

NATIONAL GRID ELECTRICITY TRANSMISSION (NGET) RESPONSE TO RIIO-2 DRAFT DETERMINATION

Introduction

Whilst we share Ofgem's objectives for RIIO2, the Draft Determination (DD) for NGET as it stands is unacceptable because it fails to meet the needs of current and future consumers as well as the needs of our direct customers and broader stakeholder base. This is because the package as a whole reduces network reliability and resilience, jeopardises the pace of delivery of a net zero energy system, and erodes regulatory stability and investor confidence in the sector.

We welcome the fact that Ofgem has clearly signalled this as a consultation in which it is open to making changes based on stakeholder views and through consideration of new evidence. We note that on a number of topics Ofgem has specifically acknowledged that it is open to better options being brought forward, and potential weaknesses in current proposals. This is positive and important because we consider that a significant number of proposals are currently unacceptable and remedies are necessary for Final Determination to address serious issues identified.

We will continue to engage constructively with Ofgem and all stakeholders over the coming weeks to provide robust evidence and rationale to motivate and secure the necessary changes for Final Determination.

Navigating our response

There are eight parts to our overall response in which we provide the substantial evidence to justify and support the changes needed:

1. A short covering letter for GEMA
2. An executive summary of our response
- 3. A summary of key issues and proposed remedies**
4. Our response to Ofgem's core DD document
5. Our response to Ofgem's Electricity Transmission sector document
6. Our response to Ofgem's NGET-specific document
7. Our response to Ofgem's Network Asset Risk Metric (NARM) document
8. Our response to Ofgem's Finance document

This document is part 3 of our overall response and provides a summary, in one place, of the major proposals across the suite of Ofgem's DD consultation documentation that are currently unacceptable to us with significant remedies necessary.

Summary of major DD proposals that are currently unacceptable

1. Extensive reductions in the volume of allowed investment for Network Reliability and Resilience which jeopardises a safe, reliable and resilient network service
2. Extensive reductions in allowances due to Ofgem's assessment of costs as inefficient, which are actually the result of errors, methodology weaknesses, data handling issues and inconsistent comparisons

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3. Ex-post re-opening and clawback of settled T1 allowances where no mechanism or vires exists, undermining the 'stable and predictable' RIIO regulatory regime
4. Punitive and disproportionate penalties resulting from a flawed business plan incentive regime that has been erroneously and inconsistently applied
5. Uncertainty Mechanism cost allowances set by a flawed methodology that systematically underfunds customer driven works and create perverse incentives to delay green energy connections
6. Ex-post funding approach for additional network capacity that adds unnecessary risk and delay to the delivery of investments that are critical to delivering net zero
7. Inclusion of a Competition Proxy regime which creates unnecessary risk, uncertainty and lack of pace for net zero related investments but without any economic benefits
8. Totex efficiency incentive strength which is too weak for Transmission, set with no transparency or justification for its derivation and is inconsistent with Ofgem's methodology decision in May 2019.
9. Undermining totex efficiency incentives by defining many project level 'inputs' instead of Outputs and the use of ex-post discretionary intervention to make subjective adjustments to incentive outturn
10. Rejection of new Incentives with clear consumer benefits of lower costs and faster connections of green energy, that are supported by Customers and Stakeholders
11. Overstretching and unjustified Proposals for Ongoing Efficiency
12. When coupled with the proposed financial framework, the DD package doesn't stack up

We go on to explain each of these in turn, including the remedies we propose.

Summary of major DD issues with proposed remedies

1. Extensive reductions in the volume of allowed Investment for Network Reliability and Resilience which jeopardises a safe, reliable and resilient network service

The proposed allowances for investment in network reliability and resilience, at less than 30% of historic investment levels, do not safeguard the reliability of the network and do not have regard to the considered views of stakeholders. The negative consequences of the proposed low levels of investment in asset health and resilience will be significant and felt for many years to come if not rectified in Final Determinations. We therefore welcome that Ofgem continues to work constructively with us in this area and we are confident that the evidence we have and will continue to provide will allow it to reach a significantly better conclusion for its Final Determination.

What Ofgem has Proposed

Ofgem proposed a Non-load Related Expenditure (NLRE) allowance of £643m which represents <20% of the proposed allowance for asset health investment in our business plan. The proposed allowances in our Business Plan were reduced in a number of ways:

- ↓ £1,373m relates to volume disallowances
- ↓ £310m relates to cost of the allowed work and represents >20% cost reduction on those works
- ↓ £215m relates to two major schemes removed from the baseline and proposed for reopener
- ↓ £556m is described as a T1/T2 crossover true-up
- ↓ £250m had no discernible motivation for disallowance set out in the determination

London Power Tunnels Two (LPT2) was allowed in full and at c. £646m it is roughly equivalent to the entire proposed NLRE allowance of £643m after T1/T2 crossover true-up is applied. For the remaining elements of the plan the volume and cost disallowances combined, £1,683m, equate to >60% of the submitted plan of £2,701m. Whilst, severe reductions were applied to the majority of asset categories, the reductions in four areas are notably more extreme leading to proposed investment levels significantly less than historic averages and current spend:

| <i>Asset Category</i> | <i>Submitted Plan £m</i> | <i>Proposed Allowance £m</i> | <i>% of historic average allowed</i> |
|---------------------------------|------------------------------|----------------------------------|--|
| <i>Overhead Lines</i> | 622 | 96 | 23% |
| <i>Protection & Control</i> | 489 | 60 | 38% |
| <i>Bay Equipment</i> | 228 | 40 | 32% |
| <i>Transformers</i> | 253 | 59 | 24% |

