate standard. As such we think it is important to have a discretionary roll-out mechanism for decarbonisation projects.

- f. **Discretionary decarbonisation and whole systems roll-out mechanism.** Recognises that there are projects that support the decarbonisation pathway and whole systems strategy that are not fully definable at the point of business plan submission that may require network investment to facilitate and implement. As such we would suggest a use-it-or-lose-it funding mechanism through which projects that have not been identified at the start of the business plan are able to progress without having to wait until the next business plan period in-order to secure the respective funding. This would enable changes due to Future Billing and Real-time networks projects support changes to billing zones, rolling out the removal of processing requirements for Biomethane/BioSNG through new billing zones and the removal of constraints for embedded entry through smart controls & instrumentation or the provision of centralised entry for green gas.

GDQ32. Are the GDNs' Distributed Gas Connections Guides and distributed gas information strategies helpful and effective? If not, how could they be improved?

As the development of distributed gas connections has progressed during the RIIO-GD1 period the information contained in the Connections Guide and strategy document has helped developers of biomethane and other unconventional gas projects gain an understanding of the process and governance around obtaining a connection to the network.

Whilst there are still some uncertainties around an appropriate mechanism to stimulate the market once the current Renewable Heat Incentive ends in 2021 there is still merit in the publication of the guidance and strategy documents by GDNs. It may be appropriate as we move into RIIO-GD2 to combine the information that is contained in the two separate documents into one, as currently there is an element of repetition.

2.4 Outputs: Maintain a safe and resilient network

Observations and overview:

Stakeholder and customer engagement that we have completed thus far strongly indicates that the safety and reliability of our network is highly valued and should not be compromised. However, there is no indication that increased investment is necessary unless it can be demonstrably shown that there are additional benefits for customers that they have indicated they are willing to pay for.

Our overarching aim is to ensure that gas is contained within the gas transmission and distribution system thus ensuring its continued safe and reliable operation, meeting our safety legislative requirements and fulfilling the arrangements specified in our safety case, which has to be accepted by the HSE.

Against this background, we are mindful of the current uncertainty around future energy pathways and recognise that any interventions identified and required on the network assets during RIIO-GD2 should reflect this uncertainty and thus be designed to ensure we can continue to operate safely having due regard for asset stranding risk. We will deliver the appropriate asset intervention based upon our '4R' strategy of repair, refurbish, replace or rebuild. We have established this flexible intervention approach during RIIO-GD1 and will continue to enhance our asset management processes and reflect these in our RIIO-GD2 plan, underpinned by our ISO55001 accreditation which informs our approach to managing the different assets.

We support the introduction of the Network Asset Risk Metric (NARMS) which will provide a consistent means of measuring and reporting network investment. However, we believe that the maturity of this approach needs to develop further in the remainder of RIIO-GD1 and during RIIO-GD2 and that it is too early to solely depend upon as a means of developing a business plan and setting of allowances in RIIO-GD2. We propose that investment plans also need to be supported by CBA (Cost Benefit Analysis) and that the outputs from the CBA should be used alongside outputs from NARMS to assess investment proposals.

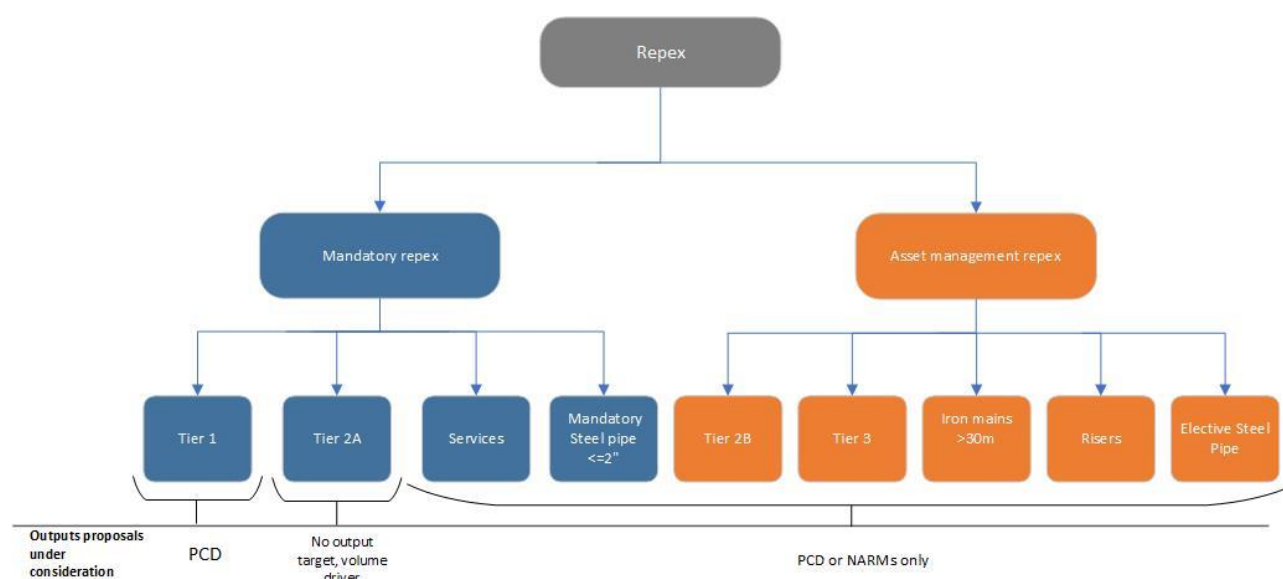
Response to consultation questions:

GDQ33. What are your views on the overall outputs package considered for this output category?

Repex

We broadly support the outputs package proposed for pipe risk management activities (Repex) and agree that Price Control Deliverables (PCDs) measuring length and volume offer metrics that can be easily understood by our customers and stakeholders.

We believe that the Diagram (Figure 7, Page 72) helpfully shows the differentiation between mandatory and asset management activities although we have a slightly different view as shown in the revised diagram below.



We have added an additional mandatory component for $\leq 2''$ steel which must be replaced when found in the course of mains replacement work or when worked on as part of our emergency repair and connections processes. This is not new and has been the case from a GDN and HSE perspective for many years.

Conversely, we have amended the elective steel component in the asset management activities section to include steel of all diameters, reflecting the potential for some $\leq 2''$ steel to be replaced on an elective basis rather than a mandatory driver.

Whilst PCDs are appropriate for asset management activities, we believe that some flexibility over the RIIO-GD2 period is required to address changing risk profiles. On this basis we believe that the development of a mechanism for adapting the investment profile over time, potentially based upon NARMS outputs, will ensure GDNs can respond appropriately to emerging issues.

We are also mindful of the current focus on gas riser supplies to multiple occupancy buildings and would highlight the potential need to incorporate any changes in Law and/or HSE policy into an appropriate reopener mechanism.

NTS Exit Capacity

SGN fully supports the current incentive and would advocate its extension to cover Assured Offtake Pressures.

The existing NTS Exit Capacity Incentive drives the appropriate behaviour from the distribution networks in managing the efficiency of both the upstream and downstream systems. The networks are incentivised to nominate the minimum levels of demand commensurate with a peak 1 in 20-year scenario and to take that demand from the offtakes with the lowest financial rate. As such, this incentive helps to drive down unnecessary investment to reinforce the gas network thereby minimising costs imposed on the customers.

While this incentive advocates the efficient management of flow, an additional incentive to manage inlet pressure would further enhance the overall benefits to customers by minimising reinforcement-based investment and therefore cost to the customer. On an annual basis, the gas distribution networks and the NTS agree the minimum Assured Pressure available within the NTS at each offtake. An incentive to minimise these pressures would surely be welcomed by the NTS and would ensure demand management is fully addressed by the distribution networks.

GDN Record Keeping

A key foundation for asset management is a core asset register with appropriate datasets to make timely asset interventions. During RIIO-GD1 SGN have invested in various systems such as predictive analytics, data mining tools, pipeline asset management systems as well as completing a programme of detailed, on-site, asset condition assessment surveys.

The outputs from our analytics assessments and survey data are being used to further enhance the reliability of the NARMS modelling we will use for the remainder of RIIO-GD1 and will underpin our RIIO-GD2 proposals.

Accordingly, we would support a broad incentive measure of record keeping and that companies with a high-quality asset register should be rewarded whilst those that don't should be encouraged to improve. Whilst a PCD may support the delivery of an output it does not necessarily follow that quality and accuracy of the output will also be there if the input data is inaccurate or estimated.

Gas Holder Demolitions

Whilst we think that gas holder demolition is important, and we will continue to progress thought the demolition of gas holder sites where appropriate we think that this is only one component of a broader legacy issue. Specifically, we need also to consider both legacy land issues and the remediation of historical pollutants and also we need to consider redundant assets, and looking to remove above ground assets that have been decommissioned and have a higher risk associated with them.

Network Asset Risk Metric

We fully support the ongoing development of the NARMS methodology as a means of measuring and reporting the outputs from investment during RIIO-GD2. However, we also believe that the current model lacks maturity and should not be used in isolation as the primary means of assessing investment in RIIO-GD2. For similar reasons, we believe that further work is required in terms of GDN records quality and the underpinning condition and deterioration assumptions in the models before it can be used to compare (relative) across GDNs

Cyber Resilience

We strongly support the need to reinforce investment in cyber resilience. However, we are concerned that an output led approach is inappropriate in this instance and may lead to the delivery of the target rather than a mitigation of a growing and unpredictable risk. For these reasons we would support an outcomes-based approach that identifies the outcomes that we are trying to achieve such as avoiding a security of supply issue created by a malware or cyber security issue for example.

This is widely recognised as an ever-changing threat and we believe it is appropriate to incorporate additional investment requirements identified during RII0-GD2 into an appropriate reopener mechanism.

Physical Security

We broadly agree with the approach set out in Chapter 6 of Sector Specific Methodology Consultation and its approach to CNI sites. However, we also recognise that physical site security is an important feature for all our sites and we will ensure appropriate levels of security are maintained and kept up-to-date at all sites across our portfolio.

GDQ34. For each potential output considered (where relevant):

- a) Is it of benefit to consumers, and why?
- b) How, and at what level should we set targets? (e.g. should these be relative/absolute)
- c) What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)
- d) Where we set out options, what are your views on them and please explain whether there are further options we should consider?

Repex

a. Is it of benefit to consumers, and why?

Investment in pipe risk management (Repex) is typically the largest expenditure area for GDNs. As such it is important that consumers can easily understand what is being delivered. Outputs defined in terms of length and volume (PCDs) are a clear means of achieving this objective and allow an easy comparison between GDNs

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

Targets should be absolute, however, given the considerable size of the programme, and the practicalities of achieving an exact metric at the end of the period, we also support the development of symmetrical tolerance dead bands if penalties are being considered.

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

We do not believe it is appropriate to incentivise these activities (penalty or reward)

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

In general, we support the use of PCDs although NARMs could also play a useful role in managing asset management activities.

NTS Exit Capacity

a. Is it of benefit to consumers, and why?

The incentive directly encourages the efficient booking of Flat Capacity at each offtake to meet the peak 1 in 20-year demand and to avoid any overbooking. Networks can maximise the incentive by accurate analysis of demand and by detailed forward forecasting.

The incentive also encourages GDNs to book the peak demand from offtakes, where the NTS has the highest surplus of capacity. This is achieved by the pricing of the incentive at the offtakes.

By ensuring the demand forecasts are tightly controlled and by ensuring that such demand is allocated to offtakes, where capacity is available on the NTS, any resultant reinforcement is minimised, thereby minimising costs to customers.

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

The scale of the Incentive is appropriate. However, for RIIO-GD1 prices from three years ago are being used, which appears rather artificial. In practice, GDNs get a forecast on 1st April (known as Indicative Charges), which we use as part of our planning of offtake capacities for the following gas year commencing in October. In October, the final prices are specified. So, use of final prices is not practical or reasonable as these are published after we agree offtake capacities for the gas year. We should therefore still use forecast gas prices, but those that are the most recent, not those from T-3

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

The nature and scale of the reward is appropriate, and we are happy to contribute to a review of the current design if deemed necessary. Further, we would also encourage the inclusion of an additional incentive based around the agreement of Assured Pressures at the offtakes.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

We would recommend the use of the Indicative Offtake Capacity prices that are published on 1st April each year rather than the Final prices, which are published at the start of the gas year (October) and after all planning and forecasts for that year have been concluded.

We would also recommend that the incentive is extended to cover Assured Pressures, which are also important in managing the capacity of the networks upstream and downstream of the offtake.

GDN Record Keeping**a. Is it of benefit to consumers, and why?**

We believe that improved record keeping should be an objective of the RIIO-2 price control period. Particularly as we move to decisions and investments that are determined primarily by the level of monetised risk removed, we believe that it is in customer's interests to have as high-quality records for our assets to ensure that the right comparisons are being made.

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

We believe that the level should be relative as inherently a comparison across networks, and that this should be driven by a consistent approach of independent audit to asset records to identify both the breadth of the asset class and the quality of the data and the improvements that have been achieved.

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

We think that this should be an incentive that rewards the best performers and encourages those companies where there are gaps to improve. Currently we do not have a baseline or consistency in measurement, so we think that it is too early to penalise companies on a relative measure, but this may be appropriate if a company does not demonstrate improvement over the course of the price control.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

No options were set out here.

Gas Holder Demolitions**a. Is it of benefit to consumers, and why?**

We continue to support the removal of gas holders where it is appropriate to do so and in line with local planning requirements. In some areas we know that parts of the structure (usually the frames) have been given 'listed' status and the demolition in these cases would be limited to all elements of the gas holder with the exception of the surrounding and supporting frame which has the potential to increase the cost of removal.

Going into RIIO-GD2 however it is important to recognise that gas holder demolition is only one component of a legacy asset issue. In addition to gas holders, we also have to consider legacy land issues, and redundant assets.

Legacy Land Issues: There are large number of sites that have been contaminated through historical use that have now been passed onto the networks. We need to work to continue cleaning up these sites and think that there should be a PCD associated with cleaning up legacy sites.

Demolition of Redundant Assets & Structures: As a responsible network operator, it is important that we recognise the lifecycle of assets and that effective demolition is undertaken to remove any residual societal risks and associated on-going maintenance. These will be incorporated into our RIIO-GD2 plan where appropriate

How, and at what level should we set targets? (e.g. should these be relative/absolute)

The targets should be based for both redundant sites and legacy land issues on a risk-based approach of the existing asset bases.

b. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

n/a

c. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

n/a

Network Asset Risk Metric

a. Is it of benefit to consumers, and why?

We fully support the development of NARMS. However, the methodology is extremely complex to grasp with limited expert knowledge within the industry. We believe that it is of benefit for consumers to be aware that a consistent methodology is being used to report on network investment but recognise that the process itself is far too complex for consumers to easily understand

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

Targets should be absolute; however, it is important that PCDs and NARMS outputs are not set for the same activity to avoid conflicting target objectives. Output levels should be set based upon the model outputs included within GDN business plans.

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

We have a number of concerns about the current proposals for the 'incentive':

- The 'incentive' is weighted heavily towards penalties with little opportunity to incentive good asset management, which is surprising as the 'Monetised Risk' methodology was envisaged as a mechanism to improve the quality of asset management within the DNs.
- The use of whole life Monetised Risk benefit in the calculation of penalties will place a heavy burden on the DNs. There is also little guidance as to period over which such a penalty would be collected; logically, this would also be over the life of the asset meaning that the burden on the DN would last many years. Often, there is little direct relationship between the cost of the intervention and the whole life benefit as calculated from the Monetised Risk methodology. As such, relating the penalty to the benefit rather than the avoided cost of intervention risks breaking the link between penalty and benefit to which the DN is exposed.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

n/a

Cyber Resilience

a. Is it of benefit to consumers, and why?

Cyber resilience is of substantial benefit to consumers in terms of reduced cost and reliability of supply. The experience of malware in recent years has demonstrated the vulnerability of global systems and the need to keep up to date on cyber protection in order to maintain safety and reliability.

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

We do not think that it is appropriate to introduce targets for cyber resilience as we do not think that nature of the concern posed by malware and cyber insecurity can be sufficiently well defined in advance of a 5-year price control. The pace of change is too rapid, and by trying to set targets you risk focusing attention on the delivery of the targets rather than the protecting against the risk.

c. What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

We do not think that it is appropriate to introduce targets for cyber resilience as we do not think that nature of the concern posed by malware and cyber insecurity can be sufficiently well defined in advance of a 5-year price control. The pace of change is too rapid, and by trying to set targets you risk focusing attention on the delivery of the targets rather than the protecting against the risk.

Rather we think that cyber security should be outcomes rather than outputs based, the outcome that we are trying to achieve is the avoidance of a serious cyber security or malware incident and that investment should be defined appropriately.

d. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

n/a

Physical Security

a. Is it of benefit to consumers, and why?

Physical site security is for the benefit of consumer as result of improved security of supply and a reduction in direct harm that may arise from a breach in security. There is a concern that the approach put forward through the sector methodology consultation place to great an emphasis on the CNI sites only, and we think that it is important that physical security should be extended across site to ensure that they are maintained up-to-date and of an appropriate standard.

b. How, and at what level should we set targets? (e.g. should these be relative/absolute)

The proposals cover allowances for existing CNI (cat. 3 and 4) sites and re-openers for new requirements. Any projects for cat. 1 or 2 sites would need to be based upon a CBA, which seems reasonable.

What are your views on the design of the incentive? (e.g. reward/penalty/size of allowance)

We think that this should form the basis of a price control deliverable.

c. Where we set out options, what are your views on them and please explain whether there are further options we should consider?

n/a

GDQ35. What other outputs should we be considering, if any?

We believe this has been adequately covered

GDQ36. What are your views on the RIIO-GD1 outputs that we propose to remove?

Maintaining operational performance (MOPs):

- Duration of telemetry faults,
- PSSR fault rate.

These outputs are currently reported to the HSE and we support their removal.

Repex

Observations and overview:

We support putting in place PCD output targets for mandatory activities such as the total volume (in kilometres) of Tier 1 iron mains abandoned over the RIIO-GD2 period. If penalties are being considered, we would want to see the development of appropriate dead bands that reflect the considerable size of the programme and the challenge of hitting an exact metric.

In relation to addressing variances within Tier 1 diameter band delivery, we broadly support the proposal to set tolerance bands between diameter mix outlined in GDNs' business plans and actual delivery. However, we would be concerned if the + / - % tolerances were set too low and resulted in the programme being not feasible or cost efficient to deliver.

We believe that a PCD should not be set for replacing non-PE services in RIIO-GD2 and support Ofgem's Option 3 proposal for services to be included as an asset class within the NARMs outputs. The GDN's would then be required to meet their NARMs output as the key driver of these workloads.

We do not think that outputs should be set for asset maintenance repex activities and again support Ofgem's Option 3 proposal for the activities included within this work category to be captured with the asset classes covered by NARMs for RIIO-GD2. As per services, the GDNs would be required to meet their NARMs output as the key driver of these workloads.

We support not including Mains Replacement Level of Risk Removed, GIBs and fractures as output measures for RIIO-GD2.

We agree with the proposed approach to keep repex uncertainty mechanisms for RIIO-GD2 to adjust cost allowances for outturn workloads for Tier 2A and ductile iron main replacement. We would also propose to add <=2" Steel mains replacement to this mechanism if this was funded by a volume driver in RIIO-GD2.

