RIIO-2 Challenge Group

Akshay Kaul
Director, RIIO Price Controls, Ofgem
(cc GEMA and RIIO committee)

18 March 2019

Dear Akshay,

RIIO-2 challenge group – response to RIIO-2 sector methodology consultation

With this letter, please see attached the response from the RIIO-2 Challenge Group ("the Group") to the RIIO-2 sector methodology consultation that was issued by Ofgem on 18 December 2018.

The Group strongly believes that the performance of the energy network companies in RIIO-2 will be key to Great Britain's success in addressing the challenges faced by the sector as a whole. Against this background, in summary:

- We whole-heartedly support Ofgem's general approach to RIIO-2 in its sector methodologies. In particular, we welcome the focus on delivering low cost, reliable, sustainable, and consumer-focused outcomes.
- In its decision, following this consultation, we urge Ofgem to give tougher messages about costs and the delivery performance that it expects to see from the companies. We would like to see the various incentive measures presented as an overall package, consistent with the strategic change that Ofgem is seeking.
- Ofgem team will share with us its analysis on the total incentive package in due course, which will explain how these consultation proposals will achieve the three intended outcomes. We will provide Ofgem with further views once we have seen this analysis. Based on the information we have seen to date, we have concerns that the overall combined package may be overly generous and that individual incentives may unnecessarily reward the expected performance levels of the network companies.

I would be happy to discuss with you any part of this response.

Regards

RMWitcomb

Roger Witcomb
Chair, RIIO-2 Challenge Group

RIIO-2 Challenge Group

RIIO-2 Challenge Group

To strengthen the voice of consumers in the process of setting price controls for energy network companies, Ofgem has established the RIIO-2 Challenge Group ("the Group") for all RIIO-2 price controls. In addition to providing an independent challenge to, and scrutiny of, all proposed network company business plans, the Group has engaged with, and provided challenge to, Ofgem's policy thinking and its sector methodology consultation published in December 2018.

This document is the response of the Group to the sector methodology consultation.

Contents

Key points

1. **Energy transition**

Energy transition is listed as a key objective, but gets little direct follow up through the document. Our response in various sections highlights areas in which this is important. In particular, the approach to whole systems is narrow, and there are few proposals - beyond some relatively minor incentives - for addressing the great structural obstacles to achieving a good outcome, given a sector in which there are so many players with conflicting interests. In addition, the role of the Electricity System Operator (ESO) is perhaps understandably under-developed, and that of Ofgem and government hardly gets a mention. Above all, our question is: what is Ofgem's strategy? It is hard to see how this approach as it stands will elicit more than a business-as-usual response from company business plans.

2. **Financing**

Our initial assessment of the proposals on the cost of capital give the impression that Ofgem has signalled a starting point for negotiating with network companies that can only go up (by setting the cost of equity at the low end of the range). We believe that the low end of the range for the cost of capital is too high and should have been lower - there should be an equal expectation that in the final decision the cost of capital could be lower or higher.

We also think it is important to preserve, to the greatest extent possible, ex ante regulation and to limit 'reopeners' under whatever guise, and that more generally there should be a preference for simplicity and clarity.

And the financing settlement needs to be drawn up against the background of the risk/return profile of the total regulatory settlement and, in particular, the incentive package.

3. **The environment and low carbon future**

We feel there should be a statement of principle in the core methodology common across all of the RIIO-2 sectors, on the environment, sustainability and low-carbon facilitation. This would send a strong signal to the companies, reflect a whole-systems approach, and frame clearly what a 'right-balance' might look like between business-as-usual, carrot and stick.

There also needs to be consideration in the round of the respective roles of: licence conditions, standards, quantifiable targets, the Business Plan Incentive, innovation funding, price control deliverables and incentivized outputs. And this should be a consistent approach across the methodologies. As it stands, the RIIO-ET2 methodology addresses this mix well, RIIO-GT2 does to a lesser extent, but RIIO-GD2 does not at all.

Environmental impact reporting is a key input to whole-system assessments. The approaches proposed for the different sectors are currently not aligned. Only the RIIO-ET2 methodology proposes a reporting framework across both direct and indirect carbon impacts as a standard licence condition – as per ED1 - while for RIIO-GT2 and RIIO-GD2 it is not clear that Ofgem will even continue to require any Business Carbon Footprint reporting.

4. **Balance of risk between companies and consumers**

The proposed methodology appears to reduce the risk that companies face by, including but not limited to:

a. proposing outputs and incentives that may be considered easily achievable.
b. providing uncertainty mechanisms that pass risks to consumers.
c. funding innovation that companies will benefit from.
d. funding resilience requirements that reduce failure risk.
e. limiting scope by not having a clear pathway to further competition or for the ESO to drive better network solutions.
f. limiting scope by not pursuing whole system solutions (the proposed methodology as it stands reinforces Transmission & Distribution limited solutions).
g. ensuring their financing requirements can be met.

If these risks are de facto being assumed by consumers, then consumers should not expect to pay again for them through either high shareholder returns and/or risk margins embedded in totex proposals from the network companies.

5. **Competition**

We support Ofgem's ambition to enhance the role of competition in the design, construction and operation of new network assets and, more widely, in providing whole-system and non-network solutions. But we urge Ofgem to be more ambitious in this area. Many of the problems that are raised in relation to early competition models have been successfully addressed in other sectors. We believe that the ESO and/or Ofgem should take a more hands-on role in promoting and facilitating whole-system and non-network solutions. We also think that data transparency is key to encouraging third-party innovation. Given that data sharing will rarely be in the interests of data owners, we think that there should be a stronger open data incentive or obligation.

6. **Distributional consequences and affordability**

We would encourage Ofgem to pull together all the measures in a document which impact on consumers, in particular those in vulnerable circumstances, in order to gauge the overall impact. A clear overview of distributional consequences and affordability would also make transparent any trade-offs that have been made.

1. Giving consumers stronger voice

We welcome Ofgem's strengthening of Enhanced Engagement in energy price controls with its introduction of Customer Engagement Groups, User Groups and RIIO-2 challenge group. A similar approach has been successful in recent water industry price controls and we believe it should lead to better outcomes for energy consumers.

We think there will be an important ongoing role for the Customer Engagement Groups and User Groups through the price control period. It would be helpful for Ofgem to clarify its expectations for this ongoing role during RIIO-2, whilst still leaving freedom for network companies to put forward proposals which identify a role for their company specific group.

Ofgem should ensure that there is an evaluation of this new model, as it is important to be able to demonstrate value for money for consumers. It is also important that an evaluation or lessons learnt session should be held ahead of ED2 to provide clarity of expectations ahead of this process.

2. Outputs and Incentives

This section gives the Group's overarching response to Ofgem's methodologies on outputs and incentives. In Appendix 1, we have included our detailed response to the proposals in the sector-by-sector methodologies. In Appendix 2, we set out the key points of our response to the treatment in the methodologies of the environment and low-carbon transition.

The Group supports Ofgem's proposed consumer focussed outcome-based framework. However, we would encourage Ofgem to go further in a number of ways:

1. **Set the outcomes more clearly in the context of Ofgem's overall ambition for cost and affordability**: The framework sets out to 'describe the outcomes for consumers that (Ofgem is) seeking to achieve'. Yet it does not explicitly address the overall cost/affordability outcome that Ofgem is targeting. Ofgem's desire to reduce costs for consumers is clearly a key driver throughout the methodology, and this vision is articulated in the initial impact assessment ('We seek to keep consumers bills as low as possible in both the long and the short term while enabling the network companies to provide good quality services.'). However, this fourth, wrap-around ambition of 'lowest possible cost in the short and long term' is not clearly articulated in the outcomes framework. We believe that it should be, given the critical importance of this outcome to both current and future consumers.

2. **Make broader use of the outcomes framework**: Having invested in creating an outcomes-based framework, we'd encourage Ofgem to use it wherever possible to assess the impact and ultimate success of these methodologies as a whole (not just of the sectoral outputs and incentives element). For example, the framework could be used as the template for the overall impact assessment of your proposals. This type of clear, outcomes based overview of distributional consequences and affordability would also make transparent any trade-offs that have been made between the interests of current and future consumers.

3. We also think that, to strengthen and reinforce the desired outcome on the environment, the methodology should set out **a short statement of principle on the environment, sustainability and low-carbon facilitation,** and that this should be common across all of the RIIO-2 sector methodologies. This statement should reflect clear ambition from Ofgem, send a strong and coordinated signal to the companies, reflect a whole-systems approach which

looks beyond individual sector silos, and frame more clearly what a 'right balance' might look like between business as usual, carrot and stick (see Appendix 2, for more on what we believe this statement should set out to achieve).

We support the overarching framework design for the various outputs and incentives, and the in-principle distinctions made for the use of Licence Obligations, Price Control Deliverables (PCDs) and Output Delivery Incentives (ODIs). In particular, we support Ofgem's proposals to use a number of mechanisms (including more penalty-only incentives and tougher minimum standards within licence obligations) to ensure that the positive service improvements achieved during RIIO-1 are maintained within business-as-usual costs. As the sector methodologies acknowledge, during RIIO-1, companies have demonstrated their ability to achieve targets easily, which has resulted in significant RORE gains. As such, we encourage Ofgem to follow through on its various proposals designed to make targets tougher and to reduce the total incentive amount available.

We also support the shift to a more innovative use of both relative and dynamic incentives. We welcome the use of competition for a bonus pool based on relative performance. We believe this is a powerful incentive as well as being a way to ensure that the risk of setting an unduly generous target is minimised. Assuming there is adequate data, the dynamic-relative approach should also help to ensure that the incentives remain appropriate over time.

Having acknowledged many of the benefits of the package, we also note that it is a complex package. The range of incentives remains largely unchanged, with some additions and with a more complicated set of evaluation techniques. We are also yet to see Ofgem's estimate of the total value of the package, but we anticipate that it will be less, potentially significantly less, valuable than during RIIO-1. In this context - of a lower value, more complex package, and a price control that is trying to make the right steps to enable a smarter, lower-carbon future system - we would further encourage Ofgem to:

1. **Set out a more strategic overview of the final package**: we encourage Ofgem to set out a strategic overview of the full suite of financial incentives used (including the heavily-weighted Business Plan incentive) to demonstrate that they are being used and weighted as effectively as possible to drive the desired outcomes. We would then encourage Ofgem to take a strong leadership role with this integrated package so as to ensure that isolated policy initiatives are not cherry picked by the companies in order to limit the extent and impact of the price control.
2. **Pull together all the measures in the document which impact consumers in vulnerable circumstances:** this would allow all parties to gauge the overall impact of the price control on this group of consumers which Ofgem has itself identified as being a high priority.
3. **Ensure a consistent application of methodologies in relation to the environment and low-carbon transition** (this includes licence obligations, standards, quantifiable targets, the Business Plan incentive, innovation funding, PCDs and ODIs): as it stands, the ET methodology addresses this mix well, GT does to a lesser extent but GD does not do it well at all. This should include aligning the approach to environmental impact reporting.
4. **Clarify and further strengthen reputational incentives and licence obligations** We note that Ofgem plans to make increased use of reputational incentives alongside licence obligations as a way to incentivise companies to perform well without additional financial reward. Ofgem might consider either combining or further differentiating the ODI(R) and Licence Obligations categories, setting out the criteria used to decide when each type of incentive is appropriate. We also encourage Ofgem to develop a communications strategy that will further strengthen the impact of both reputational incentives and licence obligations. In

energy markets, most public awareness and scrutiny is of the supply companies. We believe that it could have a positive impact on network company behaviour if there were greater awareness of their performance, and of the fact that their costs make up 25 per cent of consumers' bills.