Three major cable schemes were also disallowed or removed from baseline and make-up a further £256m of baseline allowance reduction:

- Replacement and upgrade of Dinorwig-Pentir - proposed for LOTI
- Undergrounding of Tyne Crossing – proposed for reopener
- Replacement of Sheffield Ring cables – disallowed volume

Why we are concerned

The NLRE allowance proposed in Draft Determinations is a source of great concern for NGET, its stakeholders and customers. Central to our RIIO-T2 Business Plan Submission was the understanding that our stakeholders' considered and informed objective was to safeguard the reliability of the network now and in the future by holding risk levels stable and continuing to invest in asset health. This objective reflects not only the critical nature of the national infrastructure we maintain and operate but also a clear desire to maintain optionality into the future for the progression of Net Zero objectives.

Cumulative Impact

Cutting investment in asset health by 70% compared to historic levels cannot possibly result in stable network performance in terms of reliability or asset risk. The consequences of this reduction will be far reaching and felt in both the short and medium term with a real possibility that it cannot be corrected in the long term without experiencing diminished network performance and pursuing an expensive and disruptive future catch up programme.

Under investment will manifest as a reduction in asset, route and site level reliability within a couple of years. Inherent redundancy and designed resilience in the network mean individual failures will not automatically lead to a supply interruption, however, the potential for the reliability experienced by consumers and directly connected customers to worsen is materially increased, particularly in extreme weather events when multiple co-incident failures can occur. In the overhead lines alone, the probability of a conductor fault doubles by the end of the T2 period under draft determinations when compared to our proposed plan.

Escalating risk levels on the network are at odds with stated stakeholder requirements and might be prohibitively expensive to recover in the longer term. Our proposed Business Plan aimed to hold risk levels stable on the network, by contrast, the proposed levels of investment in Draft Determinations allow risk to increase by at least 24% over the five-year period based on volume disallowances only. Whilst the majority of this risk relates to network reliability we also manage significant safety and environmental risks. The effect of the Draft Determinations is to increase these risks beyond the ALARP (As Low as Reasonably Practicable) levels as required by the HSE (Health and Safety Executive).

Our ability to recover the resulting risk position in RIIO-T3 will be constrained by system access. We analysed the impact of carrying-over work into T3 and determined that in the most constrained region there would be c.50% more outage days required than the system can accommodate. Additionally, at the replacement rate proposed for overhead line conductors it would take over 100 years to refresh a network that was largely built in in the 1960s/70s with an anticipated life of 50 to 60 years. The impact of the proposed T2 investment levels will be felt for many regulatory periods to come. Of notable concern to our stakeholders and customers is the potential for this to detract from NetZero ambitions and in particular connecting offshore wind.

A radical change to asset health investment practices, as proposed in Draft Determinations, undermines the basis on which all other network development and investment decisions are made. Both NOA (Network Options Appraisal) and SQSS (Security and Quality of Supply Standard) rely on an inherent assumption that historic performance levels prevail. This assumption cannot be made if

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reliability and resilience investment levels are materially reduced, resulting in the network carrying higher levels of risk and a population of assets that is on the whole more aged and degraded than in previous periods. We have studied a typical storm scenario in 2026 and concluded that the threat of coincident asset failures would take the network beyond planning and operating standards.

Specific Impacts

Beyond the systematic asset category cuts there are also specific schemes that have been disallowed or removed from baseline, thereby introducing delays, which will have an immediate and direct impact on consumers, customers or stakeholders:

1. Replacement of the cable that connects Dinorwig power station to the network is an in-flight scheme that we have worked on closely with the customer and the ESO, considering both the timing and the solution to ensure the station can continue to provide its essential service. Delays introduced by LOTI will increase the risk to the consumer overall and have a direct negative impact on the customer who has timed their own asset replacement works to coincide with ours.
2. Removal of the overhead lines crossing the Port of Tyne has wide stakeholder and ministerial support and is essential to enabling the manufacture of offshore wind structures. Delays introduced by a reopener mechanism may result in manufacturing contracts being lost and consequentially significant job losses in the region. The constraint costs resulting from the need to regularly switch this line out will continue to accrue to the consumer.
3. The replacement of the overhead line conductor on the 4VK route from Nottinghamshire to Hertfordshire has been disallowed. This route was commissioned in 1969 and is carrying very high risk in terms of its criticality to north/south operational security, supply of network rail, directly connected generation and public safety, with 36 motorway and rail crossings as well as a high probability of failure within the RIIO-T2 period.
4. The replacement of cables in the Sheffield Ring is required due to movement of the railway embankment they are buried in. The environmental impact of oil leaks is directly felt in the local vicinity and repairs are compromised by the progressive movement. A catastrophic collapse of the cable structure would place local demand at risk to the next fault for the duration of remediation works.
5. It is also vital to NGET and its many varied stakeholders that the network is resilient to external threats such as extreme weather and cyber-attacks. On top of the asset health disallowances described above there have been extensive disallowances on wider resilience related spend. Of greatest concern is the disallowance of the proposed replacement of telecoms equipment which facilitates the monitoring and control of the network (OpTel). We are, with the support of the manufacturers, resolving hundreds of critical cyber vulnerabilities associated with this system each year. Without the proposed refresh, OEM support will cease and expose multiple sites across the network to cyber-attack. In the worst case a complete loss of the Optel network would leave us unable to monitor or control or protect the network effectively enough to avoid a black start situation, which we would not be able to recover from without the Optel network functioning again.