Response to consultation questions

GDQ37. What are your thoughts on our proposals for Tier 1 outputs?

We take seriously our responsibility to society and delivering value to our customers. Having agreed our Business Plan with Ofgem for the RIIO-GD1 period we refined our mains replacement delivery strategy by accelerating our programme of work during the first four years of RIIO-GD1, concentrating on smaller diameter iron pipes which we assessed carried a higher level of risk. These refinements were designed to deliver safety and leakage reduction benefits more quickly for our customers. As a result, the mix of pipe diameters in our work package had become inconsistent with what we had initially submitted in our RIIO-GD1 Business Plan. To ensure fairness for our customers we made a voluntary contribution of £50m to our customers to reflect the differences between actual delivery and what was set out in Ofgem Final Proposals. We will be interested to see what mechanisms Ofgem propose in order to apply corrections for other GDNs that find themselves in the same position but have not been forthcoming with a contribution.

Proposals for Tier 1. We agree that it is very difficult to hit the diameter mix exactly over the 5-year period and support proposals for tolerance ranges around each of the diameter bands. These need to be carefully calibrated recognising the significant scale of this work programme.

We also recognise that hitting an exact length on a given day (01/03/2026), it is also very difficult, and it is often the case that to hit your output target there will be an element of over run of the programme. If penalties are being considered and no true up for over-runs, then we would propose that a similar tolerance is allowed to reflect any under or over delivery in Tier 1 within RIIO-GD2 and that that is carried forward with appropriate funding in GD3.

GDQ38. Do you think we should set an output for replacing non-PE services?

Yes, service renewals are driven by all mains replacement activities, as well as from other activities such as gas escapes, customer driven service alterations, governor maintenance activities, and as required by the HSE where we identify emerging service failures in a geographical area identified using our data analytics driven service insight (hot-spot) tool. We also have, and are tracking, several integrity issues which we expect to give rise to small volumes of part renewals, most notably things like above ground service entry where we part renew the remaining part of the service.

The bulk of these services renewals are driven by the mains replacement programme. Our forecast for service transfers and renewals will be based on historical performance, tracking forward, but there is a degree of uncertainty as we undertake work in new areas and there is not a high degree of certainty of how many of those services are steel and how many are PE. Our forecast is based on historical performance, but it can be variable.

GDQ39. Do you think we should set outputs for asset maintenance repex activities?

The risers need to be measured in terms of number of interventions not number of replacements. We have a range of interventions, we will set out in our business plan from full replacement, part renewal, remediation, refurbishment or cutting it off completely and we have some thinking around what we might do for a buy out or voucher scheme. It is important that we are intervening to manage the risk of that asset, which is why it is the intervention that should be measured not the replacement.

For other assets, it is about the type of risk management intervention we use in line with the HSE enforcement policy which requires “appropriate intention” which may include replacement, remediation or decommissioning only. For example, for Tier 3 during RIIO-GD1 we have very successfully deployed the CISBOT robot to remediate the pipe joints thus delivering a material safety improvement. The definition of decommissioning should remain as anything intervention deemed to be “appropriate attention, including but not limited to full pipe decommissioning and replacement in line with the HSE Enforcement policy.

GDQ40. What are your thoughts on not including Mains Replacement Level of Risk Removed, GIBs and fractures as output measures for RIIO-GD2?**Mains Risk Removed**

We support the removal of the Mains Risk Removed measure. Our view is based on feedback received during the Ofgem stakeholder engagement process, resulting from GDN’s taking Ofgem and other stakeholders through the level of complexity around the primary output for risk removed. We don’t believe it is at all easy to explain or understand, especially to stakeholders.

GIBs and Fractures / Corrosions

We also agree to not include output measures for GIBs, fractures and corrosion as there is a significant dependency between cold weather events and these numbers which are unpredictable.

SGN has uniquely completed and presented a significant amount of work through our predictive analytics process and the Hypercube NIA project, both of which will be described in our business plan, to demonstrate this link.

This data is also reported to the HSE.

GDQ41. Do you agree with our proposed approach to repex uncertainty mechanisms?

Yes, it is appropriate to continue with the current mechanism for Tier 2a iron pipes. The decommissioning and replacement of medium pressure ductile iron pipes is also a mandatory requirement that will require similar treatment. We agree that these are likely to be relatively low volume activities which we will forecast in our plan based upon historical evidence.

We also agree that any material change in HSE Enforcement Policy or additional HSE requirements not yet identified (e.g. risers) should also be subject to an uncertainty mechanism. This could be triggered at any point in RIIO-GD2.

NTS exit capacity**Observations and overview:**

We support the current incentive for NTS Exit Capacity as it encourages efficient capacity management both within the NTS and within the GDNs by:

- Accurate assessment of gas demand,
- Detailed forecasting of future demand both leading to robust peak 1 to 20 demand forecasts,
- Encouraging the use of available capacity within the NTS through the pricing of the incentive mechanism at individual offtakes / charging zones.

In so doing, the costs of system reinforcements incurred by the customer are minimised.

SGN would support the move away from the use of T-3 gas prices and, instead, to use the indicative prices published in the April prior to the start of the gas year. Ofgem have recommended the use of Final gas prices. However, these are published in October, at the start of the gas year, when all planning and demand allocation has been finalised.

SGN would recommend the Authority considers an additional incentive that covers Assured Pressures at offtakes. Available capacity is a function not only of flowrate (demand), but also the pressure at which that flow is delivered. As such, an incentive to minimise Assured Pressures would ensure demands placed upon the NTS by the DNs are fully managed and incentivised.

Response to consultation questions:

GDQ42. What are your views on our proposal to use final offtake capacity prices rather than T-3 offtake capacity price estimates in the calculation of incentive rewards and penalties in RIIO-GD2?

Our understanding is that, currently, prices from three years ago are used, which appears rather artificial. In practice, GDNs get a forecast on 1st April (known as Indicative Charges), which we use as part of our planning of offtake capacities for the following gas year commencing in October. In October, the final prices are specified.

So, use of final prices is not practical or reasonable as these are published after we agree offtake capacities for the gas year. We should therefore still use forecast gas prices, but those that are the most recent (known as indicative prices), not those from T-3.

GDN record keeping

Observations and overview:

A key foundation for asset management is a core asset register with appropriate datasets to make timely asset interventions. During RIIO-GD1 SGN have invested in various systems such as predictive analytics, data mining tools, pipeline asset management systems as well as completing a programme of detailed, on-site, asset condition assessment surveys.

The outputs from our analytics assessments and survey data are being used to further enhance the reliability of the NARMS modelling we will use for the remainder of RIIO-GD1 and will underpin our RIIO-GD2 proposals.

Accordingly, we would support a broad incentive measure of record keeping and that companies with a high-quality asset register should be rewarded whilst those that don't should be encouraged to improve. Whilst a PCD may support the delivery of an output it does not necessarily follow that quality and accuracy of the output will also be there if the input data is inaccurate or estimated.

Response to consultation questions:

GDQ43. Do you consider that an output(s) is necessary:

- a) for MOB recording keeping (in the form of a bespoke Price Control Deliverable)?**
- b) for other specific areas of GDN record keeping (if so which areas)?**
- c) to cover GDN record keeping requirements as a whole?**

MOB record keeping: We believe that there are inconsistencies in GDN approaches to MOB and specifically in the methodology that underpins the risk assessment process. We believe that SGN has the most advanced model which we developed with DNVGL and this is due to be updated and refreshed in the early part of 2019.

Before the development of reliable PCDs in this specific area, we believe that all GDNs would need to undertake a robust assessment of their records around risers and undertake similar validation exercises that SGN have recently completed with an external data management company. Furthermore, the dataset for risers will continue to change and increase as more high-rise (above 5 storeys) and mid-range risers (3-5 storeys) are identified and risk assessed meaning that we are some way away from a reliable dataset across all GDNs. HSE have recently audited across all GDNs and we believe SGN has seen

a good outcome. However, we believe we need to see the emerging HSE view on this before clarifying next steps across all GDNs. Clarification around the definition of MOBs and any subsets needs to be agreed.

Other specific areas of GDN record keeping: As previously indicated, we encourage Ofgem to consider an Asset Records Quality Incentive to promote accuracy of asset and condition data and the coverage of asset classes within the NARMs model.

GDN record keeping requirements as a whole: For clarification, any records related to GDN record keeping should be focussed on asset records. We do not think it is appropriate to bring forward a broader measure that covers HR and Finance functions as arrangements are already in place to monitor and ensure quality.

2.5 Cost assessment

Observations and overview:

This area is progressing constructively through Ofgem's Cost Assessment Working group (CAWG). Discussions are ongoing on all areas of the cost assessment process including updating the benchmarking models and cost drivers where this improves the robustness of the results. We are playing an active role in these discussions and therefore we have limited our answers in this section to general points of principle rather than detailed critique of the models and drivers. We welcome the opportunity to play a full role in the further consultations in this area in the summer of 2019.

Overall, we agree that the cost assessment process should evolve, taking learnings from RIIO 1 rather than a step change in approach. We believe there are credible options to update models and drivers, including, but not limited to the options put forward in the consultation. We will continue to play an active role in these discussions. However, we believe there are challenges faced in the bottom up regressions to fully explain efficiency and would therefore have concerns if there is a move away from the 50% weighting given to top down Totex regressions and also the qualitative assessments.

Regional variations in costs continue to play an important role in the cost assessment process and we will be undertaking further analysis to evidence this, such as the additional cost of working in London and the sparsity challenge faced by some Networks, including our Scotland Network.

Response to consultation questions:

GDQ44. Do you agree with our intention to evolve the RIIO-GD1 approach for RIIO-GD2?

In general, we would view the cost assessment approach in RIIO-GD1 to be an appropriate base to build on. We do not believe that a whole new approach to cost assessment is required and have not been convinced that better alternative techniques exist. For example, techniques such as DEA or SFA are likely to provide no further value due to the limited number of data points available and the likelihood that such techniques generate similar results to the existing models.

However, we do believe there are improvements that can be made to the approach based on the learning obtained in RIIO-GD1 and the options for reviewing models and drivers set out in the consultation document provide an opportunity to continue constructive discussions through the CAWG. Given this ongoing work during the first half of this year, we welcome the chance to play a full role in the summer consultation that follows. There are a lot of important decisions to be made on the methodology and therefore, this consultation is too early to finalise the methodology.

GDQ45. Do you have any comments on our initial views for cost assessment, including appropriate cost categories, cost drivers, analysis toolkit and how we combine the analysis?

We believe that a review of the cost drivers used in the regressions and cost categories is required and we believe Ofgem has identified some of the key areas for review. We will be listening to other stakeholder views in this area in the coming months to test out our current thinking.

Broadly speaking we agree with Ofgem's principles for good cost drivers – i.e. cost drivers should make economic and/or engineering sense; there must be accurate and consistent data on the driver; we would not expect to see significant fluctuations on results or efficiency scores (particularly year on year); and drivers should ideally be beyond the control of the company. We also agree with Ofgem that there are trade-offs across these principles and some degree of pragmatism might be needed. We note, for example, that Ofgem has suggested MEAV (Modern Equivalent Asset Value) might not be used at RIIO-GD2, but a significant proportion of the benchmarking models for RIIO-GD1 used MEAV as the cost driver. If an alternative metric is to be used, it should be because it meets the overall principles better than MEAV for any given model.

On a more general note, we agree that there needs to be a mixture of both regressions and non-regression analysis, as there are activities which are not suitable to put into regressions. In these areas, provided there is an independent review of efficiency, this should not weaken the overall methodology.

We acknowledge that quality may be difficult to integrate directly into regressions, however, there are clearly additional costs incurred as a result of different levels of outputs delivered in RIIO-GD1. The overall cost assessment methodology needs to recognise this.

We agree, as in RIIO-GD1, that we need to take account of network specific costs, regional factors, urbanity, and sparsity. We support the need for evidence in this area to be fully shared with other stakeholders. We will also be providing evidence of regional variations in customer satisfaction that we believe should be considered.

We have observed that there are legitimate year on year variations in regression results and consideration needs to be given to include more than one year in the regression analysis. There is likely to be good reason why outputs and costs may change in RIIO-GD2 (and some Networks may have bespoke targets) and therefore there needs to be careful consideration of how historic and forecast models interact. Additional sense checks are likely to be required.

In relation to combining the overall results, a mixture of top down and bottom up should be retained. Top down regressions provide an essential sense check and mitigates the risk that aggregating bottom up regressions 'cherry picks' the best performer across numerous categories and also mitigates the challenges that disaggregated cost drivers may not always fully explain trade-offs made across activities. Any move away from at least a 50% weighting of Top Down needs firm justification.

GDQ46. Do you have any views on our proposed options for loss of metering work?

Due to the delay in the Smart Metering roll out, we do not accept that we have reached a stable position on emergency costs and staff utilisation as legacy meterwork is still continuing for those Networks who maintain the capability.

The impact of loss of meterwork in RIIO-GD2 remains a complex issue due to the continued uncertainty around the timing of Smart Metering roll out and its impact on emergency workload due to the interventions required.

We provide an essential emergency service and it is important this is funded appropriately.

GDQ47. Do you agree with our proposal for implementing symmetrical adjustments for regional or company specific factors?

We consider that imposing symmetrical adjustments might lead to arbitrary increases / decreases in cost allowances across the sector and could undermine the cost assessment models. Instead, we think that Ofgem should set adjustments for specific companies reflecting the evidence of issues that are unique to a particular GDN or area, and which are material enough to merit benchmarking normalisation.

2.6 Uncertainty mechanisms

Observations and overview:

The use of uncertainty mechanisms will be an important part of the RIIO-GD2 package. There are various mechanisms that can be used including re-openers, volume drivers, indices and 'use it or lose it' allowances. We acknowledge that these mechanisms should not dampen incentives on companies to mitigate the impact of uncertainty but we also recognise that a balance of risk needs to be obtained so consumers or companies are not unreasonably exposed to cost or workload uncertainty.

Response to consultation questions:

GDQ48. What are your views on the proposed uncertainty mechanisms and their design?

We believe uncertainty can be dealt with through a range of tools such as reopeners, indices and volume drivers. Where such tools are used, we acknowledge the need for them is well evidenced and they should provide an appropriate balance of risk for all stakeholders. On this basis, we will be considering their appropriate use in our RIIO-GD2 Business Plan submission

In RIIO-GD1, the threshold for re-opener triggers incorporated the cost sharing factors that were set. If the sharing factors are significantly changed, the threshold that reopeners are triggered will need to be reviewed.

Given the potential number of re-opener triggers, there needs to be an aggregated trigger for all mechanisms to ensure that if individual mechanisms are not triggered, companies and consumers are protected if an aggregate cap is reached.

Given the five-year length of the price control, we do not believe specific windows are appropriate and Networks should be able to apply anytime during the price control period.

Regarding specific mechanisms proposed, we are responding separately in this response on cost of equity and debt indexation, tax and the cashflow floor. Regarding cyber, we will assess our confidence in this ever-increasing risk as part of our Business Plan and if appropriate consider a re-opener.

On whole systems, more detail is required and we are considering mechanisms to deal with costs in this area which may include incentives.

Where effective uncertainty mechanisms are proposed, this should be a positive factor in the Business Plan incentive and overall sharing factor strength.

GDQ49. Are there any additional uncertainty mechanisms that we should consider across the sector and if so, how should these be designed?

In addition, most of the work proposed and requiring investment can be identified and planned in advance and hence can be forecast in the RIIO-GD2 business plan. However, some events are unpredictable and could have a significant financial impact. These are often low probability, high consequence events that cannot be reliably foreseen

Examples include:

- River bank erosion exposing transmission / distribution assets that would subsequently fail
- Legacy legal arrangements for pipelines in private land where the original legal clauses require removal of the asset at the cost of the asset owner; e.g. non-rechargeable diversion

In some cases, it may be possible to deal with this through a volume driver. However, this is unlikely to be possible for high costs assets (transmission pipelines and equipment) where the costs are highly variable and hard to calibrate from a unit cost perspective. We will assess the confidence level of this work in our Business Plan submission.

One further area we are considering proposing an uncertainty mechanisms is in relation to the Gas Transmission network charging review. In the introduction, Ofgem reference the change in transmission operator charges for access to the

networks and compliance with EU law (para 2.24). It is important to recognise that the costs and the implications of this are not clear or fully understood, with significant debate and consultation currently underway. It is important that these potential changes are recognised, and networks are held whole for any financial impact or risk exposure through a re-opener mechanism.

We are also considering whether volume drivers may be appropriate in other areas of business where uncertainty of the volume (but not necessarily the unit cost) is uncertain. An example of this may be distribution mains reinforcement.

Examples of where re-openers or volume drivers may be required include;

- Changes to working practices due to legislative requirements or regulatory policy
- Cyber resilience
- Gas Transmission Charging Methodology
- Fuel poor and energy efficiency schemes
- New connections such as peaker plant and biomethane
- Decarbonisation and heat policy.
- HSE enforcement policy

GDQ50. What are your views on the RIIO-GD1 uncertainty mechanisms we propose to remove?

We believe there remains uncertainty regarding Streetworks in RIIO-GD2, particularly about the potential roll out in Scotland and more lane rental schemes in the South East. There is potential for RIIO-GD2 costs in this area to increase significantly and we will be assessing this as part of our Business Plan submission how best to deal with this uncertainty.

Review of Agency (Xoserve) costs

GDQ51. What do you think is the most appropriate approach for funding the GTs' expenditure for Xoserve in RIIO-2 and why?

We think that it is important that the Xoserve costs should be considered a pass-through item in RIIO- 2. This would create parity with the equivalent funding arrangements held by the Shipper community.

As gas distribution networks we are no longer in the position to significantly influence the direction of the Board or the activities as managed by the operational committees (DSC Contract and DSC Change Committees). As a result of the Funding Governance and Ownership (FGO) Review and subsequent new arrangements, collectively gas distribution networks provide 2 of the 8 board members - IGTs and National Grid Transmission each provide a further board member and the remaining 4 are Shipper-nominated representatives. At an operational level, gas distribution companies represent 2 of 12 constituency-based voting positions. Whilst we support the new governance structure and believe that the processes are working well, we consider that the imbalance between influence and funding creates challenges for both gas distribution companies and Xoserve themselves.

The majority of change at Xoserve is now being driven by Shippers in relation to reporting, proposed data service improvements and tactical response activities such as the Unidentified Gas Task Force. Furthermore, there are wider strategic activities being driven by the Shipper community, such as Xoserve's bid to become the Central Switching Service provider. Funding for these activities is determined via a number of factors – typically the tactical/strategic activities are determined on the basis of service beneficiary, whilst more standard service requests are funded according to the impacted service lines within the Data Services Contract (DSC). This can lead to a disconnect between the originator of a change and the funding parties – for example on occasion there are Uniform Network Code (UNC) changes raised by Shippers that as a Gas Transporter we are obligated to fund, irrespective of our involvement and/or support for the change. In these instances, we are reactive to the change and exposed to unexpected costs over which we have little influence and are unable to factor into our budgets.

From our discussions with Xoserve we understand that the difference in funding arrangements leads to a certain element of conflicting strategies within the customer base – with Shippers seeking to pursue enhanced activities whilst Transporters seek a more risk-averse approach.