5. **Introduce an open data incentive** The outcomes within these categories seem to capture the key areas of delivery for network companies based on historic requirements. However, it is difficult to say that they incentivise the networks to plan and deliver the energy transition over the next 20 years. This is a difficult area to incentivise as it may require the companies to seek ways to decommission assets. In order to optimise network use in the future - be it through better operation, competition or asset decommissioning – it will be important to be able to access data on networks and assets. The Group encourages Ofgem to consider an incentive for making such data available in an open and useful way. This could be realised by including company commitments to deliver access to such data as part of the business plan assessment.

Allowing network operators to propose **bespoke outputs** could be a valuable addition, but they should be clearly defined and justified, especially with evidence of consumer willingness to pay, and incentives should be costed within a total incentive/penalty cap. It is also important to avoid any double counting of costs that are already included as BAU. We also agree with the principle that an ODI should not be in place for something that may reasonably be expected to be delivered as part of the price control. ODIs should be reserved for areas where the company has to take additional steps to improve performance from what has become standard industry practice. In this context, Ofgem should consider using ODIs only where there is evidence that output levels higher than current levels of performance are required. Our comments on the sector methodologies reflect a concern that some Ofgem proposals may result in incentivising outputs that should be treated as BAU.

We think that there is a role for the Customer Engagement Groups and User Groups to challenge on whether bespoke incentives – including on the environment – go 'above and beyond' BAU expectations.

3. Whole Systems

The Group welcomes the recognition of the importance of a whole system approach. The evidence is clear that a whole system approach can facilitate the RIIO2 objective of supporting the energy system transition, at the lowest costs. For example, decarbonisation of transport and heat (for which the new BEIS policy of no gas to new housing from 2025 is a timely reminder) are non-marginal changes to the nature of demand and can only be properly assessed on a whole system basis. It is not helpful therefore to think of the electrification of transport and the provision of decarbonised heat as providing benefits to transport users and heat users rather than electricity and gas consumers.

Ofgem will need to articulate clearly its over-arching narrative and the desired outcomes for how RIIO2 will support the energy transition, over the long term, to be able to assess whole system proposals in business plans. The requirement for companies to agree a joint set of scenarios underpinning their business plans will be helpful in developing this. This should ensure a coherent industry view across all the above topics and the corresponding interactions. A whole system approach will also require the development of appropriate incentive mechanisms and market arrangements that would fully recognise the importance of cross sector flexibility in facilitating cost effective transition to lower carbon energy system.

RIIO-2 Challenge Group

The Electricity System Operator (ESO) will be essential to driving whole systems thinking and coordinating corresponding interactions between electricity and gas transmission and distribution owners. We welcome the proposal to align ESO and electricity distribution price controls. The Group is, however, concerned that the proposed narrow scope of the ESO's responsibilities will miss important opportunities to deliver the energy system transition at the lowest overall system cost. Specific areas that should be considered in RIIO2, and build on investments already made by customers through LCNF and NIC, include:

1. **The role of distributed energy resources in supporting electricity transmission network planning:** growing deployment of distributed energy resources (including generation, demand side response and energy storage) could enhance utilisation of the electricity transmission network and substitute for network reinforcement – for example, the Power Potential project[1] demonstrated that distributed energy resources could provide voltage support to the transmission network and eliminate the need for asset investment, delivering savings of over £400m.
2. **A coordinated approach to the operation of and investment in the whole electricity system:** with increasing volumes of energy resources connected to distribution networks, there will be very significant whole-system benefits from coordinating the operation of and investment in electricity generation, transmission and distribution infrastructure. Illustrative case studies estimate that a fully coordinated approach could save between £1.1 - £2.3 billion per year relative to transmission or distribution centric models[2].
3. **Interaction between operation of gas transmission and the electricity system: t**he future growth of variable generation (e.g. wind or solar) will increase the complexity of gas network management, since gas plant is likely to play a significant role in providing back-up to balance variable generation. Enhancing the flexibility of the gas infrastructure could potentially reduce electricity system operating costs[3]. The implications of the growth in small scale conventional and green gas powered generation should also be considered.
4. **Electrification of transport:** whole system solutions to transport electrification can reduce costs to all electricity consumers, whether or not they have an electric vehicle. The extra electricity consumed by electric vehicle users may be more than sufficient to cover the extra cost of network reinforcement, so that costs fall for those not charging their vehicles,[4] while electric vehicle users save on petrol or diesel[5]. Moreover, take-up of electric vehicles is affected by the extent of charging infrastructure, so that there are dynamic effects from decisions on network reinforcement to overall systems costs[6]. An integrated approach to the electrification of transport could minimise distribution and transmission network

---

[1] National Grid ESO, Power Potential Project, https://www.nationalgrideso.com/innovation/projects/power-potential
[2] Imperial College, Poyry, Roadmap for Flexibility Services to 2030, Report to the Committee on Climate Change, May 2017, https://www.theccc.org.uk/wp-content/uploads/2017/06/Roadmap-for-flexibility-services-to-2030-Poyry-and-Imperial-College-London.pdf
[3] National Grid ESO, Power Potential Project, https://www.nationalgrideso.com/innovation/projects/power-potential
[4] ESB networks, Preparing for electric vehicles on the Irish distribution system, Pilot Project report summary, 2018
[5] National Infrastructure Commission, National Infrastructure Assessment technical annex: energy and fuel bills, 2018, https://www.nic.org.uk/supporting-documents/technical-annex-energy-and-fuel-bills/
[6] Springel, Network externality and subsidy structure in two-sided markets: evidence from electric vehicle incentives, 2017

reinforcements and investment in peak generation capacity, while providing significant system and carbon benefits, including through technologies such as vehicle-to-grid[7][8][9].

5. **A whole system approach to decarbonisation of the heat sector:** cost effective decarbonisation of the heat sector will require strong coordination between gas/hydrogen and electricity infrastructures[10]. The net benefits of cross-vector flexibility have been estimated to be more than £5.4bn/year[11], though that figure includes savings from measures such as increased investment in heating infrastructure, which is outside the remit of RIIO-2.

6. **Data:** There is growing scope for effective use of data to enhance the efficiency of networks across all energy sectors, providing significant benefits to consumers through enhancing utilisation of existing assets. Data accessibility, standardisation and interoperability should be defined. Trading platforms could enable assets to operate flexibly across different markets irrespective of historic boundaries and open up network requirements to competition[12][13][14].

It is important therefore that a broad approach is taken that can reduce whole system costs. This should include the interactions between distributed energy resources and electricity transmission; a level playing field between conventional network reinforcements and non-network solutions; coordination between gas and electricity system operation; electrification of transport; the implications of alternative long-term heat decarbonisation pathways; and setting principles on data interoperability, privacy, cyber security and consumer protection.

Interactions between electricity distribution and other networks will be essential to delivering cost-effective whole system solutions. The separation of the electricity distribution price control is therefore a risk that needs to be addressed. We welcome the proposal that electricity distribution companies could participate in RIIO2 innovation mechanisms. However, mechanisms will also be

[7] National Infrastructure Commission, National Infrastructure Assessment technical annex: power system effects of electric vehicles, 2018, https://www.nic.org.uk/supporting-documents/annex-power-system-effects-of-electric-vehicles/
[8] Imperial College, Element Energy, Infrastructure in a low-carbon energy system to 2030: Transmission and distribution, Report to the Committee on Climate Change, April 2014, https://www.theccc.org.uk/wp-content/uploads/2013/12/CCC-Infrastructure_TD-Report_22-04-2014.pdf
[9] Imperial College, Smart (and less smart) large scale integration of EV into European power systems, Report for FP7 EU project Green e-Motion, Feb 2015, http://www.greenemotion-project.eu/upload/pdf/deliverables/D9_2-Smart-and-less-smart-large-scale-integration_submitted_2.pdf
[10] Imperial College London, Analysis of Alternative UK Heat Decarbonisation Pathways, Report to the Committee on Climate Change, 2018, https://www.theccc.org.uk/wp-content/uploads/2018/06/Imperial-College-2018-Analysis-of-Alternative-UK-Heat-Decarbonisation-Pathways.pdf
[11] Imperial College, Whole-System Assessment of the Benefits of Integrated Electricity and Heat System, IEEE TRANSACTIONS ON SMART GRID, Vol: 10, 2019. Figure refers to 50gCO2/kWh scenarios
[12] BEIS, OFGEM, Upgrading our Energy System - Smart Systems and Flexibility Plan: Progress Update, October 2018, https://www.ofgem.gov.uk/publications-and-updates/upgrading-our-energy-system-smart-systems-and-flexibility-plan-progress-update
[13] BEIS, Ofgem have launched Energy Data Taskforce, https://www.gov.uk/government/groups/energy-data-taskforce
[14] BEIS, "The Future for small-scale low carbon generation" A consultation on a Smart Export Guarantee, January 2019, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/769601/The_future_for_small-scale_low-carbon_generation_SEG.pdf

needed beyond innovation funding to secure whole system benefits that include electricity distribution. This might, for example, involve a specific re-opener for whole system approaches including electricity distribution.

4. Resilience

The Group supports Ofgem's robust focus on expenditure for asset, workforce and cyber resilience, and physical security measures. Together these represent a major proportion of total spend. The costs and benefits typically straddle multiple price control periods, and it is important to strike the correct balance between the interests of present and future customers. The ex-ante agreement of these expenditures should reduce the corresponding risks faced by the companies during the price control period.

We support using monetised risk to set cost allowances and output targets, provided that the costs of risk management are fairly shared between the RIIO2 period and future price control periods. While customers are ultimately interested in the absolute measure of risk, they actually pay for asset refurbishment or replacement, the benefits of which are directly measurable through relative risk. We therefore support the use of relative risk, noting that adopting the long-term measure should enable costs to be objectively balanced between present and future customers. The measures are however relatively ground-breaking in regulatory terms, so when assessing end-of-period performance, it may still be useful to take into account any material variances between out-turn work volumes and Business Plan projections. For periods beyond RIIO2, we would like to see more use of the *absolute* risk measure, as it more closely reflects customers' interests. To facilitate this, companies should further improve the data they hold on asset condition, risk, and deterioration rates.

We support a clear framework for investing efficiently across control periods. While we can see that Option 1 would encourage companies to do only what is absolutely essential in-period, we prefer an ex-ante allowance as proposed under Option 2. This is less likely to lead to an undesirable and inefficient "cliff-edge" in project delivery, or to result in companies trying to "ration demand" to the disadvantage of customers. Clear justification in Business Plans and good tracking of this expenditure will be important.

We believe that companies should be penalised where customers lose out from under-delivery. We also see the case for licensees being held neutral in cases of over-delivery, provided it has resulted in demonstrable value.

We agree that companies should not be funded for the same work twice. We are also keen to ensure that they take a joined-up approach to deliver work efficiently, and with minimal disruption to stakeholders. We generally support Ofgem's approach of discounting monetised risk, where it is a coincidental benefit of work being funded by other mechanisms. It is important however, that whatever is decided does not reduce incentives to deliver work holistically where it spans different asset categories and potentially different funding mechanisms. This is the fundamental attraction of using the NARM, and the application of ring-fencing and discounting of NARM benefit needs to be done with care so that is does not reduce overall effectiveness. There may for example be a case for partial discounting if it could be demonstrated that this would result in better decision-making.

Workforce resilience

Companies should include a sustainable workforce strategy in their business plans. It should be specific to their operating environment and business model, and be based on a sound analysis including forecasts of skills needs, for the medium and long-term, and quantified actions. Measures should be proposed, against which they can be held accountable for delivery. There may be a case for a reputational incentive mechanism to encourage innovation and best practice sharing in this area.