Working Towards Final Determinations

We have welcomed the opportunity of continued engagement with Ofgem in order to reach our shared objective of safeguarding network reliability. As a result of feedback received we have submitted an additional 118 supplementary evidence files and new BPDT (Business Plan Data Tables). For each asset category we have outlined our asset management strategy and key considerations when preparing the business plan in line with stakeholders' requirements and deploying mutually agreed methodologies such as monetised risk. These over-arching reports are supported by numerous annexes which set out at an extremely granular level the need case for investments, the asset evidence used as well as all available engineering and development considerations. The re-submitted BPDT ensures direct line of sight from the investment details described to the data table entries.

In order to distinguish between the minimum investment required to maintain reliability (in the short and longer term) and investment which offers total risk stability (in line with stakeholders' expectations and our considered asset management strategy) we have conducted an internal review of our business plan investments and categorised them in this way in our supplementary evidence reports. We have done this to ensure there is no ambiguity about the minimum acceptable level of investment required to safeguard our common goal of securing network reliability. We maintain, however, that there are significant additional benefits that our stakeholders prioritised which will be foregone if we invest only at these minimum levels, with consequential detriment to consumers, customers and the nation's Net Zero ambitions.

We understand, from recent engagement at all levels, that this distinction and clarity is helpful for your analysis and that the supplementary evidence provided is of sufficient detail and quality for you to revisit the volumes allowed in draft determinations. Specifically we understand that you agree that this further information we have provided is additional, meaningful and substantial in line with your requests.

To ensure sufficient internal challenge of our position on minimum investment for reliability we engaged DNV GL to provide an independent, high-level view on the potential consequences of failing to invest in reliability, as well as to provide an independent estimate of the minimum required spend for NGET in RIIO-T2 to maintain the current level of network reliability. In forming their views DNV GL concentrated on four critical asset classes outlined above which make up most of the funding request and the associated disallowance. They have drawn on DNV GL's 90+ years as a global expert advisor to transmission network owners and operators and deep knowledge of asset management in transmission systems and other complex high value infrastructure. The study reached the conclusion that *"Ofgem's proposed cut of NGET's £1.77bn funding request to £324m falls significantly short of what we believe to be the minimum required spend for these asset groups, which we place at £1.27bn."*

Remedies

It is our expectation that the NLRE allowance proposed in Draft Determinations will increase significantly in Final Determinations as a result of Ofgem's consideration of stakeholders' and customers' views where appropriate and use of the new supplementary evidence provided by NGET. This will allow Ofgem to re-assess needs as well as project scope which will, in turn, allow a more representative cost assessment.

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We anticipate the proposed allowances for asset health element of NLRE increasing in the following ways:

- Increase from £643m to £1.53bn
 - Reversal of T1/T2 crossover true-up
 - Correction of confirmed errors and inclusion of areas with no discernible motivation provided for that disallowance
- Increase from £1.53bn to £2.6bn (this represents our minimum for reliability)
 - Application of appropriate unit cost assessment methodologies
 - Incorporation of extensive evidence for minimum reliability investments
 - Incorporation of extensive evidence for scope driven costs
- Further increases to asset health driven by consideration of stakeholder requirements and economic cases
 - Consideration of case for greater risk reduction and robustness of Monetised Risk application and the protections it offers the consumer
 - Consideration of directly requested stakeholder schemes – including the reinstatement of funding for the Tyne crossing project
- Increases to resilience related elements of NLRE through thorough consideration of the risk and objectives as laid out in the investment justification provided

2. Extensive reductions in allowances due to Ofgem’s assessment of costs as inefficient, which are actually the result of errors, methodology weaknesses, data handling issues and inconsistent comparisons

What Ofgem has Proposed

In addition to the volume disallowances described above, Ofgem’s Draft Determination included disallowances of £417m based on its cost assessment. For NGET, Ofgem used two different approaches to calculate its view of efficient costs for our network capex costs:

- a non-standard category specific approach for Non-Load related costs, resulting in a 19% cost disallowance; and
- a standard approach (the model for which has been published as part of DDs) for Load Related costs, resulting in a 11% cost disallowance.

Why we are concerned

The majority of these disallowances are due to errors, methodology weaknesses, data handling issues and inconsistent comparisons, rather than genuine cost inefficiencies.

Some of the issues raised have already been acknowledged by Ofgem and we are working constructively with them to ensure, as far as possible, that the standard cost assessment approach can be applied to Non-Load related costs, and also to address issues and weaknesses identified in Ofgem’s standard assessment model.

We have reviewed both the non-standard and standard cost assessment approaches and set out below the issues we have identified with each.

Non-Standard assessment - Non-load related (NLR) capex

Ofgem has used a non-standard approach for NGET’s NLR capex in that it is different to that used for other companies and different to that used for load-related capex. This involved:

1. Calculating the weighted sector mean of costs per unit for 99 asset type and primary voltage combinations separately for historical and forecast schemes, using data for all projects (non-load and load-related), and selecting the lowest out of the historical and forecast means to be the benchmark unit cost.
2. Comparing these benchmarks to the NGET weighted means for the T2 period and, where our weighted means are greater than the benchmark, scaling all costs based on an ‘average of averages’ of the ratio of the NGET mean to the sector mean for each operating voltage.

There were numerous errors introduced during this non-standard process. These are discussed in more detail in our responses to ETQ9, NGETQ11 and NGETQ12; some examples are listed below.