In light of the above, we believe that as part of FGO implementation Gas Transporters no longer have significant influence through their position on Xoserve's Board and therefore suggest that pass-through arrangements should be put in place for the duration of RIIO-GD2 and RIIO-T2.

GDQ52. If Xoserve takes on any services beyond its core Central Data Service Provider role, how should we treat the costs

Any new services over and above Xoserve's Central Data Service Provider (CDSP) role should be dependent on the type of service being undertaken and the benefiting parties involved.

As an example, with Xoserve's bid to provide the Central Switching Service, whilst funded by the appropriate constituency (in this case the Shipper community), we believe this should not have been included under CDSP services as both the tender and the potential provision of the service were wholly outside of Xoserve's core role as CDSP.

The inclusion of this as a CDSP Service Line ultimately places all constituents in a position of risk. From a gas distribution perspective, this creates a risk over which we have no mitigating influence, through the creation of latent liabilities associated with providing the service but also in relation to safeguarding the ongoing delivery of our devolved licence and/or code obligations.

As such, we consider that non-core services should be managed outside of the DSC, with the appropriate ring-fencing in place, and funded by the requesting party.

3 Finance Annex Consultation

3.1 Introduction

Observations and overview

In supporting our consultation response we have been actively engaging with Ofgem through the ENA finance working group. Through this group and on behalf of the network companies the ENA commissioned a number of independent consultant reports which have informed the response to the Finance Annex Consultation, which have been submitted along with this response. These are as follows with their abbreviation of how they are referenced in our responses. The Oxera reports on the estimation of Beta and Gearing, and Debt Risk Premiums will be submitted post engagement with Ofgem on the matter on 14th March.

- Nera - Cost of Debt at RIIO-2 (Nera Report 1 – March 2019)
- Nera - Cost of Equity Indexation using Risk Free Rate (Nera Report 2 – March 2019)
- Nera - Review of UKRN Report Recommendations on TMR (Nera Report 3 – November 2018)
- Nera - Further Evidence on the TMR (Nera Report 4 – November 2018)
- Oxera – Rates of Return Used By Investment Managers (Oxera Report 1 – March 2019)
- Oxera – The Estimation of Beta and Gearing (Oxera Report 2 – to be published)
- Oxera – Asset and Debt Risk Premiums (Oxera Report 3 – to be published)
- Frontier - Adjusting Baseline Returns for Anticipated Outperformance (Frontier Report 1 – March 2019)
- KPMG - Assessment of Ofgem's Cashflow Floor Proposals (KPMG Report – March 2019)
- We have also referenced the following report which SGN submitted as part of its Framework consultation response: – ‘Regulatory Finance Issues – Response to RIIO-2 Framework Document’ (Nera Report 5- May 2018)

3.2 Cost of debt

Observations and overview

Conceptually we believe full indexation is the appropriate measure for setting cost of debt allowances, if its recalibrated in RIIO-GD2 with the introduction of a 15 to 20 year trombone to ensure that efficiently issued bonds since DN sales receive an appropriate allowance. Also, the significant refinancing costs associated with the sale by National Grid of its Gas Distribution businesses to Cadent need to be fully factored into the costs of debt for the gas distribution sector. Without these costs being incurred Cadent would have embedded debt with significantly higher coupon rates than those of its refinanced debt issued in the last couple of years, and these higher coupon rates would be the true comparator with other networks costs.

Furthermore, we set out the analysis that shows the absence of a halo effect and thus that a full allowance needs to be made for transaction costs, liquidity costs and the cost of carry. Transaction costs would include the extra costs of issuing CPI linked bonds in an illiquid market, or CPI swaps. Consideration also needs to be taken of the fact that if the financial metrics provide a credit rating below an average of A and BBB, Ofgem should revise the rating of the index underpinning the cost of debt mechanism. Finally, we also set out why smaller company allowance may be appropriate in setting cost of debt allowances and why CPIH should be used to deflate the nominal iBoxx as breakeven inflation overstates expected inflation.

FQ1. Do you support our proposal to retain full indexation as the methodology for setting cost of debt allowances?

Conceptually we believe full indexation is the appropriate measure, if its recalibrated in RIIO-GD2 to match the average tenor of issuance to ensure that efficiently issued bonds receive an appropriate allowance. Previous analysis by NERA for SGN shows this average tenor of bonds for energy networks to be around 20 years (Nera Report 5, Section 2.2.1.1).

The choice of a 10-year trailing average in RIIO-GD1 was constrained by the availability of iBoxx indices and the period since DN sales. However, these factors are no longer relevant to the selection of the trailing average in RIIO-GD2. As GDNs have issued debt since DN sales in 2005, a logical starting point for the trailing average would be 15 years extending to 20 years using the trombone precedent as per ED1 decision.

A 15-20 year trombone for RIIO-GD2 would mean roughly the same starting point as the ED1 trombone – and thus incorporate the efficiently issued debt at higher spot rates between 2005-2010, which would otherwise fall out of the ten year trailing average if that was to be continued in RIIO-GD2. It's worth noting that the CMA ED1 determination on the trombone recognised the need for the costs of debt issued pre-2004, i.e. before the start of the ED1 trombone, to be recognised but determined that the high rates of this debt was comparable to the rates prevailing in 2008-10 and thus the ED1 trombone appeared to be a reasonable proxy for the embedded debt costs of DNO's.²⁷

FQ2. Do you agree with our proposal to not share debt out-or-under performance within each year?

At this stage of the price control process (where the outcome of Ofgem's finance package is ambiguous) it's too early to comment on this particular issue without seeing the whole package and we therefore reserve our position to comment more fully on this proposal. However, we would comment that the same challenges to implementation highlighted in paragraph 2.12 of the Finance Annex would surely apply when considering levels of under or over performance against RAMs.

This is because not only will these considerations impact your own company's level of returns they can also potentially impact other companies through average sculpting or anchoring. Para 2.12 only seems to assess the impact that debt sharing via the RAMs may have on customers, and not the challenges it may have on other companies through the potential relative performance impacts of average sculpting and anchoring. Again, this highlights the need for a full impact assessment of the RAMs and a number of other significant departures from regulatory precedent proposed in the sector specific consultation.

FQ3. Do you have any views on the next steps outlined in Paragraphs 2.22 to 2.25 for assessing the appropriateness of expected cost of debt allowances for full indexation?

We agree that changes to the trailing average period do need to be assessed and, in line with our response to FQ1, the trailing average needs to be recalibrated in line with the average tenor of issuance. Additionally, we note that Ofgem are

²⁷ CMA (2015), "British Gas Limited Vs The Gas and electricity Markets Authority – Final Determination". Para 8.32

considering how the 'significant refinancing costs associated with the sale by National Grid of its Gas Distribution businesses to Cadent' (footnote 6, p11, of the Finance Annex) are being factored into their analysis. These costs need to be fully factored into the costs of debt for the gas distribution sector - as, absent this exceptional expenditure, Cadent would have embedded debt with significantly higher coupon rates than those of its refinanced debt issued in the last couple of years (which should be taken into account in the industry benchmark).

Furthermore, we agree that the reference benchmark should be assessed and if the financial metrics provide a credit rating below an average of A and BBB, Ofgem should revise the rating of the index underpinning the cost of debt mechanism.

As shown in slides 14-18 of the attached Nera Report 1 when;

- a) controlling for tenor and rating differences between utility bonds and iBoxx
- b) correcting for yield at issuance vs coupon at issuance
- c) controlling for the issuance of relatively inexpensive index Linked debt/wrapped debt in the mid-2000s

there is no halo effect and thus full allowance needs to be made for transaction costs, liquidity costs and the cost of carry. Nera show (Nera Report 1, slide 4) that that the 20bps assumed by Ofgem at RIIO-1, for example see Appendix 8 para 1.1 of the 'RIIO-ED1 Final Determination Overview', substantially understates these costs. Cost of carry and operational liquidity alone support an allowance of 23-56 bps not including transaction costs, as shown in slides 4 and 19 of Nera Report 5. This is even before consideration of the extra costs of issuing CPI linked bonds in an illiquid market, or CPI swaps that now need to be taken into account due to the move to CPI indexation. We also agree that a smaller company allowance may be appropriate in consideration of frequency and the costs of issuance compared to that assumed by full indexation, due to its RAV size meaning efficient size debt (i.e. greater than £250m) can be issued very infrequently.

Looking at para 2.25 it needs to be clear if assessing sector debt costs against expected allowances means that weighting is given to company size. If so an impact assessment needs to be carried out of this technique versus a flat average across the networks.

FQ4. Do you have a preference, or any relevant evidence, regarding the options for deflating the nominal iBoxx as discussed at Paragraph 2.14? Are there other options that you think we should consider?

We agree with the concerns of using breakeven inflation in the deflation of the nominal iBoxx as it overstates expected inflation due to the inflation risk premium that is priced into gilt yields to protect investors for the risk of unexpected changes in inflation. This would rule out option (i) of deriving CPIH-based allowances.

Option (ii) of using an expected value for CPIH should reduce forecasting risk vs option (i) as there isn't the inherent bias in the forecast, and we recommend the use of the long-term BoE 2% CPI forecast. Given the credibility of BoE's monetary policy we consider that inflation levels are likely to revert to BoE target. However, we suggest the best approach is to eliminate forecasting inaccuracy completely through trueing up the CPIH forecast with the use of CPIH outturn inflation data. We recognise this does risk introducing volatility, so we would recommend a suitable trailing average of outturn inflation.

3.3 Cost of equity

Observations and overview

Risk-free rate

We have previously expressed the opinion that using an ex ante forecast, based on an appropriate methodology, is our preference for setting the risk-free rate allowance. However, we recognise that Ofgem are minded to index the cost of equity, and on this basis we agree that the best approach to cost of equity indexation is to index the risk free rate only, assuming the weight of evidence is placed on the long term stable TMR rather than current market conditions when setting the cost of equity.

We believe that 20-year nominal gilts should be used as evidenced in the response to FQ6 below. There are also a number of reasons why 20 years is an appropriate tenor including the fact it aligns with the typical average remaining asset life, and thus investment horizon, of 20 years.

We recommend that the risk-free rate is measured over the 12 months for the financial year in question, based on a forecast and then trued up in the Annual Iteration Process, to get the most accurate input of the spot risk free rate over the period April 2021 to March 2026. Also, we recommend the use of CPIH to deflate the nominal gilt, in line with Ofgem's proposals for cost of debt deflation due to the concerns with the use of breakeven deflation.

Response to consultation questions

FQ5. Do you agree with our proposal to index the cost of equity to the risk-free rate only (the first option presented in the March consultation)?

We have previously expressed the opinion that using an ex ante forecast, based on an appropriate methodology, is our preference for setting the risk-free rate allowance. However, we recognise that Ofgem are minded to index the cost of equity, and on this basis we agree that the best approach to cost of equity indexation is to index the risk free rate only, assuming the weight of evidence is placed on the long term stable TMR rather than current market conditions.

FQ6. Do you agree with using the 20-year real zero coupon gilt rate (Bank of England database series IUDLRZC) for the risk-free rate?

We believe that 20-year nominal gilts should be used as these are less volatile than shorter term nominal gilts, and UK and European precedent is to use 10Y-20Y nominal gilts. Also, as detailed on slide 6 of Nera report 2, investors use long run gilts, and long-term real gilts do not provide an objective measure of the risk-free rate as detailed on slides 9 and 26. We agree with the use of 20 year tenor as this aligns with the typical average remaining asset life, and thus investment horizon, of 20 years.

FQ7. Do you agree with using the October month average of the Bank of England database series IUDLRZC to set the risk-free rate ahead of each financial year?

The use of a one month averaging period would be representative of only 5 months out of a 5-year regulatory period. Risk-free rate allowances estimated over shorter periods overreact to interest rate changes. On the other hand, fluctuations are reduced when using longer averaging periods. In addition, European regulatory precedents support the use of an averaging period of at least 6 months.

Therefore, we recommend that the RFR is measured over the 12 months for the financial year in question, based on a forecast and then trued up in the Annual Iteration Process. Para 3.48 of the consultation document states that using a risk-free rate for October in year t-1 means the latest information available to Ofgem on investor expectations is used. This ignores the fact that actual data can be used via the Annual Iteration Process.

FQ8. Do you agree with our proposal to derive CPIH real from RPI-linked gilts by adding an expected RPI-CPIH wedge?

We don't agree with this proposal because it effectively incorporates a 20-year "breakeven" inflation measure, which is the difference between the yields of 20-year nominal gilt and inflation-linked gilt. A 20Y breakeven inflation measure is likely to overstate outturn inflation because of the inflation risk premium embedded in nominal gilts, which compensates

investors for the risk of unexpected changes in inflation and is acknowledged by Bank of England and wider academic literatures.

Importantly we note the inflation risk premium effect is why Ofgem propose not to use breakeven inflation in the deflation of the cost of debt, and thus there appears to be a fundamental inconsistency in Ofgem's approach.

Additionally, there is uncertainty over the size of the RPI-CPIH wedge, reflected by the forecasting variance and historical averages, and therefore our preference is to deflate the 20-year nominal gilt by a long-term CPI forecast of 2% as set by the Bank of England. Given the credibility of BoE's monetary policy we consider that inflation levels are likely to revert to BoE target. However the best approach is to true up this forecast by using CPIH outturn inflation data. We recognise this does risk introducing volatility, so we would recommend a suitable trailing average of outturn inflation.

TMR

Observations and overview

Ofgem have not taken into account a significant issue raised by the energy networks on the methodology of deflating the TMR, which is a significant factor in the UKRN recommended range of 6-7% (CPI, real). The UKRN report uses historical CPI inflation published by the Bank of England, however this has a number of fundamental flaws pre the establishment of CPI as a measure in 1987, which means the switch to CPIH is being undertaken in a far from value neutral manner, as set out below.

Looking at arithmetic vs geometric averaging of long run historical TMR, as evidenced below, Nera conclude there is no recent evidence that supports an overturning of recent regulatory precedent on this issue. This precedent includes that used by the Competition Commission in its 2014 NIE review, where established TMR estimators by Blume and JKM support an adjustment to the arithmetic average of the order of a maximum of 30 bps (as evidenced in our response to FQ10 below). This level of adjustment is significantly smaller than UKRN's downward adjustment of up to 1 per cent.

Ofgem have not countered the key points of the Nera report of the errors in the way the historical TMR has been deflated and averaged - and thus why a historical RPI-deflated return (of 7 per cent), or 8-8.3% in CPI terms, shouldn't be used as a real return in a CPIH regulatory framework, as per regulatory precedent.

Response to consultation questions

FQ9. Do you have any views on our assessment of the issues stakeholders raised with us regarding outturn inflation, expected inflation, and the calculation of arithmetic uplift (from geometric returns)?

Deflation of the TMR

We don't believe that Ofgem have properly assessed the issues raised by the energy networks on the deflation of the TMR through ENA-Ofgem bilaterals, which culminated in a Nera report being submitted by the ENA on the matter (Nera Report 3). Ofgem needs to take account this relevant evidence in its assessment, as detailed below.

Firstly, the UKRN report uses historical CPI inflation published by the Bank of England (BoE) in the Millennium dataset to estimate a real (CPI-deflated) TMR of 6 to 7%, which is based on long-run realised returns (range due to differential weighting to arithmetic means). However;

'NERA's analysis shows that the Millennium CPI dataset does not provide a reliable measure of historical CPI inflation. This has been clearly acknowledged by the ONS and academic research. We conclude that the historical TMR back to 1900 must instead be calculated relative to the "official" RPI inflation.' (Nera Report 3, p4)

Nera believe this issue;

'should not be contentious as the ONS (2013) have investigated the reliability of historical data on CPI and clearly concluded: "sufficient data to calculate the CPI do not exist prior to 1987" ' (p4)

Furthermore, the Bank of England state²⁸;

'It should be noted the data do not represent official Bank of England data or National Statistics.'

and;

'In general, the spreadsheet should be viewed as 'work in progress' and is intended to be a shared research resource that will evolve and expand over time'.

Therefore, it is clear this dataset is not reliable and there is a lack of BoE and ONS endorsement of it. On this basis its unfit for use for regulatory purposes, in particular given that it is being used to inform on a critical element of the price control framework.

Furthermore, Nera report 3 clearly shows that a significant proportion of the BoE Millennium dataset is based on RPI. For example, pages 8 and 9 show that the following fundamental errors exist with the data pre-1989 when CPI data started to be published;

- a) 1950-1988: CPI data is based on ONS (2013) back-estimates of "CPI" derived from the official published RPI index and the ONS (2013) paper itself raises significant concerns regarding the reliability of this data
- b) 1915-1949: The Millennium dataset for "CPI" and "RPI" is identical, based on a single series of inflation data published by O'Donoghue et. al. (2004). Nera analysed this source and found that this series includes RPI inflation data after 1947 and estimates of the RPI index before 1947 based on data from Feinstein (1972).
- c) 1900-1914: The "CPI" data is based on Feinstein (1991), which estimates a cost of living index for working class households only and not CPI inflation. The Feinstein (1991) cost of living index is narrowly defined to focus on spending of working-class households, whereas the CPI index has a much wider definition and covers all private and institutional households

Importantly, as a sense check, when all non-CPI components have been stripped from the DMS inflation measure, the real TMR should increase. However, Ofgem estimate in figure 18, on p87 of the Finance Annex, that it should fall from 5.5% to 5.23% due to this change. This is simply not credible as CPI, for the great majority of periods for which its been produced, has almost always been lower than RPI.

Due to this unreliability in the CPI data Nera recommend (and we agree) that historical real TMR should be estimated using RPI inflation, which is the most reliable measure of UK historical inflation going back to 1900. To then estimate a forward-looking CPI-deflated TMR for setting the cost of equity allowance at RIIO-2, the historical RPI-deflated TMR should be adjusted upwards by the expected RPI-CPI wedge, of around 100-130 bps. Nera therefore state on p4 that

'UKRN's error substantially explains why its conclusions on TMR are below previous UK regulatory precedent, including CMA precedent'

Using RPI to deflate historical long run returns would give an average TMR of circa 7.1% (see footnote 48, p13 of Nera Report 3), or circa 8.1%-8.4% in real CPI terms, before any adjustment to give some weighting to geometric means.

In para 3.81 Ofgem state that the UKRN study focuses on the expected value of real returns, rather than the expected value of inflation. This links into a hypothesis raised at the October 2018 Ofgem-ENA workshop, by Ofgem, that if investor's required compensation for inflation is based on the official inflation index at the time, which used to be RPI but is now CPI, it would be reasonable to use an historical RPI-deflated return (of around 7 per cent) and use this as the real return in a CPI regulatory framework, without any adjustment. As set out on p15 of Nera report 3 this hypothesis was not considered by the authors of the UKRN report.

If Ofgem were to adopt the approach of using a TMR deflated in RPI terms within a CPI regulatory framework, it would also contradict recent regulators' decisions on the cost of capital who have continued to allow a real RPI-deflated return plus RPI as compensation for inflation (as per the indexation of the regulated asset base), despite CPI being adopted as the official measure of inflation. Ofgem's hypothesis implies that all recent regulatory decisions (including RIIO-1, and CMA NIE 2014) have erred in not simply allowing for a CPI adjustment for inflation (as the official measure). However, we are not aware of any analysts or market commentators that have stated that allowing a real RPI deflated return plus RPI indexation, as allowed by Ofgem and CMA at all recent reviews, constitutes an error.