Physical security

It is in customers' interests that government-mandated physical security measures are implemented timeously, and that properly and efficiently incurred costs are funded. We favour well quantified ex-ante allowances on the basis that they are more likely to avoid the risks of delay. Where there are subsequent changes in requirements, we would prefer a reopener, to provide the opportunity to scrutinise costs, and have no strong views on timing or frequency.

Cyber resilience

Cyber resilience is a matter of very real concern and customers have a right to know that their network companies are responding appropriately. We agree with Ofgem's proposed scope of cyber resilience costs, and are not opposed in principle, to providing an evidence-based ex-ante allowance.

It is a matter of some concern however, that companies are not able to submit cyber-security plans alongside their RIIO2 Business Plans, and those not submitting a plan need to provide clear evidence why not. A reopener could only be justified if there are significant changes in requirements. We want to see companies taking action at the pace required by the law and following best practice. Any re-opener needs to be timed accordingly, and failure to meet that deadline should result in companies having to fund the work themselves.

5. Managing Uncertainty

The Group welcomes the explicit recognition of growing uncertainties related to future energy system development and associated cost. We recognise the need to design the appropriate price control mechanism to deal with a range of alternative future development scenarios. We think that uncertainty mechanisms are important when there are costs that are very difficult for Ofgem or the companies to forecast. But our view is that they should be used as sparingly as possible. If uncertainty mechanisms are used to reduce cost risk for companies, then this should also be reflected in determinations of baseline totex allowances and cost of capital.

Two specific topics in Ofgem's sector methodology consultation related to uncertainty are discussed below:

1. dealing with uncertainty related to cost forecasts and;
2. managing risks associated with asset stranding.

Uncertainty in cost forecasts

Ofgem proposes to continue applying the concept of Real Price Effects (RPEs) in RIIO-2, which would explicitly recognise the differences between general inflation measure and input price indices that reflect the external pressure on companies, which would mitigate the impact of uncertainty on the level of price inflation in RIIO-2 period. However, the Group believes that Ofgem needs to provide additional evidence that the RPEs concept should be applied in RIIO-2, in contrast to network companies managing these risks internally (i.e. no RPEs). Ofgem should explain more clearly the benefits to consumers from explicitly handling these risks. In this context, while recognising that the presence of uncertainties may lead to higher cost of equity, Ofgem should provide clear explanation of the trade-off between minimising or removing RPEs while keeping the cost of equity low. If RPEs are applied, annual updates of allowances for RPEs would provide significant transparency while the process of updating forecasts would add only minor administrative load.

Managing the risk of asset stranding

Given the transition towards low carbon energy paradigm, there are very significant uncertainties regarding the need for existing and future infrastructures.

1. **Existing investments**: We support Ofgem's proposition not to introduce asset utilisation incentives as greater use of competition and application of non-traditional network solutions incentivised under totex regime should strongly contribute to improving the utilisation of existing assets where appropriate, as these incentives better reflect the impact of utilisation levels on long-term asset health.

2. **New investments:** We support Ofgem's proposition to establish enhanced CBA for future investment in network capacity and highly anticipatory investment to mitigate stranding risks.

In this context, we also support the proposition for establishing a Joint Working Group that would facilitate joint working between Ofgem, Government and other relevant parties to consider the merits of proposals for highly anticipatory investment across all sectors and use of re-openers when appropriate.

However, the benefits of flexible technologies and systems that may mitigate the need for infrastructure investment do not yet appear to be fully recognised by Ofgem. Technologies are available that can provide flexibility to address the challenges of a low carbon energy system, potentially at lower cost and risk. Small investments in flexibility may delay decisions related to infrastructure deployment until the case for investment is clear hence delivering least-worst regret solution. Network companies should provide strong evidence that they have explored alternatives to network investment and consider the option value of flexibility and provide least worst regret assessment.

Furthermore, we believe that the ESO should be pro-actively involved in the network planning process, supporting coordination of operation and investment between electricity transmission and distribution infrastructures. The interaction between electricity and gas infrastructures should also be explicitly considered. Furthermore, the link between energy network infrastructure operation and investment in the context of the provision of ancillary services, which is growing in importance given the growth in intermittent renewables, should be recognised.

Finally, totex baseline and incentives should be set so as to recognise uncertainties in infrastructure deployment and not to reward companies for uncertain projects that do not proceed or are delayed.

Given the challenges to the energy networks of decarbonisation and the energy transition we support the proposition for establishing a Joint Working Group that would consider the merits and risks of proposals for highly anticipatory investment across all sectors. However, it is important that the benefits of flexible technologies that enhance infrastructure investment flexibility are fully recognised.

Additional flexibility can provide significant option value, whereby small investments in flexible technologies and systems could postpone decision-making in larger investments until there is clear information regarding the need for investment, hence reducing the need to potentially high regret decisions. In this case, a balanced strategy of application of different sources of flexibility may deliver least-worst regret solution.

In addition, the role of the ESO in providing infrastructure planning against different future scenarios will be important. In developing its Network Options Assessment, the ESO should explicitly take uncertainty into consideration and apply the least-worst regret or option value concept in order to determine the optimal investment in flexible technologies and infrastructure in terms of timing, location and volume. In this context Ofgem should recognise that taking account uncertainties in decision-making may also lead to additional expenditure in flexibility technologies[15].

A risk-sharing approach for anticipatory investment may be appropriate as some high-value investments could deliver benefits for consumers, but offer uncertain benefits over a long time period. Deployment of significant volumes of offshore wind could potentially require reinforcement of onshore transmission infrastructure. One of the key roles of ESO will be to co-ordinate transmission network planning through considering interaction between onshore, offshore and interconnection infrastructure[16]. In this context, the role of ESO in supporting robust infrastructure planning and facilitating risk-sharing approach should be defined.

6. Innovation and competition

Innovation

The Group broadly supports the approach to funding more innovation as business as usual (BAU). The Group believes that the totex incentive mechanism, combined with appropriate reputational incentives, should be sufficient to see innovation rolled out in BAU, and that there is no need to keep the Innovation Role out Mechanism (IRM), given the lack of uptake of the IRM in RIIO-1, combined with the shorter timeframe of RIIO-2.

The Group welcomes the proposal that innovation funding is targeted at strategic energy challenges and believes that this will support a more strategic, coordinated approach to system transition. We also welcome the proposal that changes, including legislative change, will be considered to enable direct third party access to Ofgem administered network innovation funds. We believe that lowest cost whole system approaches will include alternatives to transmission/distribution upgrades in some cases and that innovation here is more likely to be proposed by third parties.

The NIA scheme has funded a broad range of smaller scale projects and proved an effective funding tool for increasing third part engagement. The Group believes there is a continuing requirement for this mechanism so long as appropriate checks and balances can be put in place to avoid this pot being sequestered to fund BAU.

---

[15] Grid Edge Policy, "Real Options Assessment – Energy network investment decisions under uncertainty" 2018

[16] Imperial College, "Strategic Development of North Sea Grid Infrastructure to Facilitate Least-Cost Decarbonisation" 2014

The Group envisions this pot being leveraged for projects including, but not limited to, smaller, earlier scale investigations, regional or company specific innovation, and improving service propositions for vulnerable customers.

Given the broad range of projects that the NIA pot is designed to fund, the onus could be placed on applicant companies to define how success could be tracked and stop/go decisions could be added to project milestones. Moreover, this is an area in which reputational incentives might be appropriately leveraged by publishing individual network company performance against these success metrics.

The Group wants to flag three specific concerns.

The first is whether the proposed funding for projects (single figure millions) will allow for the next stage of development of promising innovations in the biggest challenges, particularly the decarbonisation of heat. It is essential that innovation here does not simply remain at the level of small scale pilots but that the knowledge needed to make longer-term decisions is obtained by scaling up to the next stage. Ofgem and BEIS should agree on the best approach to funding the next stage of pilots.

The second is that these strategic energy challenges should be designed such that they do not ignore local, regional or company specific innovation requirements.

The third is that, given these innovations are expected to include areas (such as beyond the meter) outside of Ofgem's regulatory jurisdiction, is whether this innovation funding should be applied and governed in concert with other innovation funding bodies.

Finally, the Group supports Ofgem's proposals for electricity distribution companies prior to the commencement of RIIO-ED2 and the focus on encouraging collaboration to deliver superior "whole system" outcomes that benefit the consumer.

Competition

The Group supports enhanced competition for design, construction, operation and financing of new network assets. The Group believes that competition has the potential to be a major driver of efficiency and innovation during the RIIO2 period. We believe that Ofgem should be more ambitious in its consideration of possible models for both early and late stage competition.

Early and Late Stage Competition

We think that the models currently under active consideration are structured around limited bespoke electricity industry examples rather than proven examples from other infrastructure sectors where stand-alone projects are prevalent e.g, roads, airports, hospitals, etc. There are established models in these sectors for design, construction and operation of stand-alone infrastructure projects which can provide valuable guidance on the optimum time for initiating procurement and overcoming some of the challenges of early-stage competition. These other infrastructure examples are likely to illustrate better the optimum time to initiate procurement for design, build, construct, operate, and finance. They should also illustrate the criteria leading to a decision to build additional infrastructure capacity rather than maintaining existing infrastructure.

Late Competition

The Ofgem methodology paper proposes using 'new, separable and high value' criteria to determine projects for late competition. High value is defined as £100m+ capital cost as a threshold below which transaction costs would negate any savings. The definitive criteria proposed by Ofgem offer an opportunity for gaming, where companies may seek to ensure that discrete projects are specified at a sub £100m level or are integrated with other projects in a way that fails the new or separable tests. A way of ensuring that assets are packaged for competition, rather than excluded, may be to require an independent review of capital investment plans e.g. by the ESO to ensure that opportunities for competition are maximized. They may include opportunities for non-network solutions as well as network solutions.

Finally, it is suggested that the £100m+ capital cost threshold be reconsidered as several smaller assets grouped together might be equally attractive and much simpler to tender. For example, standard transmission equipment such as reactors, synchronous compensators, or capacitors could be collectively procured through competitive equipment supply allied with market best operation and financing costs.

The assumptions used for the draft impact assessment on late competition appear reasonable. If the anticipated saving of around 20% can be realized, then this appears to present a significant benefit to consumers which should be pursued. While transaction costs may be expected to be higher to begin with, these should fall as the bidders and the procurement process become more efficient. A key factor will be the volume of projects expected to pass through the procurement process. The higher the number of projects, the greater the benefits are likely to be.

Early Competition

Early competition should offer significant potential benefits over late competition in that it allows innovation in design and delivery of the project. Ofgem has identified the challenges to early competition being of impractical solutions being offered, access to land and consents not being available, and scope/timing change. However, these are factors that are frequently overcome with other infrastructure projects (Thames Tideway being a good example) and should not present insurmountable problems on their own in that, for example:

1. Preselecting experienced bidders should remove the risk of impractical solutions
2. Early access to land may be given through pre-licencing of bidders
3. Scope/timing change can be addressed through changes in the tendering process.

Another risk may be the reluctance of the incumbent TO to transfer necessary information or to perform related works, or for generation commissioning deadlines to impact on the overall delivery timetable. However, these are all matters that can be addressed under a procurement timetable. It may be necessary, for example, for a shadow company to be set up to enter into early procurement commitments or land rights/consents to enable the timely construction.

It is also important that all projects tendered for early competition have a reasonable chance of going forward. Early competition potentially offers significant additional benefits as it allows new design solutions to be developed. However, this is negated if the projects under tender are unlikely to go ahead – Bidders will not spend the time and effort on projects without a realistic chance of winning and proceeding.