- This approach, even according to Ofgem’s own analysis, uses benchmark unit costs that are not statistically robust. For example:
 - The maximum sector unit cost per km for 400kV OHL Conductor is a factor of 14,000 times greater than the minimum (i.e. it ranges from less than £200 per km to over £2,000,000 per km). This significant variation indicates that very different activities have been included in this category across the companies’ submissions. Ofgem’s benchmarking spreadsheet therefore concludes that they are unable to identify an efficient unit cost to use for the cost assessment stage, however in the case of OHL

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Conductor this unit cost has been used anyway to reduce NGET's NLR allowances for OHL Conductor by £42m (from £111m to £69m).

- Protection & Control is another category where the calculated benchmark is not statistically robust according to Ofgem's own modelling, but it has nevertheless been applied to reduce NGET's NLR plan. The impact of this has been exacerbated by mixing up replacement and refurbishment activities for Protection & Control. The application of this inappropriate ratio to our Protection & Control programme resulted in a 76% cost efficiency reduction of £185m (from £245m to £60m).

This issue did not impact the DD allowances for NGET's LR capex or the Scottish companies at all because the standard approach - Project Assessment Model (PAM) - correctly passed their costs in these categories unadjusted. In contrast, Ofgem's non standard approach for NGET was responsible for 85% (£260m) of the cost assessment reductions to NGET's NLR plan.

- Since Ofgem's cost assessment for NGET alone was done outside of the PAM, Ofgem did not apply a unit cost that reflected the operating voltage of the assets allowed, which is a key driver of cost. For transformers, instead of using a weighted average of 400, 275 and 132kV unit benchmarks that appropriately reflects the fact that our portfolio of work includes more units that are higher voltage, and that we have no 132kV units, Ofgem used a simple average of the three unit costs. Ofgem also made mathematical errors in the calculation of adjustment factors that systematically underestimate costs. The net impact of these two errors was to incorrectly reduce transformer allowances by £33m (from £98m to £65m).
- The use of inconsistent benchmark unit costs. Ofgem has had issues with spreadsheet version control which means that 29 out of the 33 benchmark unit costs applied to NGET's NLR T2 plan did not match the DD values subsequently provided by Ofgem on 29th July.

Ofgem has acknowledged that there are shortcomings associated with their non-standard assessment approach and expressed a strong preference to assess our non-load related network investments using their PAM for Final Determinations. We are working with Ofgem to recut our data so that most lead asset categories can flow correctly into the PAM. This will automatically correct some of the errors and we therefore expect the disallowances applied to NLR capex to decrease significantly between Draft and Final Determinations. For cost categories that cannot be assessed via PAM, we expect Ofgem to correct for the issues we have found (which are detailed in our response to relevant questions), and to use the principles employed in the PAM.

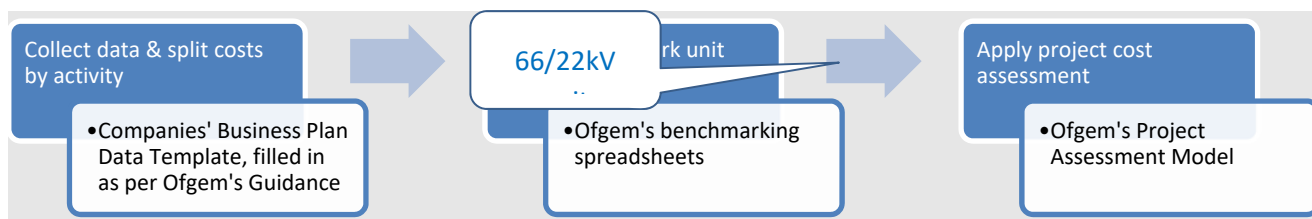
Load-related (LR) capex assessment

For load-related capex, the PAM takes the benchmark unit costs that Ofgem believe to be robust and rebuilds the project cost using Ofgem's costs per unit. This is then compared to the company cost, and:

1. Where the company project cost is lower, this passes through unadjusted
2. Where the company project cost is higher, the Ofgem project cost is adopted.

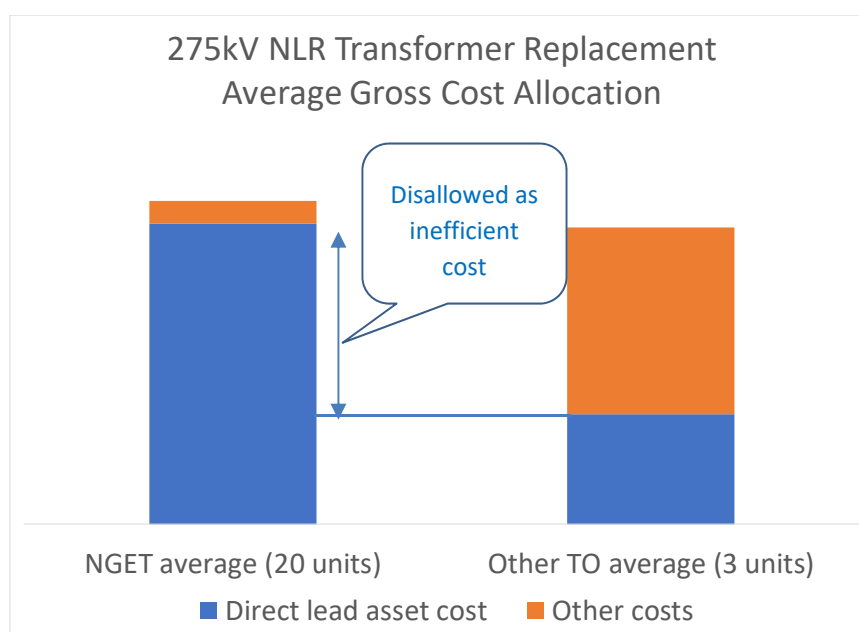
Again, we have observed a number of methodological and process shortcomings. To understand the interactions, it is helpful to consider a three-box process:

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Step 1 – Ofgem’s approach to collecting data & splitting costs by activity has created inconsistencies

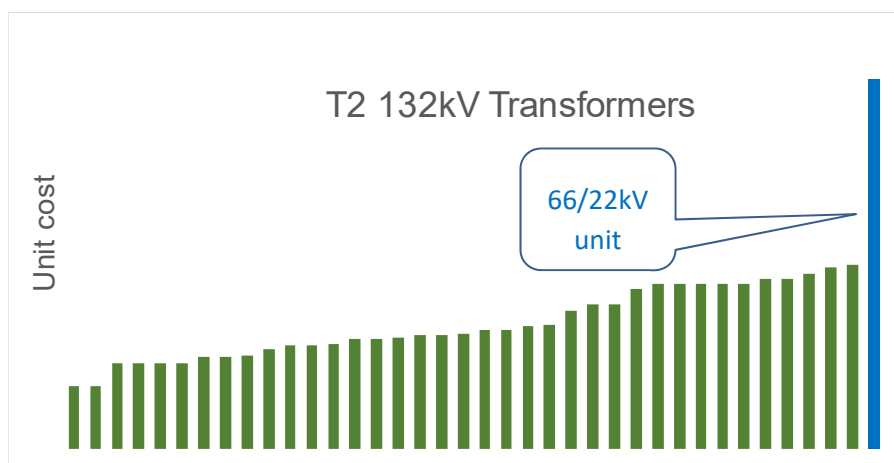
- Ofgem’s Business Plan Data Template and the accompanying Regulatory Instructions & Guidance and Glossary (which tell companies how to submit their data) were substantially new for the T2 submission. For example, there are inconsistencies between the guidance for NARM tables and cost tables which have caused reconciliation issues for Ofgem and hindered analysis. (Specifically, the 132kV category in the NARM tables is to be used for all voltages less than or equal to 132kV, while in the cost tables it is to be used for 132kV assets only, except for reactors where there are no lower voltage categories.)
- The splitting of costs, e.g. between Direct and Indirect and Asset and non-Asset, has created further inconsistencies in use of companies’ data. For example, some schemes with a similar scope and gross cost appear to have materially different direct lead asset costs due to the allocation of costs across activities. Below is an example of 275kV in situ Transformer replacement. The stacked bars total to the average gross costs for NGET and a comparator company. While NGET has mapped the majority of civils costs to the Lead Asset (as per Ofgem’s requirements stated in the Glossary), it would appear that the other company has mapped everything that is not the direct transformer cost elsewhere. The consequence is that Ofgem’s benchmarking spreadsheet compares the blue portion across companies and concludes that NGET are materially more expensive than the other company for asset costs, with an associated disallowance. However, Ofgem is not comparing like with like, and therefore this assessment is incorrect. The disaggregated approach is also fundamentally flawed as consumers are exposed to the total cost, which is much more consistent (as you would expect for a comparable activity). Ofgem has observed that our allocation of costs to Civils is much lower than others across our T2 plan, but have not suggested how it is possible to address this and also remain consistent with its own Glossary.



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Step 2 – Ofgem creates benchmark unit costs which are distorted by inconsistent data specification and a failure to control for outliers

- The standard deviations for the benchmark unit costs that Ofgem have judged appropriate to use are mostly in excess of 50% of the weighted mean, even where there is a reasonable sample size. Some are in excess of 100%, i.e. negative unit costs are possible. This is clear evidence that the input data is not robust.
- Ofgem’s benchmarking spreadsheets include the functionality to remove outliers and create “cleansed” weighted means. There is no evidence that Ofgem have used this function in setting DD allowances for NGET in spite of information provided through Supplemental Questions that explains why specific units are atypical. For example, we have a single 66/22kV transformer replacement in our plan which has been inappropriately bundled with other companies’ standard 132kV transformers. This is shown in the chart below, our unusual replacement is highlighted in blue and should be treated as an outlier, as it is clearly different to the rest of the dataset.



- It is apparent from the sector unit cost analysis that there are multiple clusters of unit costs reflecting differences in the types of interventions, for example:
 - The mixing of NLR and LR data means that the sector mean will include in situ asset replacement, new build at existing substations and new build at new substations. This contributes to the high standard deviations observed and means that a more sophisticated cost assessment is required.
 - Ofgem’s revised BPDT, Glossary and RIGs specify the grouping of asset data based on primary voltage. This means that significant cost drivers such as power rating are overlooked. For example, NGET has a significant proportion of 400/275kV 1100MVA interbus transformers as well as 400/132kV 240MVA Grid Supply Point Transformers – both of which are classified by Ofgem as the same group. However, the former are physically larger than the latter and fundamentally cost more to purchase – this important difference is overlooked by Ofgem’s assessment. This evidence was submitted as part of our response to Supplemental Questions in May 2020, but Ofgem did not make adjustments when setting allowances.
- By selecting the lowest of historical and forecast unit costs, the methodology is ignoring the fact that there might be changes in the cost drivers between price control periods, such as increasing legislative requirements, that lead to justified increases in forecast costs relative to historical costs.