²⁸ Bank of England (2010) 'The UK recession in context – what do three centuries of data tell us?'

If Ofgem were to adopt such an approach, it would also mean that the switch to CPI indexation would not be revenue neutral to networks as they would receive lower allowed nominal revenues (based on RPI deflated TMR and CPI indexation), and would contradict regulators' undertaking that;

'consumers and investors as a whole will be neither better nor worse off in net present value terms' (para 6.101 RIIO-2 Framework Decision document, July 2018)

Under a CPI approach, Ofgem should ensure that investors receive the same expected nominal TMR return that they would have earned under an RPI regime, irrespective of the change to CPI.

Geometric Vs Arithmetic Means

As also set out in section 2.2 of Nera Report 3 the issue of the predictability of returns has received widespread academic attention over many years with seminal papers on this topic published since the 1970s. This is relevant to the setting of a long term historical average TMR as it affects the weight that should be placed on arithmetic versus geometric averages.

The CMA (and previously the Competition Commission) has previously studied this issue in great detail and concluded that the arithmetic average return provides the most relevant measure for the purposes of setting the allowed cost of equity, on the basis that the evidence for predictability of returns is extremely limited²⁹. The CMA's position on this issue is generally in line with seminal papers by Blume (1974), Cooper (1998) and Wright and Smithers (2003, 2013) as referenced in Nera Report 3.

In its 2018 report, the UKRN report authors state that the evidence base for predictability of returns has strengthened and therefore it applies a downward adjustment of around 1 per cent to the simple arithmetic mean of historical realised returns to take into account the predictability of returns at long horizons.

In fact, the additional evidence that the authors of the UKRN report cite to justify their new conclusions on the predictability of returns comes from a single source of evidence from the 1990s where Shiller used the cyclically adjusted P/E to correctly predict the end of the 1990s bull market. However, this evidence would have been available (and prominent) at the time of many previous regulatory and academic studies on this issue and is not new evidence. Indeed, one of the authors of the UKRN report also previously concluded in a 2003 paper that the evidence on the predictability of historical returns is "extremely limited".

Overall, Nera conclude that there is no recent evidence that supports an overturning of recent regulatory precedent on this issue, including that used by the CMA in its 2014 NIE review, where established TMR estimators by Blume and JKM, which also consider serial dependence, support an adjustment to the arithmetic average of the order of a maximum of 30 bps, significantly smaller than UKRN's downward adjustment of up to 1 per cent. This would lead to a minimum long term historical real (RPI) TMR of 6.8% or 7.8-8.1% in CPI terms. An analysis of how the CMA's 2014 NIE review supports an adjustment to the arithmetic average of the order of a maximum of 30 bps is shown on p13&14 of Nera Report 3.

Therefore, in para 3.62 of the Finance Annex, simply stating that an author (Professor Wright) of the UKRN report had confirmed Ofgem's interpretation of the UKRN report of a 6-7% TMR in CPI terms, and 5-6% in nominal terms, is not a reasonable or adequate assessment to support this material departure from past practice and fails to take account of a NERA's detailed analysis outlined above.

Ofgem have not engaged with and responded to the key points of the Nera report 3, namely the errors in the deflated TMR and why a historical RPI-deflated return can't be used as a real return in a CPI regulatory framework. They also have not countered the points made directly above on Nera's critique of the UKRN's assertion that the evidence base for the predictability of return increased since 2003. And as set out in response to FQ10 – the TMR sense checks are not a credible way of supporting a range of 6-7% TMR in CPI terms.

FQ10. Do you have any views on our interpretation of the UKRN Study regarding the TMR of 6-7% in CPI terms and our 6.25% to 6.75% CPIH real working assumption range based on the range of evidence?

As highlighted in our response to FQ9 we have significant concerns with the approach to deflating and averaging the long term historical TMR. An approach that needs to be considered to ensure value neutrality of the change to CPIH is simply to calculate the WACC on a nominal basis, and then deflate.

²⁹ Competition Commission (2010), "A reference under section 12(3)(a) of the Water Industry Act – Report presented to Ofwat on 4 August 2010", Appendix N at paras 82 and 92 and Annex 5

Looking at the further evidence used to assess to the TMR range, i.e. the TMR cross checks, we have some fundamental concerns which show that the levels of the TMR cross checks are significantly understated. Combined with the significant methodological issues regarding the calculation of the historical long run TMR, highlighted in the answers to FQ 9 and FQ10, this places significant doubt on Ofgem's proposed TMR range of 6.25%-6.75%;

Long-Run Outturn Averages Measured in US Dollars

Ofgem's choice of inflation measure to deflate the TMR should not be contingent on the comparability of real returns in GBP and USD, as this argument is empirically and theoretically flawed as set out below.

Ofgem have compared UK market returns measured geometrically in GBP and deflated using the Bank of England's CPI-labelled data (i.e. the 5.23% real return), with the UK real market returns denominated in US dollars. It appears this is done to show that back-dating UK returns using the series labelled as 'CPI' in the Millennium dataset produces an estimate of a CPI-deflated return that can be used for a CPI-linked RIIO-2 price control. I.e. the equivalence of returns is sufficient to alleviate concerns raised by stakeholders about the unreliability and inappropriateness of CPI as a historical measure of inflation and about the downward adjustment to arithmetic uplift.

The test appears to assume that the historical series of UK CPI inflation can be approximated by converting historical US CPI inflation into UK inflation using changes in the US dollar:GB pounds exchange rate. This test requires the assumptions of relative Purchasing Power Parity (PPP) to hold.

As observed by Ofgem, the difference between real UK market returns measured in GBP and USD for the 1899–2016 period is smaller for CPI-deflated returns than it is for returns deflated using the DMS index of UK inflation, by 16 bps and 41 bps respectively. However the comparability of real returns appears to be driven more by the choice of the averaging period than by the inflation index.

This is substantiated by empirical evidence that shows returns deflated using the DMS inflation index are identical to the USD-based returns for the 1899–2012 period, at 5.23% (see table below). However, in 2012 DMS authors used RPI to calculate real market returns from 1947 onwards (i.e. there is no use of CPI), and a narrowly defined index of retail prices before that.

| Period | DMS real returns (£) | DMS real returns (\$) |
|-----------|----------------------|-----------------------|
| 1899-2012 | 5.23% | 5.23% |
| 1899-2000 | 5.78% | 5.61% |
| 2000-2012 | 0.67% | 2.08% |
| 1955-2012 | 6.58% | 7.32% |

Ofgem's reasoning is that if real returns measured in different currencies are similar and PPP holds in the long run, then the 'back-cast' index of historical CPI is an unbiased estimate of the unknown true historical CPI. However, using a slightly different time period implies that the old DMS index (which was not based on CPI) is a more appropriate measure of inflation over the long term, as it produces real UK equity returns in GBP that are identical to UK returns in US dollar.

Therefore, because the comparability of real returns appears to be driven more by the choice of the averaging period than by the inflation index - Ofgem's choice of using CPI Millennium dataset as the preferred historical deflation technique is not consistently supported by the cross-check against returns in US dollar terms. In conclusion, empirical evidence shows the cross-check against UK returns expressed in USD does not confirm that the historical UK total market return can be interpreted as 6–7% relative to CPI.

Furthermore, Ofgem's assumptions that PPP holds in the long run, and that returns denominated in two different currencies are therefore comparable, are not theoretically robust. There are several circumstances where the elasticity of exchange rates is not dependent on the change in relative prices, thereby implying that PPP does not hold. There are many other factors in addition to the change in relative prices that could affect PPP, including market conditions, changes in trade policy, and changes in underlying productivity.

Dividend Growth Model

We have the following concerns with this sense check;

Reliance on UK GDP Forecasts

CEPA's model assumptions are based on FTSE dividends growing in line with short term and long-term growth in UK GDP. As noted in NERA Report 4 p12 this assumption is incorrect because;

- *'First, FTSE All-Share companies derive over 70 per cent of their earnings from outside of the UK, which have higher forecasts of GDP growth than assumed by CEPA for the UK'*
- *'Second, short-term UK GDP forecast growth rates are somewhat depressed (e.g. due to Brexit) and are substantially lower than independent analyst forecasts of dividend growth rates for FTSE stocks, which are used by the Bank of England as a basis of forecasting'*

CEPA's Short Term Growth

CEPA/Ofgem have only considered short-term growth in the range from 1 to 6% (see Figure 21 in Appendix 3 of the Sector Specific Consultation Finance document), with a central estimate of 3.5%. This contrasts significantly to the circa 5-10% range used in the BoE DGM model (see 3017 Q2 bulletin paper, 'An Improved model for Understanding Equity prices')

Long Term Growth Assumptions

The central assumption is based on UK historic GDP growth (see critique above) and gives a long-term growth estimate of 4.5% (nominal), with 2 variants;

- The first alternative specification is based on UK historic dividend growth: this gives a long-term growth estimate of 3.1%, based on 1.1% real dividend growth since 1950 plus an assumed CPIH inflation rate of 2 %. However, it should be noted that average dividend growth will ignore the development and growth of share buy-backs.
- The second alternative is described as being based on international GDP growth: CEPA derive a value of 5.3%, based on a weighted average of UK and international GDP growth, where (instead of actually using figures for international GDP growth rates) the international rate was found by taking the long-term UK GDP growth figure and then adding the difference between the IMF's short-term advanced economies GDP growth forecasts and the OBR's short-term GDP growth forecasts.

This does not give a properly-weighted estimate of the growth rate based on long-term GDP forecasts for each of the different world regions from which FTSE listed companies derive their earnings. In contrast, the BoE explains their approach, which better addresses this issue, in the following way in p91 of their paper

"The weight on each region is chosen to match the share of revenues that firms in the equity index derive from that region. The weights vary over time, reflecting the changing geographic exposures of each index."

As shown in Figure 7 of the BoE paper, this results in a long-term growth rate which (as of 2016) was around 6%.

Overall Issues with Cross Check Model

- Given that CEPA's values for both short-term and long-term growth rates are based on poorly founded approaches and both result in values which are below a better justified estimate, the estimates of TMR from CEPA's DGM model will be significantly downwards-biased.
- Extrapolating from the values plotted on Figure 21 in the finance annex to Ofgem's December 2018 consultation, if better-founded estimates of short and long-term growth rates of around 7% and 6% (respectively) were used, the implied nominal TMR would be expected to be around 10%. If this is then combined with assumed future inflation rates of, say, 3% for RPI and 2% for CPI, the implied real return is c. 7% relative to RPI or c.8% relative to CPI. This is before any uplift is applied for the volatility of returns as highlighted on pages 29&30 of the Oxera Report (Feb 2018) 'The Cost of Equity for RIIO-2', which was submitted as part of our Framework consultation response.
- In the interest of impartiality and transparency, given that DGM estimates are calculated from estimated values of input parameters, it would seem preferable for the regulator to source DGM estimates which are used as a cross-check of TMR values from reputable and independent organisations which publish DGM results for wider usage, rather than commissioning a bespoke modelling result. Bloomberg has published an estimate of TMR for many years, and as referenced above the Bank of England has a DGM model (see the Q2 2017 publication) which gives estimates of the ERP that can then be combined with plausible values of the risk-free rate to give a view of TMR.

Investment Managers and Advisors

We have the following concerns with data shown in table 10 of the Finance Annex;

1. The TMR estimates produced by investment managers have the primary purpose of providing prudent estimates of future returns to their clients, to ensure clients are managing their finances prudently. This is mainly a function of the regulatory framework as detailed on p4 of Oxera report 1. In contrast, it has been recognised that the costs of setting the allowed rate of return too low for regulated utilities may exceed the detriment from setting too high a regulated return, as set out in our response to FQ19. Naturally this prudence will apply to the FCA forecast provided and this is shown by the FCA choosing a nominal TMR towards the low end of the range of potential estimates as shown on p5 of Oxera report 1.
2. If any weight is to be placed on this evidence, an upward adjustment has to be made to correct for the downward bias arising due to geometric averaging. This is because as set out on p5 of Oxera report 1 the FCA relies exclusively on geometric rather than arithmetic averaging. On p6 it goes on to explain that as the clients of investment managers are primarily interested in the net growth of the portfolio by the end of the specified investment horizon, whether the value of the portfolio was higher in the middle of the investment horizon is inconsequential to the ultimate investment result, and thus the estimates quoted by Ofgem are likely to be geometric averages and are therefore likely to ignore the impact of volatility in annual returns.

Therefore, consistent with Nera's approach shown in FQ9, we recommend that at least 1.7% is added to the geometric averages in line with regulatory precedent. Applying this uplift to evidence presented by Ofgem increases the average nominal TMR estimate from 6.4% to 8.1%, or 8.35% on a median basis. Deducting a 3% RPI inflation forecast then produces a 5.09–5.35% estimate of the RPI-deflated TMR

3. There is no evidence that any of the publications quoted by Ofgem can in fact be used 'to advise clients and allocate funds', with many of the publications providing explicit evidence against relying on the estimates reported therein – as shown on p6 of the Oxera report 1
4. Academic research has found that forecasts made by professional market participants have poor predictive power, as detailed on pg7 of Oxera report 1. The uncertainty of such projections has also been recognised in the regulatory environment, with the (former) Competition Commission explicitly expressing concerns about relying on the opinions of individual organisations for the purposes of determining cost of capital parameters;

'the results of such surveys tend to depend on the identity and outlook of the respondents and how they interpret the questions being asked. [...] In this report we have preferred to consider the underlying data on which survey respondents presumably base their views.' (Competition Commission (2014), 'Northern Ireland Electricity Limited price determination', 26 March, para. 13.156)

Given that Ofgem is 'mindful of the benefit to investors and consumers of predictability and stability in regulatory policy and judgements', (Finance Annex para 3.80) it appears appropriate to attribute more weight to historical evidence rather than to the individual forward-looking projections.

FQ11. Do you have any view on our reconciliation of the UKRN Study to previous advice received on TMR as outlined at Appendix 2?

We disagree with the following steps in the reconciliation of the low end of the TMR range from the 2018 UKRN study with advice received in 2003/2006;

1. adopting the UKRN Study amendment to the value of the geometric to arithmetic average uplift - for the reasons stated in our response to FQ9. This response sets out why there is no recent evidence that supports an overturning of recent regulatory precedent on this issue. This precedent includes that used by the CMA in its 2014 NIE review, where established TMR estimators by Blume and JKM support an adjustment to the arithmetic average of the order of a maximum of 30 bps, significantly smaller than UKRN's downward adjustment of up to 1 per cent.

2. deflating the nominal TMR using the BoE Millennium dataset - as this approach is fundamentally flawed as set out in our response to questions FQ9 and FQ10. The UKRN report uses historical CPI inflation published by the Bank of England, however this has a number of fundamental flaws pre the establishment of CPI as a measure in 1987, which means the switch to CPIH is being undertaken in a far from value neutral manner. Furthermore, the review of sense check shows a number of fundamental empirical and theoretical issues with the Ofgem position that the holding of PPP makes UK returns in USD terms a good proxy for UK CPI-deflated returns in GBP terms.

OVERALL TMR CROSS CHECK CONCLUSION

It's clear that due to the recommended changes to the Dividend Growth Model, and the fundamental methodological concerns with the Long-Run Outturn Averages Measured in US Dollars, Investment Managers and Advisors forecasts and the reconciliation of the UKRN study, the TMR should sit notably above Ofgem's proposed range of 5.25% to 5.75% (RPI, real). This is notwithstanding our concerns over the derivation of the long run historical market returns set out in response to FQ9-11.

EQUITY BETA

Observations and overview

We disagree with the proposed equity beta range for a number of fundamental reasons. Firstly, it's unclear why the asset betas assumed by Ofgem in their RIIO-2 ranges are lower than those used by Ofwat in PR19, given the available data on utility asset betas. Also, past decisions taken by UK economic regulators are consistent with the assessment that energy networks face higher systematic risk exposure than water networks, and there may be an increase in fundamental risk differences between water and energy networks over the RIIO-2 period. Energy networks in RIIO-2 are likely to encounter significant uncertainty over decarbonisation of energy networks. Also given the paucity of data on betas for UK utilities, and notwithstanding differences in the jurisdictions and regulatory regimes, it's appropriate to examine evidence on European energy networks.

It is not appropriate to adjust for differences in Enterprise value EV and RAV when de-gearing and re-gearing betas. This is a double count of the allowed vs expected returns concept as there is already an overriding adjustment to the cost of equity for this concept. This is notwithstanding the fact that we strongly believe the allowed vs expected returns concept is fundamentally flawed as shown in our response to FQ19 and FQ20, and the technical flaws with this approach highlighted below and in Oxera's report 2.

Ofgem have given a debt beta range of 0.1-0.15 which contrasts with Ofwat's PR19 estimate of 0.1 based on the fact there have been no defaults in water since privatisation. We are unclear why the same logic has not been carried across to energy networks and we would welcome Ofgem's views on the fact that the cashflow floor and RAMs are intended to provide downside protection for debt investors so surely this means the debt beta is lower than Ofwat's 0.1.

Furthermore the use of low frequency (i.e. quarterly) data, and GARCH models, has not been substantiated in the context of regulatory price control settings. The most recent UK precedent from the CMA (2015) explicitly disregards quarterly data for beta analysis and supports the use of OLS techniques.³⁰

Finally higher financial risk is associated with higher expected returns and thus equity betas presented at different levels of gearing should be re-levered to account for the impact of gearing on financial risk and the level of required equity returns. The CMA (2015) also supported controlling for differences in financial gearing to facilitate the direct comparison of equity betas, as evidenced in Oxera Report 2.

³⁰ CMA Report on "Bristol Water plc – A reference under section 12(3)(a) of the Water Industry Act 1991" presented to Ofwat on 6 October 2015, Appendix 10.1 at para 92

Response to consultation questions

The ENA commissioned Oxera to provide a report (Oxera Report 2) investigating the following areas where Ofgem's methodologies and assumptions may be leading to the incorrect estimation of the cost of equity:

1. the methodology for estimating beta from market data;
2. the impact of gearing on the equity beta, including Ofgem's use of an 'adjusted' gearing ratio;
3. the estimation of debt beta

This will be published shortly and provides detailed evidence behind the points we raise below.

FQ12. Do you have any views on our assessment of the issues that stakeholders raised regarding beta estimation, including the consideration of: all UK outturn data, different data frequencies, long-run sample periods, advanced econometric techniques, de-gearing and re-gearing, and the focus on UK companies?