Ofgem has identified that either Ofgem, Network companies or the ESO may be responsible for running tenders, and that the choice should take account of bias/conflicts of interest, economies of scale, and technical proficiency. These factors appear appropriate.

The two key decisions are about initiating a competition, and subsequently selecting a winning bidder. Ofgem takes both of these decisions in the OFTO regime and is respected for its independence and commercial expertise in designing and running competitive tenders. As such, it should be well placed to continue to perform these roles, retaining overall control over the tenders.

However, the definition of projects for competition may be the result of options appraisal and preparatory work, where the expertise will lie with the ESO or network company, or their contractors. The ESO could play the role of a specialist independent adviser to Ofgem, identifying the projects for competition and perhaps undertaking some routine tender process functions on Ofgem's behalf. Preparatory work may be performed either by the ESO if independence is important, or by the network company under clearly defined parameters.

Native Competition

We have a general concern that the section on native competition is at risk of confusing two distinct issues. The first is the desirability of ensuring that companies are using competitive procurement to deliver capital and indeed maintenance projects as efficiently as possible. We suggest that the totex incentive should ensure that companies are adopting competitive contracting strategies and we would be wary of any attempt to micro-manage this process since there is clearly benefit in encouraging companies to come up with the strategies which they believe will deliver the best cost/risk balance. Each network company should already be employing best practice approaches with respect to the use of native competition.

If Ofgem has concerns about the competitiveness and efficiency of company procurement solutions then this should be explored further. However, competition approaches will vary depending upon decisions taken about risks and deliverables assumed by contractors. For example, a low cost contract may not offer the best value solution if it excludes certain risks. Examination of procurement practices should seek to ascertain the benefits realized by each company through effective procurement.

The second issue the sector methodology seeks to address under native competition is using competition as a price-finding tool where there is the possibility of a company benefiting unduly from use of a non-network solution/deferral. We think there are several problems with this proposal. Whilst Totex incentives should incentivize competitive native procurement for all goods and services, where competition is taking place for a non-network solution, then native procurement may no longer be appropriate, and the procurement process may need to be overseen by Ofgem or the ESO, learning lessons from the arrangements for Shetland.

We think that it would be very difficult to base totex allowances on costs revealed through competition, as accurate quantification would be hard. Costs revealed through competition may also be combined with company project management overheads or other associated costs, making comparisons and assessments difficult. Providing a fee for running a competition may just add on an additional profit for the company. Native competition should be regarded as business as usual.

Facilitating Competition

The sector methodology is unsurprisingly focused on competition in relation to network assets but it is important to recognise, as the methodology statement does in various places, that competition within the energy sector more generally, between new energy sources and different forms of service provider will have the potential to deliver even more significant benefits for the energy sector. The role of the ESO in promoting competitive markets in electricity will be of great importance and all the network operators may have roles in facilitating new forms of competition. We encourage Ofgem to be mindful of the many ways in which the RIIO2 framework could either promote or impede emergence of new suppliers, technologies and platforms and we would encourage Ofgem, directly and through the incentivisation of the ESO, to take an active role in facilitating whole-system and non-network solutions. We anticipate that data transparency will be key to encouraging third-party innovation. Therefore, incentives or obligations to make available data may have an important role to play in promoting new forms of competition, given that data sharing will rarely be in the interests of data owners. Although this issue is touched on in the consultation we believe that given its potential to transform service delivery there should be a much stronger focus on access to data.

Finally, we agree that the ESO could take on valuable responsibilities in facilitating competition in the gas sectors, as long as its independence in performing this function could be assured. It should be able to carry out option assessment to identify projects for competition. It is suggested that Ofgem retains responsibility for tender design and decisions, perhaps supported by the ESO on some process functions.

7. Simplifying Business Plans assessment

Ofgem is proposing new arrangements that will reward companies that submit rigorous and ambitious plans with cost projections that are demonstrably efficient. Ofgem has also set out related proposals for totex incentives.

Overall, we welcome these proposals and broadly agree with the approach that is being proposed. We are awaiting analysis from Ofgem on overall incentives package, however based on the information we have seen to date, we are concerned that it may be overly generous.

Business plan incentive

Ofgem has proposed a four stage assessment process for business plans considering the level of ambition a) in cost forecasts and b) on qualitative elements such as output delivery commitments, stakeholder engagement, competition, etc. We agree that the four stage process should provide additional assessment rigour and that that cost and quality are the two key areas for assessment.

We welcome that the Group's assessments should feed into Ofgem's business plan incentive decisions. At every stage of our engagement with the companies we will consider the quality, content, and timeliness of submissions to us. Complete drafts of company plans are due to be submitted to us on 1 July and 1 October 2019. In preparation for the first submission on 1 July, we have asked the companies to provide information on a) a common and consistent view of the future, and b) their historic costs.

Ofgem has proposed a matrix of business plan categorization and corresponding incentives with a +/-2% incentive range. We agree with the approach and the fixed penalty and shared reward design. However, we are concerned that the +/- 2% of totex may offer too high a reward for a good business plan, with the potential consequence that companies may place more attention on delivering a good business plan than on results for customers and consumers.

With regard to how the plan should be assessed, we suggest adding the following to the assessment:

1. **deliverability** – requiring companies to providing evidence of how the plan will be delivered, including details of proposed resources, competences, operating models, business transformations, etc.
2. **business plan commitment** – increasing transparency about each company's planning and independent assurance approach, including preparation costs and management incentives. The governance process should be explained, including investor involvement.
3. **data access** - innovation by third parties, particularly where efficiencies can be found as an alternative to network assets, can be enabled through open data and/or permissioned data access. Company business plan should be required to set out the data they propose to make available for this purpose.

Totex sharing factor

We support evaluation of the entire totex to gain the benefits for consumers of optimising trade-offs between opex and capex. However, the totex figures may be significantly distorted by forecasts of load related capex, which is dependent on the action of third parties and not under the control of the companies. Unless the load related capex forecasts are at a low level, we would suggest that the evaluation should be based on totex less load related expenditure.

Ofgem's proposals are that the boundary between High and Low cost forecasts should be set at 1.04, reflecting that Ofgem's assessment of predicted costs may be inaccurate. We are concerned that this may over-reward companies given that there is no evidence that Ofgem's forecasting record has been to underestimate costs. We would suggest that this boundary should simply be set at 1.0 so that companies above this point fall into Medium to Low, and companies below this point fall into Medium to High.

We believe that the IQI is overly complex and the accuracy of Ofgem's ex-ante forecast is uncertain due to information asymmetry and influencing by the companies, so we agree with it being removed.

We support the blended sharing factors approach in that it seeks to highly incentivize efficiencies in more certain expenditure areas and reduce the incentives in less certain areas. It better reflects Ofgem's knowledge of costs and reduces the impact of company information asymmetry.

We agree that it provides an incentive on the companies to provide more rigorous evidence in support of their plans. However, we are concerned that with high sharing factors companies will still be incentivized to over forecast their expenditure and use their information asymmetry advantage to provide supporting evidence for Ofgem to assess. As such, we would suggest that Ofgem sets a high threshold for its award of high sharing factors.

We also agree with Ofgem's approach of a blended sharing factor. It reduces the risk to customers of an inaccurate regulatory cost forecast resulting in windfall gains for companies.

The factors proposed to be used to distinguish between costs that can be baselined with high confidence and other costs seem sensible. Particular use should be made of the track record of companies in varying from their plan forecasts over recent price controls.

The regulatory reporting pack level would appear to be an appropriate level of aggregation for calculating blended sharing factors, with evidenced individual cost lines being aggregated into higher level totals. This will need to also feed into identified cost areas that are highly uncertain e.g. transmission load related expenditure, such that these can be evaluated for the purposes of setting individual sharing factors.

We think that the proposed combination is a sensible approach to driving the right behaviours. However, as set out in our earlier answer, it is important that the business plan incentive and totex incentive are proportionate across the whole price control. The right balance should be struck between incentives to plan well and also deliver well. The calibration of these incentives in terms of available RORE should be carefully assessed.

In principle, the sharing factors should reward companies for taking actions that have a real benefit for existing and future consumers. They should not provide a reward for over forecasting or achievement of unambitious targets. The higher sharing factors should target the areas where savings are difficult to achieve.

As to the level of sharing factors, Ofgem's analysis that a sharing factor of 10-15% still has an incentive effect on the companies appears to indicate that this is an appropriate level of sharing factor where there is lower confidence in forecasts. As such, it is unclear why incentives of above 40% are necessary. However, it is less clear what the optimal incentive is for areas with higher certainty – we would like to see robust evidence supporting high sharing factors.

Evidence on the scope for productivity improvements can be had from new entrants into the sector, who have been able to offer lower costs compared to incumbents. Ofgem has gained information about the potential for transmission network productivity improvements from the OFTO regime and should consider if this can be applied in RIIO-2. Similarly, evidence of productivity improvements from areas such as competition in network connections should be considered.

In general we think sharing factors should be set ex-ante and apply for the entire price control to maintain regulatory certainty. Uncertainty mechanisms, cost/volume drivers should be sufficient to deal with uncertainty during the price control period.

8. Fair Returns and Financiability

We are broadly supportive of Ofgem's approach but concerned that, taken as a whole, it is insufficiently stretching. We consider that the overall risk profile of these companies is low and that their key residual risk, regulatory risk, is well contained by the RIIO framework and that this should be kept very much in mind in determining the financial settlement.

Our concerns can be summarised as:

- A sense that, in all matters related to allowed returns, these should be more stretching.
- The need, to the greatest extent possible, to preserve the concept of ex ante regulation and to limit 'reopeners' under whatever guise
- A general preference for simplicity and clarity and for avoiding complexity
- The financing settlement needs to be drawn up against the background of the risk/return profile of the overall regulatory settlement and, in particular, the proposed incentive package

- In what will often be complex discussions relating to financing detail, the interest of the consumer should be kept at the heart of deliberations.

There are clear indications that Ofgem is seeking to put strong downward pressure on financing costs but we consider that, in some areas highlighted in this paper, in particular (but not only) in relation to the cost of equity, it should be bolder and it will be necessary to tighten the proposed parameters in order to achieve the optimum outcome for consumers.

In any price control, there are some elements which are directly within the control of Ofgem (such as the allowed return) and some which, by their nature, it is much more difficult for Ofgem to control (such as agreed totex and what is to be delivered for that expenditure). At this juncture, we do not have a full understanding of the impact of the package of incentives available under the price control and the extent to which that package is likely to have the effect of boosting companies' returns. Against this background, and of the inevitable information asymmetry inherent in any price control process of this type, we believe that Ofgem should make its proposals such that they incorporate a lower bottom end of the allowed return rate range than that quoted or should at least signal the possibility of a lower allowed return by showing a lower bottom end of the range.

It may well be the case that, in the course of the price control, companies argue that the risk profile of the settlement is such as to warrant higher returns. However, we take the view that the overall risk profile of these companies is low and well-contained by the RIIO framework and that Ofgem should seek to resist those pressures. For these reasons, we would prefer to see the current proposals at the lower end of what might be deemed justified rather than, as we see them at present, very much at the higher end.

We recognize that Ofgem will need to avoid impacting the companies' on-going financeability to an unacceptable degree and an overall final assessment will need to be made towards the end of the price control process.

Cost of debt

We support Ofgem's approach to the indexation of companies' debt. It is important that all debt is indexed against the agreed profile: some companies have historic debt on their books which they may argue should be treated differently and/or excluded altogether from the indexation. We believe Ofgem should strongly resist any such requests. A significant proportion of the debt of most, if not all, of the companies is indexed linked with the result that there may, in our view, be a 'cushion' between the overall cost of their debt and the allowed rate. We need to gain a greater understanding as to the effect of indexed linked debt on the overall cost of debt and hence the extent of the potential 'cushion' before expressing a definitive view.