Step 3 – Ofgem’s application of its project cost assessment contains errors, rewards the least efficient firms and leads to allowances that no real-world network could hope to match

- Ofgem’s approach of setting allowed unit costs at the lower of the benchmark unit cost and the submitted unit cost means that each company’s mean allowed unit cost will be lower than the average of the benchmark unit costs. It also means that even a company whose average unit cost is lower than the average of the benchmark unit costs will have their submission reduced, if they have any spread in costs around the mean. Overall, this approach is asymmetric and does not recognise that there is a natural spread of costs that exists in any portfolio of work. Ofgem’s approach perversely rewards companies whose costs are consistently higher than the sector mean, as they would receive the benchmark unit costs across the board.
- There are formula errors in the PAM which we are highlighting to Ofgem as we discover them.
- There are some categories where the process is not sophisticated enough to set allowances correctly, e.g. Protection & Control. We submitted 62 schemes to reflect different asset and intervention types but these are merged together onto one row of Ofgem’s spreadsheets, resulting in the mixing of a wide range of interventions (from a single fault recorder replacement up to a whole substation control system replacement) with unit costs that vary by a factor of nearly 300. We have provided Ofgem with the information they need to carry out an appropriate cost assessment outside the PAM in this case.

Conclusion

Ofgem’s capex assessment resulted in a disallowance of £417m (11% of the load-related plan and 19% of the non-load related plan). Our view is that these disallowances are the result of errors, methodology weaknesses and inconsistencies in Ofgem’s analysis, rather than any genuine difference in efficiency.

Further detail can be found in our response to ETQ9, NGETQ11 and NGETQ12 respectively. Due to the commercially-confidential nature of NGET’s capex unit costs, we are also submitting a confidential appendix to Ofgem that steps through and quantifies the issues found in more detail.

Remedies for Network Capex Cost Assessment

To target the cost efficiency assessment for Final Determination to reveal genuine inefficiencies the following remedies are necessary:

1. **NLR.** We have agreed the necessary data required to enable Ofgem to use its PAM for the assessment of NLR costs. For NLR costs that cannot be included in the PAM, we expect Ofgem to correct for the various issues we have identified (as explained in the detailed responses to questions) in its bespoke approaches.
2. **LR.** Ofgem should amend its approach to:
 - a. Recognise and correct for the fact that, due to differences in cost allocations, Ofgem has not compared like-with-like.
 - b. Correct for the significant variation in some unit costs caused by outliers and the bundling of different types of interventions.
 - c. Reflect on how Ofgem adjusts scheme costs down to reflect their benchmark unit costs given that their current methodology over-shoots and systematically results in company mean unit costs that are lower than their benchmark.
 - d. Correct for all the detailed errors and inconsistencies that we have highlighted here and in the detailed responses to questions.

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3. Due to the number of issues identified with Ofgem’s current approach, we require Ofgem to provide us an updated view of its revised approach and cost modelling outputs for us to review before Final Determination. We expect this update to correct for the many errors we have identified and to apply the PAM to NLR where practicable.

Efficiency of Indirect Costs

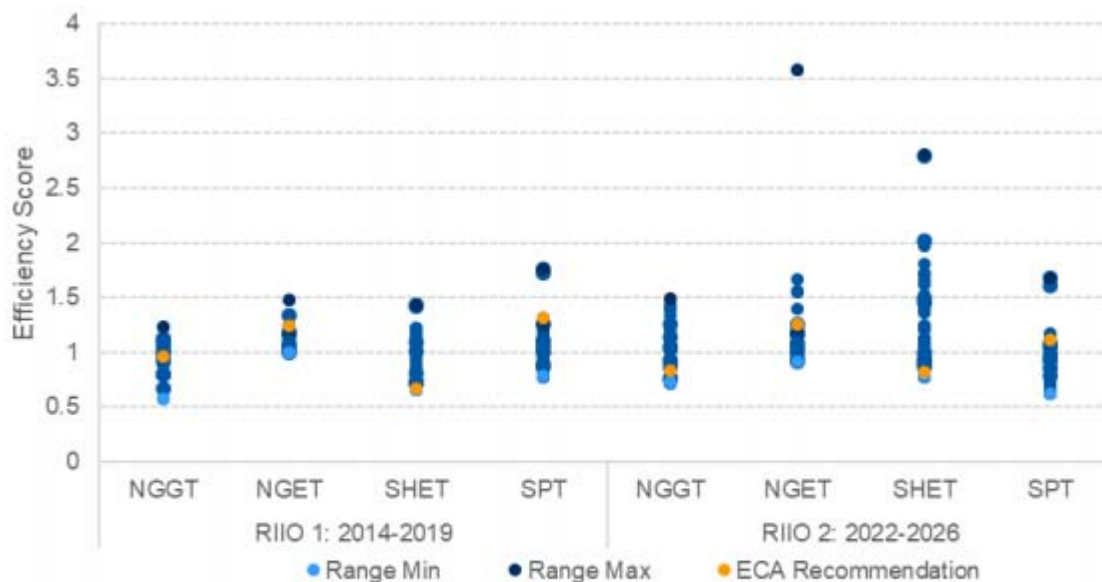
Ofgem’s decision to disallow £427m Closely Associated Indirects (CAI) costs and £20.2m Business Support Costs (BSC) is based solely on an unreliable regression approach. Retaining this decision at final determinations will place an additional £50m efficiency challenge on CAI costs that were already 17% lower on average than in RIIO-1 as a result of implementing an efficiency programme. The resulting allowances for what amounts to 46% of our operational and capitalised labour costs would require a sharp reduction in engineering roles that have historically been in high demand and short supply, threatening our future workforce resilience. Whilst regression models can be useful within a broader toolkit of approaches to help Ofgem form a view of expected future costs (for example as in RIIO-T1 for business support cost benchmarking), inherent limitations in the approach as it applies to indirect Transmission costs make it a fundamentally unsafe basis on which to set allowances. This is acknowledged over six separate times by Ofgem’s own consultants in their report, but seemingly ignored by Ofgem. The main concerns we have with this approach are as follows:

- Allowances have been set based on observations from only six years of RIIO-1 costs for the four Transmission networks, resulting in a wide dispersion of apparent efficiency gaps because there is not sufficient data to reliably estimate efficient costs.
- The regression approach incorrectly assumes comparability between the three Electricity networks and Gas network companies despite being widely different in scale and, for Gas, nature and in so doing leads Ofgem to disallow efficient forecast costs.;
- Ofgem’s preferred models fail important statistical tests and so are subject to error and bias in their estimation of true efficient costs, leading to disallowances that are too high.;
- The coefficients used by Ofgem to set allowances are highly sensitive to modelling decisions around the treatment of scale and selection of cost drivers making it impossible to conclude where the true efficient view of costs lies, for example by selecting alternative modelling approaches that still meet Ofgem’s model selection criteria the efficiency score for NGET CAI costs in RIIO-2 could fall anywhere between 0.91 to 3.58.
- Ofgem has used the results from these models directly to set allowances and has failed to consider evidence we submitted to demonstrate the efficiency of our underlying costs. This is particular concerning in cases where we forecast increases in cost drivers, such as rising insurance premiums and the costs of carbon offsetting, despite Ofgem agreeing to the need for those higher levels of cost drivers elsewhere in their determinations such as the costs we need to take forward our Environmental Action Plan commitments.
- In adopting this approach for the first time to assess Transmission indirect costs Ofgem have gone against their stated intent to “adapt the RIIO-ET1 cost assessment process, as appropriate, rather than establish a new approach for RIIO-ET2”. Earlier engagement on indirect cost assessment methodology, for example as part of the RIIO-2 tools for cost assessment consultation in August 2019, would have helped Ofgem gather views from networks and other stakeholders and develop a more

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robust cost assessment methodology than the one they have relied on in their draft determinations.

Efficiency scores for CAI across a range of models that meet Ofgem’s model selection criteria



Source: NERA analysis. Note: We illustrate the efficiency score for NGGT implied by ECA’s modelled and prior to Ofgem’s adjustment.

Notwithstanding these fundamental issues, our submitted CAI & BSC costs fall within the range of efficient costs predicted by Ofgem’s preferred models, and so should not be rejected as inefficient.

Remedies for Indirect Cost Assessment

In making their final determination Ofgem should heed the advice of their consultants to recognise the limitations of econometric modelling as it relates to the Transmission sector.

1. Rather than relying solely on this approach to set allowances Ofgem should consider evidence submitted by networks for the efficiency of their proposed expenditure in RIIO-2.
2. For our net CAI and BSC costs this would mean assessing our proposed costs against historic performance and external benchmarking evidence and the justification we have provided for the limited upward cost pressures we foresee in RIIO-T2.
3. For indirect capitalised costs this would mean assessing as part of capex unit costs, as we set out in our response to ETQ9. On the basis of such a review we would expect Ofgem to allow our submitted costs in full.

3. Ex-post re-opening and clawback of settled T1 allowances where no mechanism or vires exists, undermining the ‘stable and predictable’ RIIO regulatory regime

What Ofgem has Proposed

In the NGET Annex, firstly in a footnote, Ofgem has announced a new proposal to reduce the ET1 allowance for non-load related expenditure (NLRE) by undertaking “a £556m clawback of unspent non-load allowances for T1/T2 crossover work”.¹

Ofgem’s exceptionally brief and unevidenced explanation for this significant and unexpected proposed reduction in NGET’s NLRE allowances for the RIIO-ET2 period is that:²

- As part of RIIO-ET1 baseline allowance, there is a provision of £1069m to fund NLRE work that needed to start in RIIO-ET1 and would be completed in RIIO-ET2;
- Ofgem has now divided this amount into two parts – the first part (up to and including 31 March 2021) will be funded in RIIO-ET1 “*subject to true-up*”, and the second part (from 1 April 2021 to 31 March 2026) will be part of the total RIIO-ET2 baseline allowance for NLRE; and
- Ofgem believes that, given the amount funded in RIIO-ET1 “is already certain”, it is entitled to carry out a “*true-up*” and reflect that in the setting of RIIO-ET2.

Why we are concerned

Ofgem is mistaken in its assumption that it is entitled to ‘clawback’ any of the RIIO-ET1 NLRE baseline allowance. NGET’s position is that there is no valid basis for this proposed NLRE clawback, either in the existing electricity transmission licence, RIIO-ET1 Final Proposals, or any subsequent regulatory determination or guidance. Ofgem does not explain or evidence where in the RIIO-ET1 arrangements this “true-up” mechanism was put in place, or even envisaged.