Our view on Ofgem's assessment (Finance Annex, para 3.106) of the points made in Oxera and Nera's reports, on behalf of the energy networks, is as follows;

Time Period

A move away from the regulatory precedent of using two to five years of beta, should be treated with caution. This is because of the following factors;

- there may be structural breaks in the data – for example due to events such as the dotcom crisis in 2000, the global financial crisis (2008) and the UK referendum on membership of the EU (2016)
- there may be other factors driving shifts in the betas over time, such as changing business risk and leverage

Frequency of Observations

There is no explanation of why changes in volatility (heteroscedasticity) might lead to biased beta estimates, and therefore why there should be a higher weight on low-frequency data in the context of a regulatory price control. From a statistical point of view, it is generally the case that the more data points in the analysis, the more robust the results. We agree that both high and low frequency observations can be examined (e.g. daily and weekly), but we do not support the use of quarterly data. Moving from daily data to quarterly data entails discarding a significant amount of important information on the systematic risk of the comparator companies, especially if pre-crisis data is not used due to an identified structural break. Moreover, the CMA (2015) decided against the use of quarterly data;

'We did not use quarterly betas in this review as a result of the evidence that betas have not been stable over the period, which casts doubt on the reliability of this data. 31'

Use of Raw Equity Betas

Expected returns move with the level of financial risk and thus the use of raw betas is not reliable, for determining or cross-checking betas, as part of the allowed returns for RIIO-2. .

OLS Vs GARCH

OLS models should produce an unbiased and consistent estimate of the beta coefficient. In theory, GARCH models are used to improve standard errors, not to correct for potential biases in the point estimate of the beta. As regards to the selection of a GARCH model (or other) for analysis of each particular sample of data, this may not be practical in terms of introducing a degree of regulatory unpredictability as regards model selection for each price control, potentially even differentiated by company.

³¹ CMA Report on "Bristol Water plc – A reference under section 12(3)(a) of the Water Industry Act 1991" presented to Ofwat on 6 October 2015, Appendix 10.1 at para 92

International Comparators

Given the paucity of data on betas for UK energy networks, and notwithstanding differences in the jurisdictions and regulatory regimes, it is appropriate to examine evidence on European energy networks. We find that the equity betas of comparator European energy networks track closely the equity beta of National Grid. This is market evidence that is consistent with investors' viewing these businesses as having similar movements in systematic risk, especially since 2015.

FQ13. What is your view on Dr Robertson's report?

Our interpretation of para 3.109 of the Finance Annex is that Robertson's report has been somewhat superseded by the Indepen report – with extremely long time periods of data collection and quarterly data not impacting the equity beta range.

FQ14. What is your view on Indepen's report?

Are view of the Indepen report is as follows;

Time Period

We have concerns with a 5-10 year time period in terms of what a move away from 2-5 years may mean in terms of changes in business risk and leverage. We agree that the any programme should start out with an evaluation of structural breaks as set out in the corresponding section in our response to FQ12.

Frequency of Observations

Please refer to the corresponding section in our response to FQ12, albeit we welcome that Indepen have not explicitly endorsed the use of quarterly data.

OLS Vs GARCH and International Comparators: Please refer to the corresponding sections in our response to FQ12

De-gearing of raw beta estimates and re-gearing to a notional level

We do not agree with Ofgem's exercise of judgement in deriving an 'adjusted' gearing ratio to de-gear equity betas based on an assumption of an EV / RAV of 1.1x. For internal consistency, equity betas estimated using market data should be de-gear in line with the market-based estimate of the capital structure that underpins the observed share price movements. Oxera report 2 also provides current market evidence to demonstrate that our debt beta assumption of 0.05 is appropriate in setting allowed network returns for RIIO-2.

FQ15. What is your view of the proposed Ofgem approach with respect to beta?

Ofgem's working assumption for equity beta is based on a 0.6 to 0.7 raw equity beta – which it states is broadly in line with the recommendation of its consultants Indepen. We therefore assume that Ofgem has adopted Indepen's recommendations except for discounting the longer term estimates (over 10 years) which include periods of structural breaks – to bring the bottom end of Ofgem's range up from Indepen's lower end of 0.55, in line with para 3.109 of the Finance Annex. Bearing that in mind and the points already made on Indepen's approach in response to FQ14 – our view on the proposed Ofgem approach with respect to beta is as follows;

- a) It's unclear why the asset betas assumed by Ofgem in their RIIO-2 ranges are lower than those used by Ofwat in PR19. The asset beta for National Grid actually tends to be higher than the asset beta of the two pure-play water comparators (United Utilities and Severn Trent), when looking at the available UK data for utility asset betas. Furthermore, past decisions taken by UK economic regulators are consistent with the assessment that energy networks face higher systematic risk exposure than water networks. For example, in the RIIO-1 decisions, the asset betas implied by Ofgem's assumptions for equity betas and gearing were in the range of 0.32–0.43, while Ofwat's comparable PR14 decision regarding the asset beta was 0.30.

Furthermore, there may be an increase in fundamental risk differences between water and energy networks over the RIIO-2 period. Energy networks in RIIO-2 are likely to encounter significant uncertainty over decarbonisation of energy networks and the potential for rapid technological change, asset stranding and the extent to which all assets can be redeployed for transport of alternative gas, and associated expenditure. These risks and uncertainties are clearly highlighted in Ofgem's 'Our Strategy for Regulating the Future Energy System'

(2017). It is unlikely that exposure to such risks can be fully mitigated through regulatory mechanisms, (e.g. indexation, pass through, volume drivers etc) and that the residual risk will be borne by equity.

- c. It is not appropriate to adjust for differences in Enterprise value EV and RAV when de-gearing and re-gearing betas. Notwithstanding our criticisms of Indepen's recommendation in our response to FQ14 - this is a double count of the allowed vs expected returns concept as there is already an overriding adjustment to the cost of equity for this concept. This is not withstanding the fact that we strongly believe the allowed vs expected returns concept is fundamentally flawed as shown in our response to FQ19 and FQ20. There is an independence between regulatory decisions and traded Market to Asset Ratios (MARs) so relying on MARs from the water sector is not appropriate. Also introducing this would mean there is a circularity in the CAPM calculation as it means that a company wouldn't achieve the assumed Market Asset Ratio due to the consequent low return.
- d. Analysis of the sensitivity of listed UK regulated companies' bond returns to their equity beta, once removing for index-linked, fungible, convertible, complex, perpetual, callable and floating bonds in order to prevent these characteristics from altering the analysis, gives a debt beta of circa 0.05. This is significantly below the range proposed by Ofgem of 0.10-0.15 – which they state is narrowed from regulatory precedent and academic support for debt betas of 0.05-0.22. In PR19 Ofwat's consultants Europe Economics chose 0.125 as their point estimate, but Ofwat chose 0.1 as there have been no defaults in water since privatisation. We are unclear why the same logic has not been carried across to energy networks and note that 0.1 is consistent with the debt beta used by the CC in the Bristol Water Determination³² Also we would welcome Ofgem's views on the fact that the cashflow floor and RAMs are intended to provide downside protection for debt investors so surely this means the debt beta is lower than Ofwat's 0.1.
- e. We agree that using pre-2008 data for beta analysis is unreliable due to structural breaks in returns for UK utilities during the global financial crisis. We have concerns with a 5-10 year time period in terms of what a move away from 2-5 years may mean in terms of changes in business risk and leverage.
- f. The use of low frequency (i.e. quarterly) data has not been substantiated in the context of regulatory price control settings. The most recent UK precedent from the CMA (2015) explicitly disregards quarterly data for beta analysis.³³
- g. Indepen has not adequately supported a move away from ordinary least squares (OLS) estimation methods to generalised autoregressive conditional heteroscedasticity (GARCH) models for beta analysis in regulatory price controls. GARCH models are used, in theory at least, to improve standard errors, not to correct for potential biases in the point estimate of the beta. The use of OLS models should provide an unbiased and consistent beta coefficient. Note also that UK precedent, including the decision by the Competition and Markets Authority (CMA) for Bristol Water (2015), supports the use of OLS estimation methods.³⁴
- h. Given the paucity of data on betas for UK utilities, and notwithstanding differences in the jurisdictions and regulatory regimes, it's appropriate to examine evidence on European energy networks as Ofgem itself recognises (para 3.106 of the RIIO 2 Finance Annex). This is because such comparison provides more data points for the beta analysis, and we find that the equity betas of comparator European energy networks track closely the equity beta of National Grid. This is consistent with investors' viewing these businesses as having similar systematic risk profiles, especially since 2015. We do not consider that the challenges identified by Ofgem cannot be overcome.
- i. Higher financial risk is associated with higher expected returns and thus equity betas presented at different levels of gearing should be re-levered to account for the impact of gearing on financial risk and the level of required equity returns. The CMA (2015) also supported controlling for differences in financial gearing to facilitate the direct comparison of equity betas, as evidenced in Oxera Report 1.

Due to the significant methodological concerns highlighted above we believe the equity beta range lies significantly above the range of 0.65 – 0.76 that Ofgem are proposing.

GDN Specific Risks

³²Competition Commission Report on "Bristol Water plc – A reference under section 12(3)(a) of the Water Industry Act 1991" presented to Ofwat on 4 August 2010, Appendix N – the Competition Commission assumed levels of zero and 0.1 (see footnote 13)

³³CMA Report on "Bristol Water plc – A reference under section 12(3)(a) of the Water Industry Act 1991" presented to Ofwat on 6 October 2015, Appendix 10.1 at para 92

³⁴CMA Report on "Bristol Water plc – A reference under section 12(3)(a) of the Water Industry Act 1991" presented to Ofwat on 6 October 2015, the CMA focussed on the OLS technique and did not use the GLS approach – see para 4.99 and Appendix 4.1

Finally, it also needs to be considered that there are GDN specific equity risks. These include the following factors which are analysed in more detail in sections 6.2.1 and 6.2.2 of Nera Report 5;

- Asset Stranding Risk: Whilst the forecasts for gas network usage are more positive than previously according to the FES scenarios, there is no clear Government policy on the decarbonisation of heat, and this therefore maintains the risk that the network itself may become a stranded asset for investors.
- Operational Leverage: exposure to unexpected and company specific shocks.

CROSS CHECKING THE CAPM-IMPLIED COST OF EQUITY AND ALLOWED VS EXPECTED RETURNS

Observations and overview

A degree of cross checking of the long run historical TMR to current market data makes sense as some weight has been put on current market conditions by Ofgem and the CMA in the past. However, it must be recognised there will be differences between long run historical returns, which Ofgem see as the best objective measure of the TMR, and current market data - and this needs to be respected over multiple price controls as market conditions change. If long run historical returns are seen as the best objective measure of the TMR – there shouldn't be undue weight be put on current market conditions through cross checks.

Notwithstanding these broader concerns we believe there are also significant flaws in Ofgem's approach to calculating the cross checks. These include the fact Market to Asset ratios are assessed on the basis that any perceived expectations of outperformance will continue into RIIO-2 - despite the recalibration of allowances and incentives and the significant changes being proposed to the regulatory regime.

Looking at the professional forecasts from Investment Managers and Advisors we have a number of concerns including there is inherently a downward bias in these due to regulatory scrutiny from the FSA, the fact that the correct weighting of arithmetic averages would significantly increase the cross-check value and the CMA have historically place little weight on survey evidence to its subjectivity.³⁵

Also, we believe the cross check with OFTOs has limited value due to the significantly higher risks energy networks face as highlighted below. We do not see how the higher outperformance potential under RIIO price control offsets these higher risks, as there is no reason why the perceived asymmetry under one price control can be assumed to exist in RIIO-GD2 (which is proposed to be fundamentally changed from the RIIO framework anyway), as per our response to FQ19.

We believe that the final step in the proposed setting of the cost of equity, i.e reviewing how to implement a distinction between allowed and expected returns is flawed. This is because it assumes there should be no net under / over performance across a sector, based on the impossible premise that the fundamentals of a perfectly competitive market can be replicated in regulated industries where the networks are monopolies as set out below. In reality the economics of UK utility networks have been regulated for many years using the widely accepted solution to the existence of monopoly – which is incentive based regulation.

By setting a target fixed for some time, with rules for sharing short term gains and accepted protocols for the intermittent resetting of targets, companies are provided with incentives to discover how things can be done better. Companies can potentially benefit in the short term from outperformance, while customers benefit in perpetuity when the resulting improvements in service and cost to serve are observed by the regulator and embedded in future price controls.

As Ofgem's own previous analysis makes clear, the energy networks have outperformed the UK economy by around 1% per year in the 30 years since privatisation. This is a significant achievement and is due to the mutually supporting pillars of a clear incentive-based model coupled with a stable approach to assessing the financing requirements of the businesses.

Even if Ofgem rejects these criticisms, and the flaws in their analysis of historic performance and how it ignores previous underperforming price controls which we outline in response to FQ20, what it hasn't done is properly evaluate the wider

³⁵ Competition Commission Final Determination in Northern Ireland Electricity Limited price determination, presented to the Northern Ireland Authority for Utility Regulation on 26 March 2014 at para 13.156

consequences of this adjustment. In particular neither Ofgem, nor MPW in the UKRN report, make an assessment of the damage to the efficiency properties of the incentive-based regime from linking the future level of allowed returns with historical outperformance. These detriments are detailed below and include erosion of investor confidence and increased investor risk, weakened incentives for efficiency and innovation, distortion of incentives to invest and loss of clarity over price control calibration

Ofgem's proposal carries with it many potential costs to customers. Ofgem should recognise that dealing with information asymmetry and encouraging efficiency enhancing effort is costly. This is the fundamental conclusion of the pioneering papers in the economic literature on which a body of regulatory theory and practice has developed. It is a body of literature that has informed the many price control reviews that have been undertaken in the UK. Also the costs to the customer of encouraging information revelation and efficiency enhancing effort can be minimised if the regulator is diligent in the calibration of incentives and the setting of targets.

Response to consultation questions

FQ16. Do you agree with our proposal to cross-check CAPM in this way?

We agree with the UKRN study recommendation that regulators should continue to base their estimate of the TMR on long run averages. This is aligned with the fact that Energy network investments are long term investments where capital expenditure is being made over multiple price controls. Investors in gas networks invested on the basis of long-term returns, receiving their return on capital over 45 years. Placing significant weight on long term returns enables the stability of total market returns and stability of network investment to be aligned. It would be inconsistent to have significant volatility in the allowed return on capital which will increase the costs to customers who will have to pay for the higher associated risk premium.

We agree that it makes sense for there to be a degree of cross checking of the long run historical TMR to current market data as there has been some weight put on current market conditions by Ofgem and the CMA in the past. However, it must be recognised there will be differences in long run historical returns, which Ofgem see as the best objective measure of the TMR and current market data, and this needs to be respected over multiple price controls as market conditions change. If long run historical returns are seen as the best objective measure of the TMR – there can't be undue weight be put on current market conditions.

FQ17. Do you agree that the cross-checks support the CAPM-implied range and lend support that the range can be narrowed to 4-5% on a CPIH basis?

As highlighted in our response to FQ16 we believe there should be a degree of weight put on current market data as there has been some weight put on current market conditions by Ofgem and the CMA in the past. However, we have some significant concerns with the methodology and logic of these cross checks, as set out below;

Market-to-Asset Ratios

Ofgem's analysis is based around a review of historic MARs showing that investors in energy and water networks have, for the majority of the previous 18 years, been prepared to pay more than the underlying RAV value in order to acquire ownership of network assets. They believe this information suggests that investors expect to earn a return from network ownership over-and-above their costs of capital in the future.

Implicit in this cross check is the view that the allowed cost of equity has been set too high by regulators as there has historically been some outperformance assumed in their expectations, and therefore the cost of equity should be set below the mid-point of its range. We have several significant issues with this analysis;

- a) As highlighted by Burns in the UKRN report, MARs can be influenced by a variety of other factors including control premium and winners curse
- b) Expecting outperformance to continue into RIIO-2 needs to be questioned – Ofgem have made no mention of how the MARs of 3 publicly listed water companies have decreased as the PR19 price control process has evolved (see figure 11 of the Finance Annex). As detailed in our response to FQ19 Ofgem needs to reflect on how well it calibrates incentives and sets targets to deal with any perceived systemic outperformance.

- c) The MARs analysis is linked to the Allowed Vs Expected Returns concept. As shown in our response to FQ19 the assumption there should be no net under / over performance across a sector is based on the impossible premise that the fundamentals of a perfectly competitive market can be replicated in regulated industries where the networks are monopolies. In reality the economics of UK utility networks have been regulated for many years using the widely accepted solution to the existence of monopoly – which is incentive based regulation. This is on the basis that its impossible to simultaneously satisfy allocative, productive and dynamic efficiency.

Furthermore, as also shown in our response to FQ19, when the analysis of historic performance data is extended back beyond the last set of pre-RIO controls there is no evidence of systematic outperformance. Even if Ofgem rejects these points what it hasn't done is properly evaluate the wider consequences of this adjustment. In particular, neither Ofgem nor MPW in the UKRN report make an assessment of the damage to the efficiency properties of the incentive-based regime from linking the future level of allowed returns with historical outperformance. The consequences of such a change are also detailed in our response to FQ19.

Importantly we question the logic of including MARs as a CAPM cross check, and then having a separate Allowed Vs Expected Returns adjustment. This appears to be a double count.

Professional Forecasts from Investment Managers and Advisors

We have the following concerns with data shown in table 10 of the Finance Annex, as per our response to FQ10;

1. The TMR estimates produced by investment managers have the primary purpose of providing prudent estimates of future returns to their clients, to ensure clients are managing their finances prudently. This is mainly a function of the regulatory framework as detailed on p4 of Oxera report 1. In contrast, it has been recognised that the costs of setting the allowed rate of return too low for regulated utilities may exceed the detriment from setting too high a regulated return, as set out in our response to FQ19. Naturally this prudence will apply to the FCA forecast provided and this is shown by the FCA choosing a nominal TMR towards the low end of the range of potential estimates as shown on p5 of Oxera report 1.
2. If any weight is to be placed on this evidence, an upward adjustment has to be made to correct for the downward bias arising due to geometric averaging. This is because as set out on p5 of Oxera report 1 the FCA relies exclusively on geometric rather than arithmetic averaging. On p6 it goes on to explain that as the clients of investment managers are primarily interested in the net growth of the portfolio by the end of the specified investment horizon, whether the value of the portfolio was higher in the middle of the investment horizon is inconsequential to the ultimate investment result, and thus the estimates quoted by Ofgem are likely to be geometric averages and are therefore likely to ignore the impact of volatility in annual returns.

Therefore, consistent with Nera's approach shown in FQ9, we recommend that at least 1.7% is added to the geometric averages in line with regulatory precedent. Applying this uplift to evidence presented by Ofgem increases the average nominal TMR estimate from 6.4% to 8.1%, or 8.35% on a median basis. Deducting a 3% RPI inflation forecast then produces a 5.09–5.35% estimate of the RPI-deflated TMR

3. There is no evidence that any of the publications quoted by Ofgem can in fact be used 'to advise clients and allocate funds', with many of the publications providing explicit evidence against relying on the estimates reported therein – as shown on p6 of the Oxera report 1
4. Academic research has found that forecasts made by professional market participants have poor predictive power, as detailed on p7 of Oxera report 1. The uncertainty of such projections has also been recognised in the regulatory environment, with the (former) Competition Commission explicitly expressing concerns about relying on the opinions of individual organisations for the purposes of determining cost of capital parameters;

'the results of such surveys tend to depend on the identity and outlook of the respondents and how they interpret the questions being asked. [...] In this report we have preferred to consider the underlying data on which survey respondents presumably base their views.' (Competition Commission (2014), 'Northern Ireland Electricity Limited price determination', 26 March, para. 13.156)

Given that Ofgem is 'mindful of the benefit to investors and consumers of predictability and stability in regulatory policy and judgements', (Finance Annex para 3.80) it appears appropriate to attribute more weight to historical evidence rather than to the individual forward-looking projections.