Cost of equity

Overall cost - We are concerned that, taken in the context of the proposed arrangements as a whole, the range proposed in relation to the cost of equity is too high and that there is evidence to support a lower range. We believe that the result of setting the ranges as currently proposed would be likely to lead to a settlement which, as a whole, would be insufficiently stretching.

Indexation of risk free rate - Ofgem has clearly proposed the indexation of the equity risk-free rate to reduce the risk on investors and hence enable the initial allowed return to be set at a lower rate than might otherwise have been the case. In principle, we take the view that this is not a risk against which investors have been given protection in the past, that indexation adds unnecessary complexity and, more importantly, it is a risk which they have considerable capacity to hedge. By providing for indexation, the risk of rates increasing over the course of the charge period is passed to the consumer who obviously has no capacity to hedge against a rise.

In the light of current yield curves and forecasts, we also think there are arguments for consumers to take advantage of the current very low rates and that they should be locked in. The companies may well make the case that the fact that they are being asked to bear this risk (as, of course, they have done hitherto), and this should be reflected in their equity returns. We believe Ofgem should resist this argument and that any additional returns should be limited to the risk premium implied in the yield curves.

Equity beta - We believe that the range that Ofgem is proposing for the equity beta is too generous. Betas have been high in recent years, but much lower over longer time horizons. In the light of the apparent tendency of beta to revert to the mean, they would seem likely to reduce over the period of RIIO-2. In contrast to the proposed use of 100 year plus data for the TMR, we note that the proposed range for the equity beta is taken from a much shorter period and, as a result, places insufficient emphasis on data from periods when betas were low.

In any event we are concerned that, particularly in the context of the comments in section 1 above (Introduction) about the pressure that Ofgem is likely to come under – for a variety of reasons, both good and less good – to increase rates, the currently proposed range is too high at the bottom end (and possibly also at the top end): we keep very much in mind that these companies have a fairly low risk profile with their principle residual risk, which is regulatory risk, very much contained by the RIIO framework.

CAPM cross check - We support the concept of a cross-check with the CAPM results. We are concerned, however, that both the top and the bottom ends of the proposed range are too high. The Sector methodology paper references the use of the returns acceptable to infrastructure funds as comparators. We believe it is important to compare also with the rates acceptable to pension funds, both British and international and a range of other entities, which, even in the current environment of increased risk due to Brexit, remain keen to invest in regulated British utility companies.

We would also like to see a cross-check using other methodologies, such as ratio comparison. It is important that comparison is made with companies with a similar risk profile. In our view the best comparators are other utility companies rather than entities such as the OFTOs, which are effectively project companies (and geared accordingly).

We agree with Ofgem that entities such as the OFTOs (and PFI companies) with a long-term contracted revenue stream have a higher risk profile. These entities are only able to attract high levels of debt finance because of the long-term contractual arrangements which underpin their financing arrangements. We consider their much higher gearing make them inherently riskier than the companies which are the subject of the RIIO-2 price review. If OFTOs are used, we would also like to see a comparison with the WACC, rather than the equity returns, with the view that OFTO WACC should be an indicator of the top end of the range for network companies.

Expected/allowed returns - We are supportive of the use of an expected return to set the allowed returns. It is clearly difficult to form a definitive view on the exact amounts in the absence of a full understanding of the proposed incentive package and, in particular, the extent of anticipated over or under performance.

Financiability

Cash flow floor and RAM backstops – We recognise that care must not be taken to push the cost of capital down to the point at which there is such pressure on companies' borrowing ratios that their cost of borrowing is increased and we are cognisant of the issues surrounding the impact of Ofgem's financiability obligations. However, it is equally important that consumers are protected from a settlement which is insufficiently robust, and which allows the companies to make excessive profits. We understand Ofgem's discomfiture at the level of outperformance seen from some companies in RIIO-1 and share the view that it is important to ensure that this does not occur in RIIO-2.

We can see many arguments for not having either of these 'backstop' provisions which between them amount to a reopener for what could be a wide range of downside risks. Ideally, we would prefer that financiability should be assessed and managed by the companies themselves against an allowed return that is assessed for financiability ex ante on a notional financial structure. It would then be for the companies to determine an appropriate level of gearing such that they can expect to meet their ratios during the period and to manage any cash flow issues through dividend holidays or the injection of further equity. We note that this more robust approach has been applied in the water sector.

Cash flow floor - Despite our reservations, we can see that there may be a trade-off between what look like significant complexities of setting up and operating a cash flow floor and consumer benefits in terms of lower cost of capital. However, we think it very important that the risk and benefits are carefully evaluated and that

1. this reduced risk profile is fully considered when the allowed cost of capital is finally determined and
2. the threshold for accessing the arrangements is not set too low and shareholders are appropriately penalised for access: with a dividend lockup not just for dividends payable to shareholders but, in the cases in which this is applicable, a bar on dividends to parent companies to fund interest payments on debt at that level.

Once there is clearer sight of the overall shape and impact of the l incentive package as a whole, it may well be desirable to set a cap on the extent to which companies can benefit from the incentive package and still access the cash flow floor arrangements.

RAM - In our view, the right way to limit excessive returns is by appropriate calibration and capping of the incentive package and the totex sharing arrangements. It will be very important to keep the focus on these arrangements and to treat the RAM as a 'backstop' only. We are concerned that the RAM may encourage Ofgem to offer more a more generous price control settlement than is necessary. The benefits to companies of limiting the downside risk should be fully reflected in the financeability assessment and the allowed returns.

It should be the clear intention that a combination of the arrangements in relation to the capping of ODIs and the totex sharing scheme should be such that the RAM will never need to be accessed. With these provisos we support the introduction of a RAM as a last line of defence against a repeat of the outperformance seen in RIIO-1 and with a preference for the 'sculpting' rather than the 'anchoring' variant and with the further proviso that the arrangements do not add too much complexity to arrangements which we think are already at least as complex as is desirable.

Corporation tax

We are broadly in support of the approach to tax set out in the Sector Specific Methodology and are sympathetic to the concept of the 'double lock' on corporation tax (Option C). We have some concerns about the proposal to use the Fair Tax Mark or other tax legitimacy options. We can see that, particularly in terms of perceptions, the proposal may have some merit on the basis of a 'belt and braces' approach but, in the absence of evidence of outperformance on tax in RIIO-1, our inclination is that, in the current political climate for utilities, the companies have a strong reputational incentive to put appropriate tax arrangements in place and that a specific regulatory requirement would add unnecessary complexity. We are keen to see Ofgem take every opportunity to keep the overall regulatory arrangements as simple as possible.

Indexation of RAV

We accept that a decision has been taken to index RAV by CPIH. We are supportive of the move away from RPI, accept Ofgem's rationale for selecting CPIH and are supportive of making the change with immediate effect at the start of the charge period. We are cognisant of the fact that the cash flow impact – and hence the impact on companies' debt service ratios - is not insignificant and note that the rating agencies appear willing to take this into account.

9. Achieving Balance

Across the sector methodology we have considered how the key proposals for achieving desired outcomes at least cost may best be realised. In this context, there are trade-offs between the incentives to drive required outcomes, the costs of achieving these and the risks that are shared between companies and consumers.

Outcomes - The starting point for consideration of balance is the proposed RIIO 2 delivery outcomes of reliability, sustainability and customer service. We have sought to assess whether the target and incentive proposals in the Sector Methodology consultation strike the appropriate balance for consumers through the prism of these three overarching outcomes. An integrated package of incentives should be developed and assessed against the impact on consumer bills.

Costs – The next consideration of balance is the RIIO-2 cost to consumers. We consider that Ofgem should adopt an over-arching affordability outcome in keeping with its vision to keep consumer bills as low as possible in both the long and short term. This should be balanced with funding the network companies to provide good quality services. The companies should not be rewarded for BAU activity.

Risk –Finally, a fair balance of risk should be in place between the companies and consumers. Companies will benefit if an undue proportion of risk is passed to consumers. Consumers are not in a position where they can manage this risk so it is important that the companies do not transfer risks that they can manage

Balance between accuracy and simplicity

In commenting on various parts of the methodology we have identified that the proposed framework is already complex and have welcomed steps to simplify (such as discontinuation of the IQI). We are concerned that some new proposals such as indexation of risk-free rate and the cash-flow floor will introduce significant additional complexity but have recognised that they potentially offer benefits in terms of affordability, by facilitating a lower cost of capital, and that this would justify greater complexity.

Several of the illustrative trade-offs between accuracy and simplicity such as removal of price control deliverables or network resilience measures would significantly reduce accountability and would not be consistent with the overarching outcomes. We recognise that the enhanced engagement process may itself lead to a more complex set of outputs, deliverables and incentives but believe that this complexity should help to enhance the trade-offs in terms of affordability and service levels as well as accountability through the life of the price control.

We do have reservations about the additional complexity flowing from introducing a return adjustment mechanism (RAM), particularly in the context of a 5 year price control. We have noted that this should in any event be viewed as a line of last defence and would suggest that the case for it should be reviewed in the light of responses to consultation.

Risk vs return

We have noted in our comments on the financial aspects of the methodology that we believe that the balance between risk and reward may still be unduly favourable to the companies.

The proposed methodology appears to reduce the risk that companies face by, including but not limited to:

a. proposing outputs and incentives that may be considered easily achievable.
b. providing uncertainty mechanisms that pass risks to consumers.
c. funding innovation that companies will benefit from.
d. funding resilience requirements that reduce failure risk.
e. limiting scope by not having a clear pathway to further competition or for the ESO to drive better network solutions.
f. limiting scope by not pursuing whole system solutions (the methodology reinforces Transmission & Distribution limited solutions).
g. ensuring their financing requirements can be met.

If these risks are de facto being assumed by consumers, then consumers should not expect to pay again for them through either high shareholder returns and/or risk margins embedded in totex proposals form the network companies.

Efficiency vs Fairness

We have commented in detail elsewhere in this document on the proposed measures to support customers in vulnerable circumstances. We support the inclusion of enhanced obligations, including reporting and evaluation and the availability of funding for projects to address consumer vulnerability, provided that the spending is justified and clearly delivers benefits beyond what should be business as usual.

We are also supportive of the targeting of innovation funding towards strategic energy challenges and the implications for that on the balance between current and future consumers. We have stressed throughout this document that plans for new capital expenditure need to be subject to stringent, independent scrutiny to minimise the risk of creating unnecessary assets. At the same time, we are strongly supportive of a no-regrets approach which takes account of option value.

Impact Assessment

We would encourage Ofgem to pull together all the measures in a document which impact on consumers, in particular those in vulnerable circumstances, in order to gauge the overall impact. A clear overview of distributional consequences and affordability would also make transparent any trade-offs that have been made.

10. ESO Sector Methodology

The Group recognises the critical role that the ESO has today and will have in the future GB power system. We broadly support Ofgem's approach to the ESO regulatory regime design for RIIO-2 and would urge Ofgem to prioritise the role of the ESO to be an agent of change.

The future GB power system is moving to a new operating model, with many more participants in the supply, storage and generation of energy, and system operation will be far more digitalised and accessible to market participants than today. Security of supply may be delivered through intelligent control rather than redundancy in assets. The ESO should enable future benefits for consumers by:

1. Optimising the planning and operation of transmission and distribution networks to minimise costs of new network investment, exploiting opportunities from 'smart' networks by enhancing utilisation of the existing network infrastructure and lower security standards
2. Minimising the cost of generation capacity by enabling the provision of flexible energy capacity on transmission and distribution networks

However, the ESO will not be the only entity that plays a major role in this change – DNO's will have a key role to play and there will need to be greater co-ordination between the ESO and DNO/DSO's as already envisaged through initiatives such as the ENA's Open Networks programme. Furthermore, TO's will also have a key role, for example in delivering enhanced utilisation of network assets e.g. through the application of dynamic ratings. Also, strategic issues will demand decisions from Ofgem and/or BEIS. The advisory role of the ESO is respect of these decisions should be clearly defined.

As the manager of many of the power system rules and codes, the ESO will also need to review the existing standards for appropriateness, and particularly to enable non-network asset technologies to be exploited. In the future, the ESO should seek to create an environment where it is able to choose between traditional network solutions and new non-network solutions on a level playing field.

The ESO should also seek opportunities for a digitalised power system to minimise the overall cost of energy generation, both in terms of capacity requirements and balancing costs. A more intelligent generation system also offers the opportunity to reduce the cost of investment in low carbon generation whilst still meeting carbon targets. This is likely to require redesign of current market arrangements – and the ESO should play a central role in this redesign. The benefit to consumers available from realising this optimisation is estimated at being between £17-41 billion by 2050.[17]

The ESO should help to deliver this change by taking a leadership role in:

- Ensuring new load related or reinforcement network investment is efficient, ensuring non-asset solutions are taken into account.
- Developing changes to network planning standards to enable more efficient design e.g. security of supply standards may be better specified at local rather than national levels.
- Making use of more intelligent network and energy system operation, including smart generation, storage and demand
- Enabling a whole systems approach, co-ordinating across DNOs, with gas transmission networks across other energy vectors and beyond the regulated electricity sector.
- Enabling greater access to the whole energy system by simplifying rules and standards, driving transparency, and enabling innovation and new entrants.

There is also a significant challenge in clearly defining the ESO role due to the delay to the ED-2 price controls for DNOs. Smart control of distribution networks could minimise the costs of distributed

[17] https://www.carbontrust.com/news/2016/12/capturing-the-benefit-of-a-smart-flexible-energy-system/

energy resources providing services to the ESO. This may require some incentives for DNOs to increase complexity of their network operation in order to provide benefits to ESO.

The role of the ESO in whole system co-ordination should be clearly defined. The definition of whole system as set out in the RIIO methodology is limited to regulated T&D companies. We do not agree that this is an adequate scope given the increasing emergence of a decentralised energy system that extends beyond Ofgem regulated boundaries, across energy vectors, and into data and other customer services.

Further to this overview, we have provided responses to the specific ESO questions in an appendix 3.

Appendix 1: Response to sector specific questions

This Appendix sets out the Group's comments on each of the three sector-specific methodologies. We have not responded to every question but only to those where we want to offer particular support or challenge. The Group is broadly supportive of the approach outlined in the RIIO- ET2 methodology for the environment and thinks that this **approach should be adopted as the 'benchmark model' for the other sectors**.

1. **Gas distribution**

Chapter 3 questions: Meet the needs of consumers and network users

Consumer vulnerability

- **Remit of networks in relation to vulnerability.** We think networks could invest in energy efficiency measures as an alternative to reinforcement or as a flexibility measure - but not as a measure to tackle fuel poverty paid for through the price control.
- **Principles-based licence obligation**. This should go a long way to embedding support for vulnerable customers, whilst leaving GDNs the freedom to develop best practice. We look forward to further details from Ofgem on the requirements of the licence, and how Ofgem will monitor and enforce performance against it.
- We also suggest that a **more comprehensive dataset of vulnerable consumers is created**, ideally together with health and social care services (and the datasets available in those sectors).
- **Reputational ODI.** Ofgem should not underestimate the importance of reputational ODI in this area. As to how performance should be assessed we think Ofgem should consider setting up a group which has expertise in this area and which could compare performance across GDNs.

Consumer vulnerability use-it-or-lose-it allowance

- **We welcome the provision of further funding for networks to go beyond the minimum requirements**. In particular, the prospect of having innovation funding for vulnerability activities is positive. Real innovation should see failures so networks may be less likely to spend the use-it-or-lose-it allowance on true innovation. We also welcome the funding provided being more than for the Discretionary Reward Scheme (£12m over 8 years) in RIIO-1. It's important that networks don't use this pot to fund past activities, and that GDNs are properly evaluating their CO awareness and vulnerability activities.

Fuel Poor Network Extension Scheme

- We recognise that the scheme helps households that are living in fuel poverty right now. But we think **the scheme needs to demonstrate it delivers value for money**.
- **Improving the targeting rate is essential** to ensure the scheme delivers value for money. An ex-post incentive seems unhelpful in this regard, and might result in networks' making fewer connections for fear that they will not be able to recover their expenses. Networks should also make sure that they update their data continuously and go back to assessing any changes in household fuel poverty status.

- **We also encourage Ofgem to consider whole system solutions to Fuel Poverty**: for example, hybrid or non-gas alternatives (eg heat pumps) could be considered under certain criteria. These would support the energy transition and avoid extending the gas asset.
- We suggest **one mapping tool** is used across GDNs.
- We agree that **coordinating FPNES better with existing schemes** would help households to get 'whole house' treatment.

Guaranteed Standards of Performance

- **GSoPs around services for vulnerable customers in the event of an interruption** We welcome that this is to be reviewed as the existing standard is limited. We also welcome the fact that GDNs are conducting research to show what people need.
- We welcome **the increase in compensation payments and higher performance targets**, as GDNs were meeting them most of the time.
- **Compensation caps should be increased and better targeted** though reasonable exemptions should be in place (e.g. if a site cannot be restored because the owner is not home for longer periods and/or does not give access to the property, the customer should not receive a huge compensation sum.)
- **We greatly welcome Ofgem's proposal to make all payments automatic.** This should avoid consumers' missing out on compensation.
- From a customer service point of view, it seems important to offer customers **a timed appointment** which will give them clarity about when they will be back on the gas supply after a planned interruption. Ofgem should explore how the design/wording of the standard could strike a balance between customer convenience and efficient workforce planning.
- We are concerned that Ofgem is not planning to set further targets against GSoPs performance which would be written into the licence. Targets currently exist for connection but not for other standards.
- We are concerned about the proposal to remove financial incentives altogether for stakeholder engagement. Ofgem says 'high quality stakeholder engagement should be BAU' now. But, given the heat transition to come, it is vital that GDNs are engaging well with consumers. A Citizens Advice report from May 2018 showed that most networks (GDNs and DNOs) have engaged stakeholders at the 'inform' and 'consult' end of the engagement spectrum. But there is scope for the networks to do more.
- We support a financial incentive with strict parameters that gives GDNs money for going further with consumer engagement on the 'collaborate' and 'empower' end of the spectrum. This could include: activities such as Citizens Juries or participatory budgeting; engagement that has more depth, is innovative and tackles future-looking, complex issues; and work that engages directly with end-consumers instead of only with their representatives. In addition, GDNs would have to demonstrate clearly how that engagement has changed their actions and plans.
- **Financial ODI for Customer satisfaction** We welcome the proposal to retain this incentive. We think it is important but must avoid over-rewarding what should, by now,be standard performance. We support the use of dynamic, relative incentives here and agree that comparability should be retained as consumers should benefit from the competition that comparability encourages.
- **We welcome the intended updates to the survey method** as it will make the satisfaction survey much more representative.
- **Financial ODI for complaints** which is penalty only. We support this and also support the use of both more demanding targets – to recognise the shift in performance during RIIO-1 – as

well as relative targets as all consumers should be able to expect the same levels of service in such a crucial area.

- **Financial ODI for unplanned interruptions average restoration time**. We welcome the focus on unplanned interruptions as this creates more detriment to customers than planned interruptions. We agree that the incentive should be penalty only. We think that more consideration is needed into the target level (historic or relative benchmarking) and the measure used (average restoration time). We agree that large events should be included in this measure.
- **Emergency response time licence obligation** We agree with the proposal to retain this. Network research shows that customers don't expect networks to respond quicker.

Chapter 4 questions - Deliver an environmentally sustainable network

- We are concerned that the RIIO-GD2 methodology on the environment and the energy transition takes too narrow an approach and may not drive a more ambitious culture among the GDN, especially on low-carbon facilitation.
- The GD methodology needs to stimulate efficient 'additional' steps by GDNs on a 'least-regrets' basis to reduce their green-house gas emissions. This could be encouraged both via Business Plan price control deliverables and via explicit incentives where appropriate.
- **Shrinkage and Leakage - repex and other incentives :** the role of repex as a central means of effective green-house management by GDNs is understood. But we believe that a stronger overall expectation and message is needed on the importance of GDNs' tackling their green-house gas reduction by continuing to be proactive on leakage. Any reformed incentive must ensure that GDNs look actively and 'in-the-round' at leakage reduction - both across repex and also at other effective and efficient actions such as pressure management and gas conditioning[18].
- GDNs also need to be incentivised to look at the other elements of shrinkage (i.e. reducing theft; own-use). These each add to the volumes of gas fed into the system and hence to customer costs, even where shrinkage may not create a direct environmental impact[19].
- **Framing the GDN environmental methodology 'in the round'**: unlike the RIIO-ET2 and RIIO-GT2 methodologies, Ofgem does not work through what a 'right-balance' might look like for GDNs as between licence obligations, appropriate and stretching standards, quantifiable targets, the Business Plan incentive, Business Plan baseline price control deliverables and outputs which are to be explicitly incentivised (be this financial, reputational and /or bespoke). Approaches in the GD methodology to green-house gas reduction, low-carbon facilitation and more demanding annual environmental impact reporting need to be framed and articulated more clearly.
- **GD Environmental Performance Reporting**: although introduced for ED1, the GD methodology does not discuss what benefit more comprehensive approaches to environmental impact reporting could bring in RIIO2 – i.e annual reporting on the

[18] In GD1 the leakage incentive is aligned to the cost of carbon, aiming to ensure that companies take any actions that are cost effective to reduce methane emissions. Ofgem has concerns about the basis of the models used to strip out the effects of repex (and avoid double rewarding) but it should be possible to address this given the materiality of methane leakage.

[19] Linking the shrinkage incentive to the costs of gas as per GD1 has an economic rationale

environmental impact of business plan price control deliverables; more meaningful ways to tackle reporting on GDN Business Carbon Footprint; more prominence given to reporting on bio-methane connections and the wider narrative around bio-methane[20]. We'd encourage **Ofgem to revisit requirements on reporting on green-house gas reduction and low-carbon facilitation. Ideally, the GD methodology should align with the comprehensive framework approach already required for ED-1 and proposed for ET-2.**

- **Least-regrets steps** – gas network 'futures' may be uncertain beyond RIIO2 time-frames, and a case for future-facing GDN investment needs to be demonstrated. Nevertheless, there are 'least regrets' steps within RIIO2 GDN business plans - on both the investment and operations-side - which could serve to promote reduced green-house gas emissions and low-carbon facilitation. Such steps need not entail significant new or additional spend, nor place GDN efficiency at risk. It may be helpful to make clearer in the methodology that *network-wide* or *sector-wide* initiatives to promote lower carbon solutions *overall* could be incentivised either via business plan outputs or explicit incentives[21]. For example, **least-regrets steps** on:

    - **Biomethane**: to promote and facilitate the right conditions for more bio-methane connections (which may be relevant given that the stakeholder element of the Gas Discretionary Reward Scheme is to end). The downgrade of biomethane connections - to no longer being a formal RIIO output - sends a wrong signal to GDNs about the importance of being proactive on bio-methane. Ofgem's sector methodology should enable bio methane injection into gas networks and ensure network companies address potential capacity and compression constraints.
    - **Heat de-carbonisation** Overall, the Challenge Group thinks that **the GD methodology should display a greater ambition for heat-decarbonisation in RIIO2**. This might include a potential business plan requirement for GDNs to consider low and no-regrets heat de-carbonisation projects.