Bids for Offshore Electricity Transmission Assets

Ofgem state there's been a 3% decline in the cost of equity of OFTOs from 2011 to 2018, broadly in line with the difference between the RIIO-1 allowance and the CAPM-implied range for RIIO-2. However, they acknowledge the differing OFTO/network risk profiles but state that networks offer greater outperformance potential under the RIIO price control framework.

Firstly we strongly believe that energy networks have much higher risks that need to be reflected in the cost of equity;

- a) They have delivery risk for ongoing construction programmes – unlike OFTOs whose assets have already been constructed
- b) Construction risks are not protected
- c) Significant ongoing financing activity and risk vs peers
- d) 45-year recovery horizon vs 25 years
- e) Higher safety risk
- f) Larger workforce means greater exposure to employer risk
- g) Higher political risk exposure

We do not see how the higher outperformance potential under RIIO price control offsets these higher risks, as there is no reason why the perceived asymmetry under one price control can be assumed to exist in RIIO-GD2 (which is proposed to be fundamentally changed from the RIIO framework anyway), as per our response to FQ19.

We would also like to see the modelling calculations that generate the cost of equity for OFTOs, even if it just the methodology rather than actual data.

Infrastructure fund discount rates

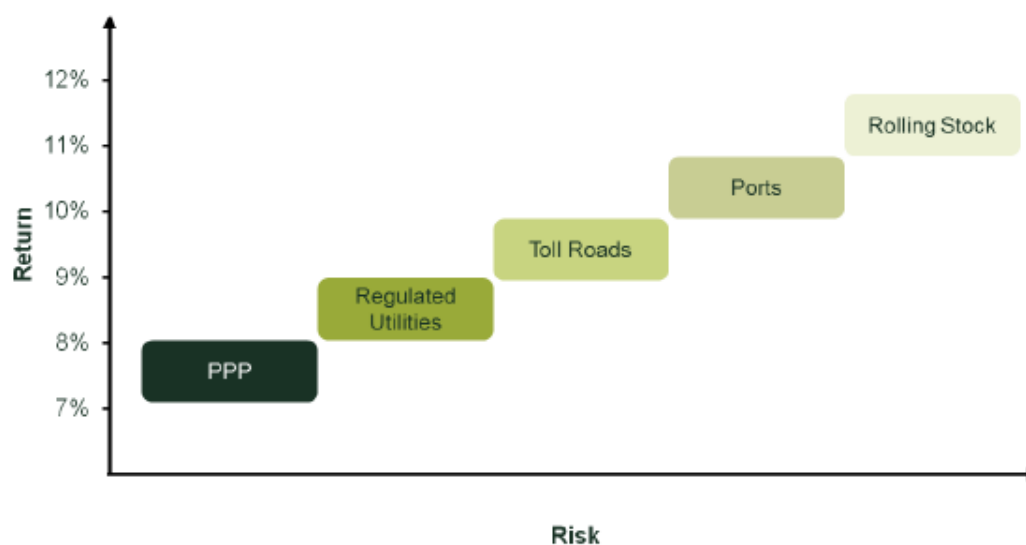
In para 3.140 Ofgem quote 5 out of the six listed London-based infrastructure funds' discount rates of 7.2%-7.9% nominal, 4-4.7% (real, RPI) to justify the 4% (real, RPI) upper bound of the cost of equity range for RIIO-2. Ofgem exclude 3i's nominal rate of 10.2% nominal as it believes it includes assets with higher risk than regulated networks, which may contribute to the higher discount rate.

There are two main reasons why the infrastructure funds' risk and return characteristics suggest that the funds' discount rates are not an appropriate cross-check to determine the upper bound or the lower bound of the CAPM cost of equity range. These are the asset composition of infrastructure funds and how Ofgem interpret the Net Asset Value Premiums;

1. Asset Composition of Infrastructure Funds

The funds' asset composition makes them less risky than energy networks, and, where funds' portfolio investments face greater revenue or volume risks than energy networks, these are generally hedged by long-term or availability-based contracts and/or government subsidies e.g. renewable obligation certificates (ROCs). This is evidenced below for each infrastructure fund;

- **BGGI SICAV:** BBGI infrastructure fund consists entirely of long-term availability-based public private partnership (PPP) contracts. PPP projects are less risky than energy networks and other regulated utilities due to the government support they receive. This view is shared by the report 'PwC and BBGI's analysis presented in BBGI interim presentation, (June 2018) which lists the risk return characteristics of PPPs below Regulated Utilities as shown below;



- **HICL Infrastructure:** HICL's portfolio consists 70% of investments in PPP contracts, 22% in demand-based assets and 8% in regulated utilities. Despite investing in some demand-based assets, HICL mitigates this risk by ensuring 'track record of user demand prior to asset purchase' (HICL 2018 Capital Market Seminar). HICL's overall portfolio risk is likely to be lower than energy networks, primarily due to a large proportion of the portfolio investments in PPP contracts.
- **John Lang Infrastructure Fund:** As JILF's portfolio consists of 92% availability based investments, which they stated in their 2018 Interim results are less risky than regulated assets, and they invest predominately in projects either owned or supported by the government, their portfolio is likely to face lower expected risk than energy networks.
- **GCP Infrastructure:** GCP's investments are either in PPP and social housing, or renewables with government subsidies to negate the demand side risk, so GCP's portfolio should lower risk than energy networks.
- **International Public Partnerships (INPP):** Given that, as per its Sep 2018 Interim results presentation (p1)
 - greater than 50% of INPP's investments are in PPP or senior debt, which are less risky than energy networks
 - its focus is on low risk assets, with revenues sourced principally from, or regulated by, public sector entities
 - its investments are ring-fenced from each other
 then its overall portfolio risk is likely to be lower than energy networks.
- **3i Infrastructure:** Despite the fact that the volume and revenue risks on the investments are to a certain extent hedged by long term contracts or government subsidies – it is possible that net of hedging the risk of 3i's investments is on average higher than that of regulated utilities, and thus we agree with Ofgem's exclusion of 3i from the sample of infrastructure funds.

2. Net Asset Value (NAV) Premiums

In para 3.144 of the finance annex, Ofgem concludes that the relative risks of the constituent investments in the infrastructure funds, combined with the funds' shares trading at a premium to the NAV, supports the use of the funds' discount rate as a cross-check to inform the upper bound of the cost of equity range for RIIO-2.

Ofgem presents NAV premiums ranging from 3.5% (HICL) to 15.5% (BBGI). The premiums are calculated using the closing price of 27th November 2018 and the NAV taken from the last published results or the 'Financial Times of 26th November 2018'.

A more consistent way of estimating the NAV premiums is to use the closing price on the date of the publication of the results (i.e. using the share price and the NAV as of the same date). This approach is generally used by closed-end mutual funds and exchange traded funds (ETFs) which calculate a NAV and a premium to the NAV at the end of each trading day. Using this approach to estimate NAV premia for infrastructure funds, gives a range of -1.4% (HICL) to 11.1% (GCP Infrastructure).

However, given the sensitivity of the NAV premia to the underlying methodology, it is best to observe the trend in NAV premia over time, instead of relying on an estimate at a point in time. The average NAV premium while positive has decreased since 2017. This does not suggest a divergence between the discount rate used by the funds and the rate used by the investors in the funds.

Conclusion

The decline in the NAV premiums, along with the funds' lower risk constituent investments relative to energy networks, suggest that the funds' discount rates are not an appropriate cross-check to determine the upper bound of the CAPM cost of equity range for RIIO-2. Furthermore, the discount rates cannot even be used to determine the lower bound of the cost of equity range. This is because infrastructure funds generally constitute investments in lower risk assets compared to energy networks.

OVERALL CAPM CROSS CHECK CONCLUSION

It is clear that the Infrastructure discount rates have a TMR in the upper end of Ofgem's range, or above, when the issues of forecast bias and arithmetic vs geometric returns are taken into account. When the lower risk of OFTOs and infrastructure funds vs energy networks are also considered – it is apparent that the cost of equity, based on current market conditions alone, should sit significantly above Ofgem's 3-4% range (RPI, real).

FQ18. Are there other cross-checks that we should consider? If so, do you have a proposed approach?

Asset Risk Premium Vs Debt Risk Premium

A further important cross check of the cost of equity is to compare the level of risk premium for equity holders vs the risk premium of debt holders, as the claim for interest and repayment of principal of the debt holders has priority over dividend payments to equity holders. Oxera report 3 provides detailed analysis that shows that the proposed allowed cost of equity is insufficient to compensate for the relative risk, as it is at the very low end of Asset Risk Premium – Debt Risk Premium differentials compared to UK and US utilities, and regulatory precedents.

This suggests that the combination of assumptions used for the CAPM parameters is extreme, and that one or more of the parameters should be revised upwards to provide a more sensible market-based result for the cost of equity.

Aiming Up

The required return on equity can only be estimated for a future price control, often with a significant degree of uncertainty. As regulators will ultimately need to select a point estimate in the presence of this uncertainty, two risks arise - that the chosen point estimate may prove to be too high, or that it may prove to be too low. As stated in p4 of the Frontier report, regulatory best practice is to take explicit account of the likelihood of making either of these errors and the consequences of each. The reasons for aiming up have been repeatedly articulated by regulators, including the CMA (which) and are well summarised as follows.

'Given the uncertainties in cost of capital estimates, we considered the cost of setting an allowed WACC that was too high or too low. If the WACC is set too high, then the airports' shareholders will be over-rewarded and customers will pay more than they should. However, we consider it a necessary cost to airport users of ensuring that there are sufficient incentives to invest, because if the WACC is set too low, there may be underinvestment from BAA or potentially costly financial distress...Given the significance to customers of timely investment at Heathrow and Gatwick, we have given particular weight to the cost of setting the allowed WACC too low. Most importantly, we note that it is difficult for a regulator to reduce the risks of underinvestment within a regulatory period.' (Competition Commission, A report on the economic regulation of the London airports companies (Heathrow Airport Ltd and Gatwick Airport Ltd), September 2007. P 49)

As a result, the CMA has in almost all cases chosen a final point estimate in the upper half of the range, with UK regulators historically following a similar approach. The CMA's 2015 determination on Bristol Water 2015 is the exception. Frontier details a critique of the justifications of why the CAM did not choose to explicitly aim up in its 2015 determination, on p20-21 of its report. However, the CMA acknowledged that it had been conservative in the parameters it had used to estimate the WACC, for example building in a debt small company premium, an equity beta uplift and a forward-looking uplift in areas of new debt, as detailed on p20 of the report. Therefore, a degree of aiming up can be considered to be implicit within the range.

Aiming up is justified by recognising that underinvestment arising from setting allowed returns too low leads to much more material harm to consumers than the modest harm that arises from setting the number too high. The CMA has

relied on this reasoning on many occasions in the past, as have numerous other regulators.³⁶ This regulatory best practice, is also supported by academic research, which has found that aiming up well above the central estimate is likely to minimise the expected losses to society from misestimating the regulated business's true cost of capital.

As stated on p5 of the Frontier report, the recent UKRN report also supported aiming up. MPW's review of precedent supports aiming up, and indeed had MPW analysed the precedent (particularly the CMA precedent) more rigorously then these conclusions would have been even clearer. In addition, MPW's stylised model to calibrate the appropriate level of aiming up also supports aiming up, although flaws in their analysis set out below leads them to markedly underestimate the extent of optimal aiming up. More weight should be placed on the Dobbs' (2011) model³⁷, of which the MPW model is a somewhat inferior, cut-down version, and relevant regulatory precedent including from the CMA.

Furthermore, as detailed on p29 of the Frontier report, we strongly disagree with MPW's conclusion that there should be no aiming up for sunk investments justified by Mason's observation that the investment has already been made and hence there is no risk that a low WACC may cause an already existing investment not to be made. Therefore, Mason states that consumer welfare is maximised by setting WACC as low as possible but this would fall foul of regulators' requirement to ensure financeability; so balancing these two concerns leads to the optimal choice being to set the point estimate for sunk investments at the midpoint of the range for the WACC. Blending together Mason's results for new and sunk investments, weighting each according to the flow of expenditure (load and non-load related capex allowances for RIIO-T1) and the stock of past expenditure (RAV) leads to an aiming up point that is just above the 50th percentile (52% to 58%)

However, Frontier state on p29 of their report;

'the reasoning for no aiming up on sunk investments can only be correct if investors are myopic (failing to see beyond the present period). Under Mason's model, an investment expected to be added (or not) in this period would earn an aimed up WACC in the period it was created, but would earn a central WACC in all future periods as it then becomes sunk and earns a lower return. Mason does not explain why investors would fail to foresee this future lowering of rate under this regulatory model, and why they would choose to base their investment appraisal only on the rate available for the investment in the first period, rather than the significantly lower future blended rate.'

Additionally, in its unblended form, Frontier note that it echoes the Helm split cost of capital model, an approach that has been extensively debated and rejected explicitly and repeatedly by several regulators in the UK and elsewhere. In summary then MPW's suggestion that regulators should aim up just above the 50th percentile is based on flawed logic and should not be adopted.

Expected and allowed return

FQ19. Do you agree with our proposal to distinguish between allowed returns and expected returns as proposed in Step 3?

Ofgem bases its proposed 50 bps downwards adjustment to the allowed cost of equity on the theoretical arguments made by Mason, Pickford and Wright (MPW) in the recent UKRN report; and on its own analysis of historic outperformance. The assumption that there should be no net under / over performance across a sector is based on the impossible premise that the fundamentals of a perfectly competitive market can be replicated in regulated industries where the networks are monopolies. In reality the economics of UK utility networks have been regulated for many years using the widely accepted solution to the existence of monopoly – which is incentive based regulation. This is on the basis that its impossible to simultaneously satisfy allocative, productive and dynamic efficiency. As explained by Burns in p86 of the UKRN paper;

'There is a tension at the heart of regulation, between encouraging allocative efficiency (where prices equal costs and there are zero excess returns), and encouraging productive and dynamic efficiency (where costs are as low as they could be given the assets in place, and where those assets are added to and replaced as efficiently as possible). Thus, the US-style of cost of service regulation historically attempted to achieve allocative efficiency, but at the cost of productive and dynamic inefficiency that would not be observed in the idealised competitive equilibrium. In the UK, a built-in feature of incentive-based regulation is to promote information revelation and cost discovery, and this requires that companies are given profit incentives to beat the regulator's targets.'

³⁶ For example, Competition Commission Report on "Bristol Water plc – A reference under section 12(3)(a) of the Water Industry Act 1991" presented to Ofwat on 4 August 2010, at para 9.14

³⁷ Dobbs, 2011, Modelling Welfare loss Asymmetries Arising from Uncertainty in the Regulatory Cost of Finance, <https://www.staff.ncl.ac.uk/i.m.dobbs/Files/Welfare%20loss%20JRegE.pdf>

By setting a target fixed for some time, with rules for sharing short term gains and accepted protocols for the intermittent resetting of targets, companies are provided with incentives to discover how things can be done better. Companies can potentially benefit in the short term from outperformance, while customers benefit in perpetuity when the resulting improvements in service and cost to serve are observed by the regulator and embedded in future price controls.

This high-level structure has been implemented throughout price control frameworks by UK regulators. Examples include cost sharing factors for deciding which entity obtains benefit (or bears the cost) of any divergence between allowed cost and outturn cost and a number of output incentives, such as the interruptions incentive for electricity distributors or the shrinkage incentive for gas distributors.

Importantly, it's clear that allowing short run departures from allocative efficiency is well worth it. As Ofgem's own analysis makes clear, the energy networks have outperformed the UK economy by around 1% per year in the 30 years since privatisation. This is a significant achievement and is due to the mutually supporting pillars of a clear incentive-based model coupled with a stable approach to assessing the financing requirements of the businesses.

Even if Ofgem rejects the criticisms above and the flaws in their analysis of historic performance, which we outline in response to FQ20, what it hasn't done is properly evaluate the wider consequences of this adjustment. In particular, neither Ofgem nor MPW in the UKRN report make an assessment of the damage to the efficiency properties of the incentive based regime from linking the future level of allowed returns with historical outperformance. These detriments, as set out in section 4 of the Frontier report, include:

1. Erosion of investor confidence and increased investor risk:

- a. The past stability and predictability of the WACC-setting process is the cornerstone of the UK regulatory model, where the focus has been squarely on achieving two highly desirable outcomes: maintaining investor confidence in order to keep investors cost of capital of investing in the industry low; and stimulating significant dynamic efficiency improvements (in large part through a predictable approach to remuneration of assets and performance). Ofgem's arbitrary adjustment, for which there is no known UK precedent or satisfactory conceptual or evidential basis undermines those benefits.

Indeed the CMA explicitly recognise the importance of maintaining investor confidence in the following quote;

'Consumers' interests had to be considered broadly and included the interests of existing and future consumers in maintaining investor confidence in a stable and predictable regime and the Authority's adherence to principles and commitment' (para 8.11 CMA final determination on BGT appeal on ED1 trombone)

- b. In applying its adjustment to the WACC, which is then applied to the RAV, Ofgem is in effect retrospectively clawing back the value of past investments. This runs counter to established regulatory practice in the UK and will unquestionably undermine investor perceptions of risk and company behaviour.
2. **Weakened incentives for efficiency and innovation:** in calibrating its downward adjustment by reference to historical outperformance Ofgem is clearly signalling that any outperformance will affect its future calibrations of the downward adjustment. This will significantly reduce the incentives to innovate and drive efficiency to the longer term detriment of customers.
 3. **Distortion of incentives to invest:** Ofgem's approach directly impacts on the managerial appraisal of new investment projects. The hurdle rate for operators is given by the actual WACC rather than the downwardly adjusted return that Ofgem would apply. Therefore, under Ofgem's proposals, for the operator to invest normally it would need to be reassured that each investment project can earn not only the allowed return but also a target level of outperformance associated with that investment.
 4. **Loss of clarity over price control calibration:** the arbitrary and unfounded nature of the adjustment, coupled with its de-linking from the other elements of the price control package undermines stakeholder engagement with the process and likely weakens the effectiveness of the appeal arrangements. This is because the adjustment captures several areas of the calibration of the price control in a one off overriding and unfounded adjustment.

Therefore, on p8-9 of their report, Frontier conclude that not only is Ofgem's proposal without merit, but it carries with it many potential costs to customers. Ofgem should recognise that dealing with information asymmetry and encouraging efficiency enhancing effort is costly. This is the fundamental conclusion of the pioneering papers in the economic literature on which a body of regulatory theory and practice has developed. It is a body of literature that has informed the many price control reviews that have been undertaken in the UK. Happily, the evidence provided by Pollitt for Ofgem suggests that these costs have been worth it, in that customers have benefitted significantly from the application of incentive-based regulation to energy network operators, in the form of lower network charges and enhanced quality of service.

The second conclusion of the body of theory and practice, that is also relevant for this report, is that the costs to the customer of encouraging information revelation and efficiency enhancing effort can be minimised if the regulator is diligent in the calibration of incentives and the setting of targets. It is by now well-understood by most stakeholders that for a variety of reasons and across a number of dimensions, Ofgem may have underperformed in this task at the RIIO-1 reviews. We suggest that Ofgem review the process of calibrating incentives and the setting of targets with a view to improving the quality of its analysis that feeds into target setting rather than applying a remedy that ignores the underlying problem and creates new problems of its own.