- The Committee on Climate Change[22] identified a number of 'low-regrets' approaches across different decarbonisation pathways: energy efficiency across UK building stock, low-carbon heat networks in heat dense areas, low-carbon new buildings, and biomethane injection into the gas-grid. The CCC also identifies heat-decarbonisation as a main gap in meeting the 4th and 5th carbon budgets[23]. Low-regrets approaches on heat decarbonisation are also necessary to deliver on the government's Clean Growth Strategy.
- The RIIO-GD2 methodology allows for 'Low- and no-regrets' heat decarbonisation projects to be proposed via business plans, which is welcome. More widely, the methodology points to innovation funds, uncertainty mechanisms or a possible re-opener once government heat policy is clarified.
- The RIIO- GD2 methodology also needs to make a clearer link between RIIO2 approaches on heat-decarbonisation, energy efficiency and the FPNES. In so doing, Ofgem should clearly signal that well-justified proposals on low-carbon heat development (eg district heating) can

[20] Bio-methane connections to be reported on, but no longer a formal RIIO2 output – GD para 4.50

[21] So, not bespoke incentives

[22] CCC. Next steps for decarbonising heat. 2016

[23] 4th Carbon Budget - 2023-27. 5th Carbon Budget - 2028-2032

be treated as business plan deliverables and outputs, in particular where these are well-targeted to serve customers in vulnerable circumstances or those in greatest need.

- On **energy efficiency in general**, Ofgem should clarify that, while it does not consider an 'Eco-type' obligation to be on the agenda for the networks, non-pipe and wire alternatives can nevertheless be on the table where network reinforcement can demonstrably be avoided.

Chapter 5 questions - Maintain a safe and resilient network

- **Tier 1 outputs:** To ensure that customers are getting what they are paying for, we think the proposal on targeting overall Tier 1 targets in combination with the option to address variances within the Tier 1 diameter band makes sense as a package. Recognising that it may be inefficient to target diameter band mixes too tightly, we believe a tolerance band may be appropriate.
- **Non-PE services:** Service replacement is probably the asset maintenance investment that touches customers most directly and therefore has relatively high visibility. Within service replacement there is little or no optionality over the nature of the intervention – one either replaces the pipe or does not. We therefore support having a reasonably simple output measure for this. We prefer option 2. Given the variation in the number of services connected per unit length of mains pipe, we would be concerned that Option 1 could lead to companies chasing the target through inefficient projects. With a reasonable threshold around the target, option 2 strikes a fair compromise between affording companies flexibility and providing customers with assurance that service replacements are being progressed at a predictable rate. Option 3 affords the greatest flexibility, but it may be more vulnerable to uncertainty in quantification and is more difficult for customer to understand and verify.
- **Outputs for asset management repex activities:** We support the NARM approach in general because we believe it offers the best way to manage overall network risk at minimum cost. We therefore support option 3. While recognising the case for some degree of ring-fencing for Tier 1 and service replacements, we think that, on balance, it would be better to leave asset management repex activities within the NARM risk reduction output target. This is partly because companies have choices both over which pipes to select and the nature of the interventions (ie re-lining or replacement). The NARM mechanism is equipped to deal with these complexities in a way that a straight volume measure is not.
- **Mains replacement level of risk removed, GIBs and fractures:** We have no strong view on maintaining these measures as outputs, but we would advocate placing an obligation on the companies to continue to record and report this data. In addition to providing companies and stakeholders with important information about issues on the network, it will underpin the evidence required for future NARM.
- **Repex:** we agree this is a price control deliverable and should not be subject to separate incentives.
- **NTS exit capacity:** this appears to be an appropriate incentive to better utilise the NTS but seems to allow much higher rewards than needed. It is suggested that this incentive is recalibrated to a lower level and to only reward positive actions taken by GDNs in better managing capacity
- **Record keeping:** we suggest that this should be a licence obligation.
- **Gas holder demolitions, Asset risk metric, Cyber resilience:** we agree that these should be PCDs and not subject to additional incentives.

2. Gas transmission

Chapter 3 questions - Meet the needs of consumers and network users

- **Stakeholder satisfaction output** (engagement/survey): this is an important incentive but the target appears to have been achieved easily. As a result, we suggest reducing the amount of this incentive. We agree with Ofgem's preference to refocus this incentive on NGGT's customers rather than all stakeholders. We also agree that the User Group could play a valuable role in helping to target this survey on key customer groups.
- **Quality of demand forecast** If this is not valued by NTS users, then it should be discontinued.
- **Maintenance days** This appears to be useful but the target level should be reconsidered based on past performance
- **Connections** We agree that this should be a licence obligation
- **Exit/exit capacity and constraint management** This is an important service which should be an ODI (F) but over performance suggests a tougher target should be set or the incentive value reduced.
- **Residual balancing** This could become an LO rather than an incentive.
- **Emergency response** We agree that this should be treated as an LO.

Chapter 4 questions - Deliver an environmentally sustainable network

- **The approach for GT broadly mirrors the coherent ET methodology**. However, Ofgem queries how far business carbon footprint reporting (BCF) remains relevant for GT – and therefore whether this should remain an ongoing requirement. **We think that annual environmental impact reporting should be required for GT with BCF reporting within this as a standard licence condition – just as for ET.**
- **Removing the GHG/venting incentive:** We believe that, provided it can be shown that the variable is within NGGT's control or influence, an incentive/penalty regime should be used to reduce greenhouse gas emissions due to venting and own fuel use.

Chapter 5 questions - Maintain a safe and resilient network

- **Network capability:** we agree that this should be a licence obligation
- **Asset risk metrics:** we suggest that this should be a licence obligation rather than an incentive.
- **Cyber resilience/physical security:** we agree that this should be part of the price control determination.

3. **Electricity transmission**

Chapter 3 questions - Meet the needs of consumers and network users

- **Stakeholder satisfaction output** (engagement/survey): this is an important incentive but the target appears to have been achieved easily. As a result, we suggest reducing the amount of this incentive. We agree that, if the incentive is retained, measures should be standardised to allow better comparison of performance. This standardisation would also enable the use of a competed fixed rewards pot which would still reward improvements while limiting the cost impact on consumers. We also support the use of an absolute penalty to hold up standards that have already been achieved and incentivise those who are the poorest performers.

- **Timely connections output** We agree this should be a Licence Obligation
- **Energy not supplied**: we agree that this should be retained as a financial incentive noting that, were it to become a penalty-only mechanism, this could lead to the undesirable feature of a dead band. We note that Ofgem is seeking evidence of how stakeholders value this target, but think it's difficult to see that customers would value from an even higher ENS target. As a result, we suggest that the level of this incentive in reduced.
- In general we support setting **absolute targets** where performance depends significantly on a company's asset characteristics and/or on its specific operating environment. We believe that ENS/SF6 and capital works related PCDs fall into this category. Relative targets are appropriate for the other outputs, where benchmarking is both practical and beneficial.

Chapter 4 questions - Deliver an environmentally sustainable network

- **In general, Ofgem proposes a well-considered methodology approach for ET** Ofgem has sought to achieve a 'right overall balance' between licence obligations, appropriate and stretching standards, quantifiable targets, business plan baseline price-control deliverables - plus identifying outputs that may warrant further explicit incentivisation (be this via financial, reputational or bespoke incentives). Ofgem has coupled this approach with more demanding requirements for annual environmental impact reporting – both company-specific and sector-wide.
- One matter for Ofgem still to address is **how the Business Plan incentive and the environment methodology for ET will integrate in a coherent way**. For example, Ofgem notes that, in setting outputs and incentives, it will need to consider interactions with other components of the price control including the proposed Business Plan incentive (ET 4.42). Ofgem will therefore wish to consider any such interaction with the proposal for a bespoke environmental output delivery incentive (ET 4.31-32).
- **ET should be taken as the 'environmental benchmark' for the GT and GD sector methodologies** Where feasible and desirable, this would ensure some high-level alignment, consistency and comparability.

Chapter 5 questions - Maintain a safe and resilient network

- **Network access policy** We agree this should be a licence obligation, and that it is critical to the energy transition.
- **Large capital investment** Wherever possible this should be opened up to competition but where this is not possible, we agree that it should be a PCD. Provision should be made for ensuring that, when projects do not go ahead because of external events, they are not rewarded.

Appendix 2: Response to Ofgem's approach to environment and low-carbon

The core methodology document refers to Outcome 3 ('Network companies must enable the transition towards a smart, flexible, low-cost and low-carbon energy system for all consumers and network users'). But, beyond that, the documents do not discuss Ofgem's overall expectation on approaches to the delivery of Outcome 3.

As well as on matters of price, affordability and service, customers increasingly care about the environment, sustainability and low-carbon delivery. Ofgem's principal objective in statute[24] includes the reduction of greenhouse gas emissions in its definition of consumer interests. Ofgem needs to ensure that its approach to network regulation aligns well with government's Clean Growth Strategy and the trajectory implied by the fourth and fifth carbon budgets.

- The main methodology document therefore needs a short statement of principle on the environment, sustainability and low-carbon facilitation – common across all of the RIIO2 methodologies. This statement should reflect clear ambition from Ofgem, send a strong and coordinated signal to the companies, reflect a whole-systems approach which looks beyond individual sector-silos, and frame more clearly what a 'right-balance' might look like as between business-as-usual, carrot and stick - to deliver consumer benefit.
- Such a statement will help Ofgem, the Challenge Group and User Groups / Customer Engagement Groups to form a clearer view of the overall adequacy of Business Plan proposals in delivering Outcome 3 – be this at company level, at sector level, cross-sector or for whole-system.

As a minimum, the statement should ensure :

1. Clear framing and strong high-level messaging from Ofgem on its ambitions for a central role in each sector methodology in ensuring that the companies deliver on the environment and the low-carbon energy transition in an efficient and coordinated way, in line with Outcome 3.

2. A clear expectation from Ofgem of a broadly consistent and aligned approach across each sector methodology on the environment and low-carbon transition – while recognising specific sector needs and difference.

3. Each sector methodology to reflect a 'right overall balance' in the chosen mix of approaches to deliver better environment and low-carbon outcomes for that sector. Consideration 'in-the-round' of the respective roles of : licence obligations, appropriate and stretching standards, quantifiable targets, the Business Plan incentive, Business Plan baseline price control deliverables, and which outputs to be explicitly incentivised (be this financial, reputational and / or bespoke).

4. Annual Reporting Framework : for RIIO2, annual environmental impact reporting to be required as a standard licence condition for ET, GT and GD as a key building block of the low-carbon energy transition. Ofgem to signal a demanding expectation, as for DNOs in ED1, for clear and comparable approaches to environmental performance reporting as a business plan

[2424] https://www.legislation.gov.uk/ukpga/1989/29/section/3A requirement, broadly consistent across each sector. BCF reporting to be retained for each sector within the new annual environmental impact reporting framework.

Annual environmental impact reporting requirements should be a RIIO2 standard licence condition to allow clear assessments and comparisons - at company-level, sector-level and cross-sector. Such reporting requirements should form key inputs to future whole-system assessments - be these emissions which the networks directly control or not. External stakeholder review of green-house gas impacts associated with energy network operations should be made easier.

At present, only the ET methodology introduces a new reporting framework and a more demanding expectation than in RIIO1 for annual environmental performance reporting (including Business Carbon Footprint reporting) - across both direct and indirect carbon impacts. This approach should be common across all the network sectors - and therefore also adopted for GT and GD.

Business Carbon Footprint reporting : The main focus of BCF reporting is not on the role that the networks must play in facilitating the low-carbon transition. Rather, BCF reporting is a measure of how a responsible company tackles its own green-house gas emissions[25]. In this sense BCF continues to offer a worthwhile internal and external measure.

For RIIO2, ET-2 proposes to retain BCF reporting within the new annual environmental impact reporting. For GT-2, Ofgem questions continued BCF reporting – and does not propose a broader environmental performance reporting framework as per DNOs or that proposed for ET-2. And for GD-2, there seems no explicit BCF reporting requirement

BCF should be retained for each sector within new annual environmental impact reporting requirements for RIIO-2.

Electricity Distribution RIIO-1 reporting on the environment : in RIIO-1, electricty distribution networks provide Ofgem with detailed environmental data under their standard licence condition for annual environmental reporting (SLC 47). To support preparation of the ED-2 sector methodology on the environmental and low-carbon, Ofgem's sector-specific annual reports for the ED-1 periods 2017-18 and 2018-19 need detailed analysis – to ensure that high-level RIIO-1 lessons on the environment are learned to inform the ED-2 draft methodology.

5. ED2 : clear signalling on the environment and low-carbon: In any statement of principles on the framework for environment and low-carbon for RIIO2, Ofgem should make clear that the principles also point to Ofgem's likely high-level approach on treatment of the environment and low-carbon for ED2. Currently there is no acknowledgement in the main methodology or elsewhere that the methodological approach for the environment and low-carbon for ED2 can be expected to be broadly consistent and aligned with the other sector methodologies.

6. A clear statement of how Ofgem proposes to ensure a coherent approach across (1) the sector reporting arrangements on the environment and low-carbon – with the separate RIIO2 approaches for (2) whole-system (3) innovation funding and (4) the future role of the ESO**.**

Links between the sector environment methodologies - and the methodology approaches on whole-system, on innovation funding, and on the remit of the ESO - are under-developed across the methodology documents. Environment and low-carbon outcomes need to be framed as a core outcome for 'Business as Usual' in RIIO2 – and not just framed as an outcome of innovation.

---

[25] BCF reports on the green-house gas impacts of buildings' energy-use, operational and business transport, fugitive emissions and fuel combustion.

One helpful approach for Ofgem to consider could be to look further at how to link (1) production of environment reports for each sector with (2) the suggested whole-systems incentive on 'co-ordination and information sharing' [26] with (3) an ongoing role for company Consumer Engagement Groups to review both company and sector-wide annual environment reports.

[26] Main methodology – para 5.11. p.35

Appendix 3: Response to ESO sector methodology questions

1. ESO roles and principles

ESOQ1. Do you agree with our proposal to maintain the current roles and principles framework for RIIO-2?

Yes, overall this fits with our vision for the ESO and we agree that the aim should be to evolve the existing roles and principles. However, there is a risk that many of these activities may be less than successful in making a real difference for customers because of

- ambiguity about who is responsible for taking action,
- lack of ambition due to implementation risks for the ESO.

We suggest that roles and principles should clearly identify where the ESO is responsible for decisions, or where it is responsible for advising Ofgem or Government to take decisions.

Overall, the activities that sit behind these principles should target the achievement of strategic goals and be ambitious.

The transition to digitalised operating model will likely increase system operation complexity and risks, and this should be explicitly recognised by Ofgem in its performance regime. The ESO should be incentivised to move into this new world, but also risks should be recognised appropriately.

ESOQ2. Do you agree with our proposals to keep the ESO's code administration, EMR delivery body, data administration, and revenue collection functions in place for RIIO-2? Do you believe that any of these functions (or any other functions) should be opened up to competition, either now or in future?

Yes, this is a pragmatic solution in order not to cause unnecessary market disruption. However, the current framework which includes several codes and several code managers is complex, slow and unresponsive to change. We suggest that a root and branch reform is appropriate to obtain a governance system that is fit for purpose for a future whole energy system.

Once an improved design is adopted then certain administration functions may be opened up to competition, but the potential disadvantages of further fragmentation or delegation of governance should be taken into account.

ESOQ3. Do you consider the ESO is best-placed to run early and late competitions?

No, the competitions for network assets will ultimately result in the grant of licences by Ofgem in accordance with statutory duties, therefore Ofgem will be the final decision maker and is in the best position to run the competitions and take decisions. Ofgem will also be responsible for agreeing any subsequent changes to the competition awards and/or commercial terms.

Delegating the decision making role to the ESO may be appropriate if the decisions are routine in nature – however, this is unlikely to be the case given the large bespoke nature of major network investments.

However, given its network planning, technical and commercial knowledge, the ESO may play a valuable role in advising Ofgem during the competitive process, providing independent assessments of bids or design solutions.

Nevertheless, the NOA transparency should be enhanced – ESO should clearly explain the network problem that should be solved and then carry out the assessment of proposed solutions, including both traditional network reinforcement and non-network solutions.

2. Price control process

Ofgem proposes to move to a two-year business planning cycle but within the five year RIIO-2 period, to maintain the Performance Panel, and define content to be included in the ESO's business plan.

ESOQ4. Do you agree with our proposal to move to a two-year business planning cycled price control process for the ESO? If not, please outline your preferred alternative, noting any key features (eg uncertainty mechanisms or re-openers) that should be included.

We recognise that the two year business planning cycled period is seeking to strike a balance between ensuring flexibility for the ESO and Ofgem to determine the most appropriate plan for the dynamic energy market, while at the same time marking sure a pathway remains to achieving long term strategic goals for the ESO and the industry.

We think at this early stage of development that this is appropriate for the ESO but would urge Ofgem to ensure that progress towards strategic goals is captured on a five year time horizon and beyond and is not jeopardised by a short term focus.

It will important to establish appropriate balance between incremental and strategic planning. In order to address this, the ESO should develop long term strategic plans, and then specify the actions to be taken in the next 2 years. The key is to develop a long term plan (say 10-15 years, given decarbonisation agenda and transition to digitalised paradigm) and then set out the ESO response for the next 2 years in the context of the long term plan.

The ESO will need to develop plans to deal with uncertainties – in this context flexible technologies may have a significant option value and this needs to be explicitly recognised in the regulatory framework.

ESOQ5. What stakeholder engagement mechanisms should be put in place for the ESO's business planning and ongoing scrutiny of its performance? Do you agree with our proposal to maintain, and build upon, the role of the Performance Panel?

The ESO's stakeholder engagement process already underway and its ongoing development is encouraged. Some of the ESO's proposed performance targets may not be as ambitious as stakeholders require. It will be important that the ESO is seen to be listening to the engagement process and Ofgem may wish to monitor this aspect.

The performance panel offers a valuable way of independently assessing the performance of the ESO and can be more flexible in a rapidly changing environment for the ESO. The panel could provide more detailed feedback to help improve short and long term performance.

3. Outputs and incentives

It is proposed to continue with the incentive arrangements introduced in April 2018 – which adopts an ex post, evaluative approach to the ESO incentives, rewarding or penalising the ESO depending on how well it has delivered against principles-based outcomes.

ESOQ6. Do you agree with our proposed approach of using evaluative, ex-ante incentives arrangements for the ESO?

Yes, Option 4 (the current approach) is an appropriate approach and the incentives should be directly linked to progress in achieving the strategic goals behind each of the principles. This maintains flexibility needed during the energy system transition.

ESOQ7. Do you agree that we should continue to apply a single 'pot' of incentives to the ESO, and that this should be a symmetrical positive/negative amount? If not, why not?

A single pot of incentives provides a very strong incentive but it faces the challenge of how it is reliably assessed against pre-specified criteria. Unless there is clear evidence and assessment criteria, marking may veer towards the average or undecided position. An approach where the pot is divided into the four roles/seven principles (not necessarily equally) and judged against clear criteria may be preferable.

The use of symmetrical incentives is supported, while noting that, for a company with a thin balance sheet a negative incentive (potentially requiring shareholder support from National Grid) may have a more profound effect than a positive one, thereby changing behaviour accordingly. This will need to be monitored on an ongoing basis.

4. ESO Cost assessment

Ofgem proposes to assess the costs of the ESO on an activity-by-activity basis, using a combination of different tools and processes.

ESOQ8. Do you agree with our proposed approach to assessing the costs of the ESO under RIIO-2? Do you think we should assess costs on an activity-by-activity basis? How would you go about defining the activity categories? Are there alternative approaches we should consider?

We agree with the activity based costing approach, and think that the ESO should show activities for its organisational departments and also allocate these costs by delivery principle.

All cost data should be presented in a way that can allow comparisons reconciliation over time, so that historic trends may be monitored and efficiencies captured for consumers.

ESOQ9. Do you consider the types of cost assessment activities we outline in this chapter are the right ones? Are there additional activities you think we should consider?

The use of activity breakdowns, historic trends, benchmarking, cost benefit assessment, efficiency assessment etc, are proposed for cost assessment. A third party audit of costs is also proposed, on an ex-ante and/or ex-post basis.

These represent a comprehensive approach to cost assessment – no additional activities are suggested.

5. Finance

Ofgem proposes a remuneration model for the ESO that is based around the pass-through of actual costs, with a margin assigned based on business plan allowances. This margin could vary by activity.

ESOQ10. Do you agree with our proposed remuneration model for the ESO under RIIO-2? Do you think it provides the right incentives for the ESO to deliver value for money for consumers and the energy system? Are there other models you think are better suited?

A cost pass through with a margin is proposed as this increases Ofgem's ability to monitor expenditure. It is intended to be associated with a cost disallowance mechanism if costs significantly deviate from the business plan. No sharing factor is proposed.

This approach appears appropriate in the circumstances. It is not likely to result in significant efficiency savings but it should not lead to excessive costs either.

ESOQ11. Are there any risks associated with our proposed remuneration model that you do not think have been effectively captured and addressed? Do you think that we should put in place any of the mechanisms intended to provide additional security to the ESO outlined in this chapter – eg parent company guarantee, insurance premium, industry escrow or capital facility?

The ESO should be able to face the impact of repeated penalties without having to ask Ofgem for an intervention which would negate the impact of these penalties. It would be preferable if the security would not be a shareholder guarantee as this may lead to undue influence upon the ESO by National Grid.

Ultimately the remaining choices of insurance, capital or escrow facility would be funded by ESO customers, so the least cost option should be selected.

ESOQ12. Do you agree with our proposal relating to remove the cost sharing factor? Can you foresee any unintended consequences in doing so, and how could these be mitigated?

We agree, however, consideration should be given to introducing automatic sharing mechanisms once confidence is gained in the cost targets and incentives.

ESOQ13. Do you agree with our proposal to introduce a cost disallowance mechanism for demonstrably inefficient costs? What criteria should we apply in considering what constitutes 'demonstrably inefficient'?

We agree this should be used in situations where expenditure is demonstrated to be nugatory e.g. an IT system that has failed to operate, or a function that has been duplicated or is no longer required. This should take account of when the ESO may reasonably have been expected to have the information that expenditure was no longer required.

6. ESO Innovation

The Ofgem methodology proposes to broadly adopt a similar innovation stimulus package for the ESO as for other RIIO-2 sectors.

ESOQ14. Do you agree with our proposals to retain an innovation stimulus for the ESO, but tailor aspects of this innovation stimulus to take account of the nature of the ESO business?

We agree that its important that the ESO is encouraged to participate in innovation activities, given large the potential benefits it can help attain.

ESOQ15. What ESO-specific issues should we consider in the design of the ESO innovation stimulus package

The ESO innovation stimulus should consider the whole energy system, not just regulated T&D. It should extend into areas such as data, AI, beyond the meter, other energy vectors, etc.