FQ20. Does Appendix 4 accurately capture the reported outperformance of price controls?

We believe that the out-performance data that Ofgem has used to calibrate its adjustment is selective and misleading. Ofgem claims there is an inherent and systematic informational advantage which means that operators have been able to systematically outperform targets, which both renders the proposed adjustment necessary, and also enables its calibration.

However, the data it uses to support this contention largely relates to the first generation of RIIO price controls, and the last set of pre-RIIO controls. If the data is extended further back in time, it becomes possible to gain significant further insights. For example, at DPCR4, it is clear that the core cost and output targets were set at challenging levels that many companies could not meet. Even more starkly, at the gas distribution price control period ending in March 2007, companies overspent their allowances by £864m, with companies bearing 31% of the value of the overspend.

Taking a longer time span of historic data disproves Ofgem's assumption that historic data shows there is an inherent and systematic informational advantage which means that networks systematically outperform targets. Notwithstanding this point, as detailed in section 3.3 of the Frontier report, Ofgem makes no allowance for the fact that the scope for outperformance is likely to be quite different in the RIIO-2 period than the RIIO-1 period, due to its proposals in respect of:

- Tightened calibration of incentives through price control deliverables and license obligations;
- Greater use of uncertainty mechanisms and indexation;
- Price control duration reduced from 8 years to 5 years;
- Dynamic target setting;
- Lower incentive rates; and
- Introduction of Return Adjustment Mechanisms (RAMs).

FQ21. Is there any other outperformance information that we should consider? We welcome information from stakeholders in light of any gaps or issues with the reported outperformance as per Appendix 4.

As detailed in our response to FQ20 expanding the data set back before the last set of pre-RIIO price controls disproves Ofgem's assumption that historic data shows there is an inherent and systematic informational advantage which means that networks systematically outperform targets.

3.4 Financeability

Observations and overview

We welcome the continuation of the link of financeability with the fact that an investment grade credit rating signals a strong likelihood that a company will be able to meet its liabilities and keeps the cost of debt low for networks. However, we are concerned with the extent that Ofgem will actually stress test the financeability of a notional company and ensure there is sufficient financial headroom between the credit metrics of an efficient notional company and the investment grade rating boundary.

A number of factors cause this concern, including the consultation document stating that a lower cost of equity may mean less headroom to deal with downside scenarios, with no reflection that a proposed greater than 50% reduction in the real cost of equity since RIIO-GD1 ought to be revisited. Instead the focus or onus is solely on the companies to deal with this situation or for the cashflow floor mechanism to be triggered - which fundamentally weakens the purpose of the financeability test that has acted as an explicit cross check of the price control in the past.

We recognise there should be an onus on companies when company significant factors such as excessive company underperformance or particular capital structure has caused the financeability issue, but not when there are inherent issues with the regulatory regime and calibration of the price control under a notional structure. Looking at the principles of the cashflow floor a fundamental question that needs to be answered by Ofgem, before the concept of a cashflow floor is explored any further, is why do they think this mechanism is needed in RIIO-2 for the first time? It needs to be explained

by Ofgem why their focus is not on calibrating the price control correctly rather than introducing various fail-safe mechanisms which are unprecedented in UK regulation.

We are concerned that the cashflow floor appears designed to provide liquidity at particular points in time by shifting cash flows over time. But improving liquidity is not the same as improving creditworthiness and the floor cannot reduce company/asset risk or improve financial position of a firm on a sustainable basis. These concerns have been echoed by two of the rating agencies in recent reports on RIIO-2, in terms of them questioning whether the cashflow floor signals a deterioration of credit quality in the sector. Also, the long-term impact on a network's ability to raise debt needs to be considered - once it has entered into the mechanism the ramifications on how debt providers will view the company, and probably the sector as a whole, will last for many years.

The primary tool for securing the credit worthiness of licensees is setting a suitable allowed return that generates a reasonable headroom for reasonable stress test scenarios for a notional company. The allowed cost of debt is yet to be calibrated but it is clear the cost of equity is set on a flawed methodology as set out in section 3.3 above, and this needs to be addressed.

When looking at the financial headroom Ofgem needs to be very mindful of how its proposals for the overall RIIO-GD2 package may undermine the stability and predictability of the regulatory regime. For example, in May 2018 Moody's commented on the proposed regulatory changes in the water sector, as part of Ofwat's PR19 review. It said these resulted in *'a modest deterioration in the stability and predictability of the regulatory regime and companies will need to demonstrate stronger financial metrics if they are to maintain credit quality'*. As a consequence, Moody's raised its rating thresholds required to achieve certain ratings. Changes to the overall regime that Ofgem are proposing could all be considered in the same light if implemented. These regulatory changes could therefore require targeting stronger financial ratios and/or result in higher (efficient) financing costs across the sector.

Also, further to our response to FQ3, we note the significant refinancing costs associated with the sale by National Grid of its Gas Distribution businesses to Cadent need to be factored into the debt costs considered for the financeability test of a notional company.

Furthermore, we think it is only reasonable that there needs to be a test on whether, if the cashflow floor is triggered, the conditions were met due to poor performance or poor price control calibration. If the latter is the case, then the price control should be re-opened rather than the Cashflow Floor activated. The cashflow floor also interferes with respective debt and equity's control rights and cash flow claims on the business. Rather than not provide support for equity payments it actually increases risks to equity, as it is seemingly a mechanism to lower the financial headroom of a network for downside scenarios and protect only debt providers from the consequent risks. Furthermore, the floor may in fact aggravate rather than reduce risks to lenders through explicit weakening of the financeability duty as a binding constraint as well as incentives or financial restructuring.

The application of a penalty where the floor is triggered for highly geared companies could undermine the incentive for companies to determine the most efficient capital structure including the gearing level, irrespective of the notional structure. Finally, to ensure the value neutrality of the change to CPIH we strongly believe the financeability test should be done on an RPI and CPIH basis, and over the long term, to test for any value leakage. Additionally, there needs to be consistency between the credit rating in the financeability test with the cost of debt assumptions in the WACC.

Response to consultation questions

FQ22. What is your view on our proposed approach to assessing financeability? How should Ofgem approach quantitative and qualitative aspects of the financeability assessment? In your view, what are the relevant quantitative and qualitative aspects?

We welcome the continuation of the link of financeability with the fact that an investment grade credit rating signals a strong likelihood that the company will be able to meet its liabilities and keeps the cost of debt low for networks. However, we have a number of concerns as set out below;

Reduction in Financial Headroom

We are concerned with the extent that Ofgem will actually stress test the financeability of a notional company and ensure there is sufficient financial headroom between the credit metrics of an efficient notional company and the investment grade rating boundary. A number of factors cause this concern.

Firstly para 4.5 of the Finance Annex acknowledges the impact that a sharp reduction in the cost of equity could have on metrics without some offsetting action. Para 4.15 implies that a lower cost of equity may mean less headroom to deal with downside scenarios due to it signalling to the operation of a cashflow floor by Ofgem for the first time, rather than rely solely on the financial headroom. Ofgem fails to take account of the fact that a proposed greater than 50% reduction in the real cost of equity since RIIO-GD1 ought to be revisited, nor that the underlying long term historic Total Market Return – which Ofgem recognise as the most objective measure – has actually increased in real terms since RIIO-GD1. There is also no reflection of how Ofgem has come to the conclusion that the risk has fallen so much from RIIO-GD1, and indeed relative to water or the international sector with which the UK competes with for investment in energy networks, to contribute to such a fall in cost of equity.

The primary tool for securing the credit worthiness of licensees is setting a suitable allowed return that generates a reasonable headroom for reasonable stress test scenarios for a notional company. The allowed cost of debt is yet to be calibrated but it is clear the cost of equity is set on a flawed methodology as set out in section 3.3 above, and this needs to be addressed.

Instead Ofgem's focus is solely on the companies to deal with this situation or for the cashflow floor mechanism to be triggered. There has always been some onus on the companies to take action to resolve financeability issues versus the notional company. However, to place the resolution of the financeability concerns of limited financial headroom on companies, or a temporary bail out mechanism, fundamentally weakens the purpose of the financeability test, which has acted as an explicit cross check of the price control in the past.

When looking at the financial headroom Ofgem needs to be very mindful of how its proposals for the overall RIIO-GD2 package may undermine the stability and predictability of the regulatory regime. For example, in May 2018 Moody's commented on the proposed regulatory changes in the water sector, as part of Ofwat's PR19 review. It said these resulted in *'a modest deterioration in the stability and predictability of the regulatory regime and companies will need to demonstrate stronger financial metrics if they are to maintain credit quality'*.

As a consequence, Moody's raised its rating thresholds required to achieve certain ratings, for example the Adjusted Interest Cover Ratio. Changes that Ofgem are proposing - for example an allowed vs expected returns adjustment, non NPV neutral changes to the framework when switching to CPIH, the cashflow floor and RAMs could all be considered in the same light if implemented. These regulatory changes could therefore require targeting stronger financial ratios and/or result in higher (efficient) financing costs across the sector.

Furthermore If the financeability test is so devalued what tests the regulatory settlement? As detailed on p20 of the attached KPMG report;

'Based on regulatory precedent financeability tests act as a binding constraint on price control parameters and calibration as evidenced by CMA appeals. In recent cases like SONI (System Operator Northern Ireland), the CMA explicitly increased ex ante financial headroom to address financeability challenges and ensure that headroom corresponded to downside risk exposure, including an explicit premium for exposure to asymmetric downside risk.'

This weakening of the financeability test is detailed in our response to FQ24 which highlights how Ofgem are allowing credit quality to weaken by relying on the cashflow floor to deal with downside scenarios.

Finally the asymmetric risk in the current RIIO-2 package needs to be taken into account in the establishment of the financial headroom.

Consistency Between Cost of Debt Assumptions and the Allowed Return

As detailed in section 4.1.1 of Nera report 5, there needs to be consistency with the cost of debt assumptions in the WACC. The use of iBoxx indices to set the cost of debt implies a credit profile. This same profile should be used in the financeable analysis. If there is any need to use a different credit profile in the financeability analysis, then this would require a consistent adjustment to the cost of debt allowances.

Also, to ensure the value neutrality of the change to CPIH we strongly believe that the financeability test should be done on a RPI and CPIH basis, and over the long term, to test for any value leakage.

Direct Link Between Ofgem's Approach and Rating Agencies Methodology

Ofgem's proposal for looking at qualitative and quantitative factors in the round is reasonable and one followed by credit rating metrics. Following the same, or similar, methodology as credit rating agencies would provide a direct link between Ofgem's approach and a credible market view of financeability. For example, Moody's apply 40% weighting to quantitative

factors and 60% to qualitative. As highlighted above Ofgem needs to be very mindful of how its proposals on the overall package may undermine the stability and predictability of the regulatory regime.

Financeability Assessment Period

It is important that the Financeability assessment covers both the short and long term. Therefore, we would expect the GD2 package to maintain financeability into several future price control periods.

FQ23. Do you agree with the possible measures companies could take for addressing financeability? Are there any additional measures we should consider?

Notwithstanding the points in our response to FQ22 regarding our concerns on the onus being solely on companies or the cashflow floor to resolve the issue of limited financial headroom for an efficient notional company – at a principle level we think the measures listed in para 4.16 are reasonable if excessive company underperformance or particular capital structure has caused the financeability issue. The key point is that these measures are reasonable when these company specific factors have come into play – not when there are inherent issues with the regulatory regime and calibration of the price control under a notional structure.

However, we are not supportive of the cashflow floor in any circumstance – as set out in our response to FQ24.

FQ24. Do you agree with the objectives and principles set out for the design of a cashflow floor?

Overriding Concern with Cashflow Floor

A fundamental question that needs to be answered by Ofgem, before the concept of a cashflow floor is explored in any further, is why do they think this mechanism is needed in RIIO-2 for the first time? It needs to be explained by Ofgem why their focus is not on calibrating the price control correctly rather than introducing various fail-safe mechanisms which are unprecedented in UK regulation. Why are the current measures of regulatory ring fencing and special administration not deemed enough to protect customers in RIIO-2?

We think it is only reasonable that there needs to be a test on whether, if the cashflow floor is triggered, the conditions were met due to poor performance or poor price control calibration. If the latter is the case, then the price control should be re-opened rather than the Cashflow Floor activated.

Finally, there needs to be a detailed impact analysis and cost benefit analysis before this proposal goes any further – following good regulatory practice

Impact on Credit Worthiness of Sector

We are concerned that the cashflow floor appears designed to provide liquidity at particular points in time by shifting cash flows over time. But improving liquidity is not the same as improving creditworthiness and the floor cannot reduce company/asset risk or improve financial position of a firm on a sustainable basis. These concerns have been echoed by two of the rating agencies in recent reports on RIIO-2, in terms of them questioning whether the cashflow floor signals a deterioration of credit quality in the sector;

'We therefore struggle to recognize the value of the cash flow floor mechanism and question whether the introduction of the mechanism signals the regulator's willingness to allow credit quality in the industry to decline.' (p6, S&Ps Report 'Ofgem's Proposed RIIO-2 Regulatory Framework Will Test U.K. Energy Networks, Feb 19)

'If a mechanism is eventually devised that successfully removes the need for Ofgem to allow any headroom to financing costs, the credit quality of the sector is likely to be weakened.' (p10 Moody's Report 'Credit quality likely to weaken in RIIO-GD2 regulatory period)

Also the long term impact on a networks ability to raise debt needs to be considered - once it has entered into the mechanism the ramifications on how debt providers will view the company, and probably the sector as a whole, will last for many years.

Interference With Respective Debt and Equity's Control Rights

The cashflow floor also interferes with respective debt and equity's control rights and cash flow claims on the business. Rather than not provide support for equity payments it actually increases risks to equity, as it is seemingly a mechanism to lower the financial headroom of a network for downside scenarios and protect only debt providers from the consequent

risks. Furthermore, the floor may in fact aggravate rather than reduce risks to lenders through explicit weakening of the financeability duty as a binding constraint as well as incentives or financial restructuring.

Interference With Capital Structure

The application of a penalty where the floor is triggered for highly geared companies could undermine the incentive for companies to determine the most efficient capital structure including the gearing level, irrespective of the notional structure.

We have the following comments on the objectives of the cashflow floor, as set out in para 4.23;

i) Strengthen the ringfence and support the creditworthiness of actual Licensees in the current low-cost of equity environment.

As highlighted in the 'Impact on Credit Worthiness of Sector' section above the cashflow floor would actually weaken the credit worthiness of the sector

As set out in response to FQ22 the primary tool for securing the credit worthiness of licensees is setting a suitable allowed return that generates a reasonable headroom for reasonable stress test scenarios for a notional company. The allowed cost of debt is yet to be calibrated but it is clear the cost of equity is set on a flawed methodology as set out in section 3.3 above, and this needs to be addressed. As set out on p14 of the KPMG Report;

'Ofgem has a statutory duty to have regard to whether licensees are able to finance their activities in a manner "best calculated to promote efficiency and economy"'. (Gas Act 1986 & Electricity Act 1989).

However as detailed in section 5.3 of the KPMG report the floor seems to move in the opposite direction—it substitutes new regulation for an expected market outcome of capital withdrawing until there is a reasonable return. As set out in section 5.1 of the KPMG report Ofgem does not point to a specific market failure or market distortion that the floor is required to remedy, as required by the principles of regulatory economics.

(ii) Protect consumers and debtholders from downside scenarios while leaving shareholders fully exposed to incentives on cost and quality of service.

The floor would interfere with respective debt and equity's control rights and cash flow claims on the business, as detailed in section 5.5 of KPMG's report. Tax policy and regulation of financial markets generally aim to reduce any potential bias for one type of capital over another to avoid inefficient market distortions—Ofgem's proposals appear to go in the opposite direction.

A potential market distortion to justify the floor could be some very high costs of financial distress, as detailed in section 5.2 of the KPMG report, but there is no evidence of that and utilities benefit from special protections anyway. There is no justification for supporting one type of capital provider at the cost of others.

Additionally, the floor introduces a completely new public claim on the company with certain rights, which might need to be recognised on the balance sheet as a new liability. This can be seen effectively as a conditional part-mutualisation of the business introducing new public capital. Therefore, the company subject to the floor might be seen as under a mix of public and private ownership.

(iii) Preserve incentive on Licensees to manage their financial structures in a reasonable and prudent manner

The application of a penalty where the floor is triggered for highly geared companies could undermine the incentive for companies to determine the most efficient capital structure including the gearing level, irrespective of the notional structure. A design of the floor that restricts intercompany interest payments could incentivise raising of new debt within the regulatory ring-fence, increasing gearing at the Opco level. This is a highly complex area where regulatory interventions risk major distortions, meaning that an in-depth impact assessment is crucial.

We have the following comments on the principles of the cashflow floor, as set out in para 4.30;

a) It should provide support for debt payments but not equity payments - this supports objectives (i), (ii) and (iii).

Rather than not provide support for equity payments it actually increases risks to equity as it is seemingly a mechanism to lower the financial headroom of a network for downside scenarios, and protect only debt providers from the consequent risks. Furthermore, the floor may in fact aggravate rather than reduce risks to lenders through explicit weakening of the financeability duty as a binding constraint as well as incentives or financial restructuring

b) It should be targeted, only applying to those companies in circumstances that require it - this supports objectives (ii) and (iii).

The key issue is that it is being introduced due to the very low cost of equity that is currently being proposed by Ofgem for RIIO-2, and the impact on financial headroom – as highlighted in our response to ‘objective i’ above. As explained in this response we think this is against one of Ofgem’s statutory duties.

Additionally, the market should be able to provide similar liquidity solutions itself, as long as the company is solvent and financeable to start with, as detailed in section 5.4 of the KPMG report. Markets can efficiently shift money over time, credit facilities can be arranged ex ante and or even ex post if a business is viable. Private contracts can shift risks across debt and equity, or ring fence one type of capital provider, and would do this at a cost which is appropriately priced.

c) It should be proportional; it should not place any unnecessary burden on particular consumer groups - this supports objective (ii).

We don’t think the cashflow floor places unnecessary burden on particular customer groups, but does place unnecessary burden on equity as highlighted in response to principle ‘a’ above.

d) Compared to the alternatives (including not having a cashflow floor), it should be beneficial to consumers - this supports objective (ii).

If implemented in the short term the cashflow floor is seemingly beneficial to customers as it seemingly means that Ofgem would not set a suitable allowed return. However, in the medium and long term this would have detrimental impacts for consumers in terms of the willingness of investors to invest in UK energy networks. Notwithstanding the financeability duty that Ofgem has to networks (see response to principle ‘b’ above) Ofgem also has obligations to future customers.

e) It should allow the removal of constraints on cost of equity judgements that might otherwise apply - this supports objectives (ii) and (iii).

A reasonable allowed return is required that generates headroom for suitable stress test scenarios for a notional company. Notwithstanding this point we strongly disagree with the calculation of the cost of equity in the first place – following regulatory precedent and sound technical judgement may well avoid any ‘constraints on cost of equity judgements that might otherwise apply’ to make a notional GDN financeable with reasonable headroom.

FQ25. Do you support our inclusion of and focus on Variant 3 of the cashflow floor as most likely to meet the main objectives?

As set out in our response to FQ24 we fundamentally disagree with the concept of a cashflow floor. Also we do not see any merits in variants one (maximum penalties) and two (minimum coverage ratios), as set out in our response to Qu. 39 of the RIIO-2 Framework Consultation, March 2018. These were also proposed due to the impact of a very low cost of equity, which has many methodological issues in its derivation (see section 3.3. above), on the available financial headroom.

3.5 Corporation tax

Observations and overview

We consider that, where possible, networks should seek to obtain the “Fair Tax Mark” certification, as this would provide independent verification of networks’ tax affairs. SGN still consider that funding for tax costs should remain under option A of the May 2018 RIIO-GD2 consultation (current notional tax allowance with tax clawback mechanism) as it provides an incentive to manage tax costs efficiently.

Response to consultation questions

FQ26. Do you support our proposal that companies should seek to obtain the “Fair Tax Mark” certification?

SGN consider that, where possible, networks should seek to obtain the “Fair Tax Mark” certification as this would provide independent verification of networks’ tax affairs, providing Ofgem, consumers, and other stakeholders with comfort that these are fair. It will need to be considered how any difficulties in acquiring the Fair Tax Mark due to foreign ownership will be dealt with.

FQ27. Is there another method to secure tax legitimacy other than the “Fair Tax Mark” certification? Could we build upon the Finance Acts (2016 and 2009) with regards to the requirement for companies to publish a tax strategy and appoint a Senior Accounting Officer?

The benefit of the “Fair Tax Mark” is that it provides an independent view of a network’s management of its tax affairs, and as such would provide Ofgem, consumers, and other stakeholders with comfort that these are fair. Therefore, SGN do not consider that an alternative approach to the “Fair Tax Mark” would be as beneficial.

FQ28. For Option A, how should a tax re-opener mechanism be triggered? Is there a materiality threshold that we should use when considering the difference between allowances and taxes actually paid to HMRC? If so – what might this be?

SGN still consider that funding for tax costs should remain under option A of the May 2018 consultation (current notional tax allowance with tax clawback mechanism) as it provides an incentive to manage tax costs efficiently. The tax re-opener mechanisms and materiality levels under RII0-GD1 are broadly considered appropriate for RII0-GD2, however SGN recommend that a tax trigger event should also include when tax legislation changes are enacted by government and that allowances should be updated to reflect this (subject to materiality levels). SGN also consider that, there should be an incentive mechanism for companies to obtain the Fair Tax Mark accreditation, such as pass through of their actual tax costs where those exceed the tax allowance.

3.6 Indexation of RAV and calculation of allowed return

Observations and overview

One of the main reasons we believe that a transition to CPIH indexation is required is to maintain the trust and confidence of investors. This is because historic investment, which will constitute the vast majority of the RAV during RIIO-2, would have been financed by either equity invested, or debt undertaken, on the firm basis of RPI indexation. Therefore, we believe Ofgem should transition to CPIH by indexing historic RAV, and returns and depreciation, on this basis as a commitment to RPI was made at previous price controls. Otherwise investor confidence would be weakened, and cost of capital would have to be raised for new and existing assets, due to the significant regulatory uncertainty created.

Also transition reduces the risk of the nominal WACC being eroded in RIIO-2 - due to the decreased effectiveness of the real CPIH in masking the impact of a step reduction in the nominal WACC on financeability. Implementing an immediate switch to CPIH to enable a short-term fix to a cashflow problem caused by the proposed significant drop in cost of equity, is far from a regulatory policy that maintains the trust and confidence of investors. The use of financial levers in such a way undermines the trust in the regulatory framework.

A steady transition, e.g. indexing the historical RAV on a RPI basis, can also be used to avoid a lot of the significant costs of financing using CPI linked bonds, or CPI swaps, until a liquid market exists.

Finally, due to the complexity of the way indexation is embedded in the price control framework, the uncertainty over what is actually going to be the official measure of inflation going forward and the many concerns over how value neutrality is being maintained - transition allows management of the impact of the switch to CPIH being implemented incorrectly. This is because any errors have less impact under a steady transition.

As an economic regulator Ofgem has a duty to do a full impact assessment of such a fundamental and complex change to its regulatory framework. Paragraphs 6.11 - 6.13 of the Finance Annex imply that the choice of value neutrality is either simply a one-off switch of the indexation of the RAV, depreciation and allowed returns from CPIH to RPI, or making true-ups for the difference between RPI and CPIH which indirectly result in continued RPI indexation.

Only when an overall cashflow analysis is undertaken, showing the cashflows under RPI and CPI and incorporating how all elements will be impacted by a move to CPIH and what the solutions to value neutrality issues are, can the move to CPIH be seen as value neutral. Such elements to be assessed would include

1. has there been a significant reduction in the proposed nominal cost of capital due to the short to medium increase in allowed returns under CPIH providing a short-term boost to cashflows to mask its impact?
2. has the value neutrality of the switch been undermined by the way in which nominal to real conversions have been carried out in the underlying CAPM calculations? We highlight below particular concerns with the deflation of TMR
3. some rating agencies may adjust their calculations or thresholds to cater for the fact that there is no increase in value due to the increase in short to medium term cashflows.
4. what do the financeability metrics look like under RPI and CPIH in RIIO-2 and future price controls to test the value neutrality of the switch?
5. what are the additional financing costs of issuing CPI linked bonds, or CPI swaps, in an illiquid market?
6. what is the inflation basis risk due to the mis-match between RPI ILD and CPI(H) linked RAV, under the no transition scenario proposed?
7. has value neutrality been preserved for RIIO-1, for example is the RAV still RPI indexed up to March 2021?
8. Are nominal Totex Allowances being maintained at correct nominal level through the use of RPEs?

Beyond cashflows the following factors need to be taken into account – which were highlighted in CEPA's 'Review of Cost of Capital Ranges for Ofgem's RIIO-2 for Onshore Networks';

- a) the impact of the fact that CPI linked investments are probably less desirable for investors resulting in a larger cost of equity for these investments
- b) a considerable number of investors have a preference for capital growth vs cash income. For long life assets (i.e. 40-60 years) changing to CPI would materially adjust the asset valuations in the intervening period. Also, a number of investors have significant RPI linked liabilities and thus have a strong preference for a RPI linked asset.

Response to consultation questions

FQ29. What is your view on our proposal for an immediate switch to CPIH from the beginning of RIIO-2 for the purposes of RAV indexation and calculation of allowed return?

SGN believe a phased transition to CPIH is necessary for a number of reasons;

1. An immediate switch to CPIH would be a fundamental change to a key part of the price control framework. A key reason why Ofwat decided there would be transition in PR19 was that it;

'...recognises the importance of maintaining the trust and confidence of investors and allows for a planned transition for existing debt. A rapid change to CPI/H might increase the perception of risk to investors.'
(p71 Water 2020: our regulatory approach for water and waste water services in England and Wales.)

Importantly, with reference to para 6.8 of the Finance Annex which compares the relative size of the index linked debt of the water and energy network sectors in the context of the need for transition, the quote above highlights the need to maintain the trust and confidence of investors. Historic investment would have been financed by either equity invested, or debt undertaken, on the firm basis of RPI indexation. Therefore, we believe Ofgem should index historic RAV, and returns and depreciation, on this basis as a commitment to RPI was made at previous price controls. Otherwise investor confidence would be weakened, and cost of capital would have to be raised for new and existing assets, due to the significant regulatory uncertainty created.

Para 6.6 of the Finance Annex implies that an immediate switch is better than phased transition because it offsets the impact of a step reduction in the cost of equity on cashflow available to service debt interest costs. Implementing an immediate switch to CPIH to enable a short-term fix to a cashflow problem caused by the proposed significant drop in cost of equity, is far from a regulatory policy that maintains the trust and confidence of investors. This is especially the case due to the number of significant methodological concerns we have with how the Cost of Equity is being set, as highlighted in section 3.3 of this response. The use of financial levers in such a way undermines the trust in the regulatory framework.

Transition reduces the risk of the nominal WACC being eroded due to the decreased effectiveness of the real CPIH in masking the impact of a step reduction in the nominal WACC on financeability.

2. A steady transition, e.g. indexing the historical RAV on an RPI basis, can also be used to avoid a lot of the significant costs of financing using CPI linked bonds, or CPI swaps, until a liquid market exists (see response to FQ30)
3. The Governor of the BoE and the UKRN report, recommend a one-off switch to CPI/CPIH when it becomes clear on which one to adopt. It is in doubt whether the picture will be any clearer in summer 2020 when Ofgem intend to review the situation between CPI and CPIH. A single switch to CPIH, by its very nature, would have more dramatic consequences than a transitional approach, if it needed to be reversed.
4. The following factors mean there is significant risk that not all the changes required will be fully recognised and implemented in the correct manner;
 - a. the complexity of the framework, PCFM calculations and licence mechanisms, and the numerous ways in which RPI is currently used in these,
 - b. the many concerns regarding value neutrality highlighted in our response to FQ30
 - c. the uncertainty over what is actually going to be the official measure of inflation going forward

Transition allows management of the impact of the switch to CPIH being incorrect - until these issues can be addressed in RIIO-3. As recognised by the Competition Commission, "consistency with regulatory precedent is a relevant consideration [and] significant changes should be satisfactorily explained and well justified. Differences that arise due to changes in approach may need to be particularly well justified, as there are benefits to a stable and well understood regulatory

framework”³⁸ We do not consider that an immediate switch to CPIH has been properly justified through evidence by Ofgem.

FQ30. Is there a better way to secure NPV-neutrality in light of the difficulties we identify with a true-up?

A Full Impact Assessment is required due to the complexity of the regulatory framework, PCFM calculations and licence mechanisms, and the numerous ways in which RPI is currently used in these. Paragraphs 6.11 - 6.13 of the Finance Annex imply that the choice of value neutrality is either simply a one-off switch of the indexation of the RAV, depreciation and allowed returns from RPI to CPIH, or making true-ups for the difference between RPI and CPIH which indirectly result in continued RPI indexation.

Its proposal that NPV-neutrality is best secured by a one-off, point-in-time switch from RPI to CPIH is seemingly driven by the analysis it did for the July 2018 RIIO-2 Framework Decision doc which shows that a change in indexation would reduce the rate at which the RAV grows (and therefore reduce depreciation allowances over time) and increase return allowances in the short term – meaning an overall NPV neutral impact on cashflows.

As an economic regulator Ofgem has a duty to do a full impact assessment of such a fundamental to change to its regulatory framework – this simple analysis does not suffice, and thus Ofgem’s statement that

‘consumers and investors as a whole will be neither better nor worse off in net present value terms’ (para 6.101 RIIO-2 Framework Decision document, July 2018)

can not be substantiated. The analysis in Appendix two of the RIIO-2 Framework decision doc only shows that the switch to CPIH is revenue neutral. Only when an overall cashflow analysis is undertaken, showing the cashflows under RPI and CPI and incorporating how all elements will be impacted by a move to CPIH and what the solutions to value neutrality issues are, can the move to CPIH be seen as value neutral. Such elements to be assessed would include;

1. Has there been a significant reduction in the proposed nominal cost of capital, due to the short to medium increase in allowed returns under CPIH providing a short-term boost to cashflows to mask its impact? Para 6.6 of the consultation document states that;

‘A step reduction in the allowance for equity costs would dramatically reduce the cashflow available for companies to service debt interest costs. An immediate switch is better than a phased transition in terms of off-setting this reduction.’

2. Additionally, has the value neutrality of the switch been undermined by the way in which nominal to real conversions have been carried out in the underlying CAPM calculations? Our response to FQs 9 & 10 highlight that the UKRN report uses historical CPI inflation published by the Bank of England to deflate the TMR. However, this dataset has a number of fundamental flaws pre the establishment of CPI as a measure in 1987, which means the switch to CPIH is being undertaken in a far from value neutral manner. Moody’s also raise concerns in their Feb 2019 review of RIIO-GD2 (p3), when assessing Ofgem’s deflation of historic Total Market Returns, that;

‘Ofgem has said that investors have tended to rely on the prevailing official measure of inflation in forming their expectations and that historical RPI- and CPI-based real returns data can therefore be used interchangeably. This implies that Ofgem would use the same “real” market return regardless of its chosen inflation index. If this is the case, the change from RPI to CPIH is likely to be NPV-negative.’

3. some rating agencies may adjust their calculations or thresholds to cater for the fact that there is no increase in value due to the increase in short to medium term cashflows.
4. what the financeability metrics look like under RPI and CPIH in RIIO-2 and future price controls to test the value neutrality of the switch. There has been no reference to this in Ofgem’s proposals.
5. What are the additional financing costs of issuing CPI linked bonds, and CPI swaps, in an illiquid market? There has been no reference to this in Ofgem’s proposals. In absence of CPI Gilts - Corporate Debt issuances are negotiated individually to determine the “wedge” vs RPI market price. Investors seek additional premium for illiquidity. Nera’s ‘Evaluation of Inflation Indexation for RIIO-2’ (May 2018), for WPD, estimates a premium of up to 80 bps for debt

³⁸ Bristol Water, Competition Commission 2010 Report, 4 August 2010, para 9.21.

and 15bps for swaps. In addition to the liquidity premium Nera state that debt issuance costs could also be higher for illiquid instruments, due to the lack of price transparency and difficulties in identifying and matching counter-parties

6. What is the inflation Basis Risk due to the mis-match between RPI ILD and CPI(H) linked RAV, under the no transition scenario proposed? Networks will need to consider CPI(H)-RPI swaps and issuing CPI(H) ILD. We would question the approach in para 6.7 of the Finance Annex which implies that the increased cashflow available under CPIH will help pay debt costs where there is material exposure to RPI. Only if the NPV of cashflows under CPIH was positive to the extent of covering the extra debt costs due to RPI exposure – would companies be NPV neutral overall.

It is worth noting that RPI basis risk has already contributed to negative outlooks being given for RIIO-2 for some networks, and there is a risk of accretion being included in interest costs due to the mis-match RPI ILD and CPI(H) linked RAV

7. That value neutrality is preserved for RIIO-1, for example the RAV is still RPI indexed up to March 2021.
8. Nominal Totex Allowances need to be maintained at correct nominal level through the use of RPEs

The opening remarks of John Pullinger, the current National Statistician, to the House of Lords enquiry into the continued use of RPI are worth quoting in full

"The RPI represents a series of accumulated expectations of all kinds of parties and any change that we were to make to it would result in some getting a windfall gain and some getting a windfall loss. So it seems to me that it is very important to choreograph anything that is done by the statistics authority with actions particularly by the Treasury and the Bank. So what I am doing is, with my colleagues, working very closely with counterparts in the Treasury and the Bank to make sure that any proposition that comes forward doesn't do anything that will undermine the markets or send a signal about something that is not properly thought through".

Ofgem need to adopt the same cautious approach to preserving value through any change of the price control away from RPI.

Beyond cashflows the following factors need to be taken into account – which were highlighted in CEPA's 'Review of Cost of Capital Ranges for Ofgem's RIIO-2 for Onshore Networks;

- a) the impact of the fact that CPI linked investments are probably less desirable for investors resulting in a larger cost of equity for these investments, as stated on p81
- b) a considerable number of investors have a preference for capital growth vs cash income. For long life assets (i.e. 40-60 years) changing to CPI would materially adjust the asset valuations in the intervening period. Also, a number of investors have significant RPI linked liabilities and thus have a strong preference for a RPI linked asset, as stated on p82-83

3.7 Other Finance Issues

Response to consultation questions FQ31. Do you have any specific views or evidence relating to useful economic lives of network assets that may impact the assessment of appropriate depreciation rates?

Material changes were made to depreciation in RIIO-1 and at this stage we do not believe that there is significant scope or need to change the methodology. However, we do think this is something that should be considered as part of the Business Plans when the networks will have a further refined view of future network strategy.

FQ32. Do you agree with our proposed approach to consider capitalisation rates following receipt of company business plans?

Capitalisation rates could potentially be used to manage customer bills but should not be used as a financeability fix as credit rating agencies could recognise the short-term nature of this value neutral change, a point that has been noted by Ofgem.

Notional gearing

FQ33. Do you have any comments on the working assumption for notional gearing of 60%, or on the underlying issues we identify above?

We believe that the level of notional gearing can only be reviewed when a networks business plan has been assessed and the overall price control package is known. Until that point we would recommend that the working assumption is the current notional gearing for each sector, i.e. 65% for GDNs. We agree with the assessment of the factors that need to be known in para 7.19, i.e.

- cashflow volatility (as affected by totex spend and fast/slow money split, incentives and uncertainty mechanisms)
- the companies' business plans (including proposed transitional arrangements and notional equity injections)
- the cost of equity, the overall cost of capital and financeability

apart from the fact equity injections to reduce gearing may be appropriate for company-specific financeability issues due to underperformance, we strongly believe changes to gearing levels are not likely to be an appropriate measure to take in addressing issues inherent in the regulatory regime and present under the notional structure.

Notional equity issuance costs

FQ34. Do you agree with our proposed approach to consider notional equity issuance costs in light of RIIO-2 business plans and notional gearing?

The price control settlement should allow an efficient company to be financeable. Therefore, the notional gearing should be set at a suitable level to allow for the appropriate levels of equity for an efficiency company to be financeable. Relying on other mechanisms, except in extreme unforeseen circumstances, is against this policy.

Notwithstanding the above if notional equity is required this will need to be compensated. For RIIO-1 it was assumed that equity issuance would attract a cost allowance of 5% of the value of any notional equity raised. We continue to consider Ofgem is correct to allow for equity issuance costs, where the business plan requires the issuance of new equity to be financeable. We consider 5% remains a good working assumption for the cost of new equity issuance.

Pension funding question

FQ35. Do you agree that for RIIO-2 we align transmission and gas distribution with electricity distribution and treat Admin and PPF costs as part of totex?

We agree that alignment across the sector is a sensible aim. However, we suggest that a review is undertaken to see if there have been variations to allowances in Electricity Distribution that have been outside companies control and the materiality of variations. The review should also consider any factors such as legislative changes that could impact admin costs or uncertainties that could impact the PPF costs. If the conclusion is that there is no material uncertainty, we would support alignment. The proposed shortening of the price control period may also mitigate the materiality of uncertainty.

Directly Remunerated Services

FQ36. Do you have any views on the categories of Directly Remunerated Services and their proposed treatment for RIIO-2?

We support the proposed approach and have no specific points to add to Ofgem's proposals. We believe it is too early to lock down these categories and we will identify any new categories in our Business Plan where resulting from stakeholder feedback we have received that may be specific to SGN or cross sector and we recommend their treatment is assessed on a case by case basis.

Disposal of assets question

FQ37. Do you have any views on the potential treatment of financial proceeds or fair value transfers of asset (including land) disposals for RIIO-2?

We believe it is in consumer interest to ensure there are incentives on the financial proceeds of asset disposals. This incentivises the networks to efficiently deal with redundant land and assets, rather than the continuing to pay the sometimes significant expense of safely maintaining and securing them. The customer currently benefits from a sharing of cash proceeds as set out in the background to this section.

We agree with the proposal for licensees to include a strategy as part of their Business Plans on how they treat the disposal of assets, and that as part of their submission they should demonstrate how consumers would benefit from that strategy.