In fact, Ofgem’s proposal is contrary to the stated position in RIIO-ET1 documentation regarding the treatment of licensee under or overspend of allowances. The RIIO-ET1 framework makes it clear that the NLRE baseline allowance was committed and subject to RIIO incentives, and was not to be subject to any uncertainty or other adjustment mechanism. The RIIO-ET1 documents make clear that Ofgem considered while setting the allowance in RIIO-ET1 whether it was appropriate to adopt an uncertainty mechanism, but rejected this on the basis that NGET was best placed to manage the risk. The NLRE baseline allowance was also subject to the relevant sharing factor, which operates so as to ensure that consumers benefit through the sharing of any outperformance achieved. It is not now open to Ofgem to revisit this decision to subject the allowance to a true-up mechanism at the outset of RIIO-ET2.

Ofgem’s proposal is also contrary to the principles of the RIIO model and its framework of incentives and outputs. The implications of Ofgem’s proposal have not been fully considered, but NGET’s initial view is that the proposal risks significantly undermining the incentive effects of the RIIO framework and drives the wrong incentives for network companies.

¹ Ofgem, Draft Determination, NGET Annex, footnote 38 on page 39 linked to Table 14: Proposed NGET allowance for RIIO-2 period

² Ofgem, Draft Determination, NGET Annex, paragraphs 3.65 and 3.66.

The manner in which the proposed ex-post adjustment has been introduced (without any consultation, engagement with the licensee or supporting evidence and rationale) is clearly contrary to best regulatory practice and undermines certainty and transparency. Such action diminishes investor confidence, which will ultimately increase long-term costs for consumers.

Given the material and unanticipated impact of the proposal, NGET requests that this proposed clawback is removed prior to Final Determination. As set out above, there is no basis for Ofgem to bring forward the proposal.

Our evidencing of these points is set out below:

The NLRE ET1 baseline allowance is only subject to a true up in limited circumstances, which do not apply here

The Draft Determination does not set out the regulatory basis on which Ofgem considers that an ET1-clawback applies to the RIIO-ET2 baseline allowance. That said, the RIIO-ET1 Final Proposals do allow for costs to be excluded from the RIIO-T2 allowance in two limited circumstances:³

- (a) First, if a TO fails to satisfy the network output measures (**NOMs**), then “[a]voided costs associated with under delivery are excluded from the RIIO-T2 allowance”.
- (b) Second, if the TO under-delivers against the NOMs and it fails to justify the under-delivery as being in the best interest of consumers, then any benefit of the financing cost of the delayed investment could be clawed back.

NGET’s regulatory reporting into Ofgem each year has confirmed that the NOMs risk targets are being met at a portfolio level and this has been further confirmed in RRP20. Delivery of the required NOMs output has been achieved and therefore this mechanism will not adjust allowances.

Outside of these two limited circumstances, the RIIO-ET1 baseline allowance can only be retrospectively adjusted where exceptional or defined circumstances apply. The following extracts of the RIIO-ET1 Handbook make clear that *ex post* adjustments to revenue would be limited to all but the most exceptional circumstances:⁴

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

[...]

*For the upfront efficiency incentives to work as intended, **we need to make a firm commitment that the incentive rate set at the price control review will be honoured.***

³ Ofgem, RIIO-T1: Final Proposals for NGET and NGG: Outputs, incentives and innovation Supporting Document, 17 December 2012, paragraphs 2.23 to 2.24 and Table 2.1. Available at:

https://www.ofgem.gov.uk/sites/default/files/docs/2012/12/2_riiot1_fp_outputsincentives_dec12.pdf

⁴ Ofgem, RIIO-T1: Handbook for implementing the RIIO model, Chapter 10 – efficiency incentives, References 10.3, 10.18 and 10.19

We recognise that this will require a commitment not to make discretionary adjustments to the revenues that companies are allowed to collect, based on comparisons between what a company actually spent and the expenditure forecast at the price control review. We will provide this commitment save in the exceptional circumstances outlined in paragraphs 10.21 to 10.25.⁵

Provided that a company delivered the outputs agreed at the price control review, it will enjoy the benefit of any under-spend relative to the expenditure assumed in the price control, in line with the specified incentive rate. We will not make discretionary adjustments to ‘claw back’ differences between the base revenue allowances set at the price control review and what a company actually spent. Indeed, we will not undertake any detailed assessment of the expenditure level as long as outputs were being delivered.

Neither the limited exceptions above, nor any of the “exceptional circumstances” envisaged in the RIIO-ET1 documentation, apply in the present case.

In the absence of these conditions being met, there is no mechanism for Ofgem in the RIIO-ET1 arrangements or in NGET’s transmission licence to “clawback” the RIIO-ET1 NLRE allowances in RIIO-ET2. Ofgem is therefore mistaken in its assumption that the allowances can be subject to a “clawback” or any other form of true-up mechanism.

The NLRE baseline allowance was committed.⁶ This covered all works required in the RIIO-T1 period related to NLRE, including where these works were completed in later price controls. This was not subject to any uncertainty or other adjustment mechanism (despite an initial proposal from NGET to this effect), other than that specified in SLC 2M relating to over- or under- delivery as highlighted above, for the reasons set out in RIIO-ET1 Initial Proposals:⁷

*Due to the uncertainty associated with the forecast of asset degradation and unexpected type faults, the asset renewal volumes forecast by NGET may vary over the RIIO-T1 period. NGET’s forecast on risk is P50 based and we consider that the risk of uncertain renewal volumes is symmetric. **As an asset owner, NGET is best placed to manage this risk.** Therefore we do not propose any uncertainty mechanism to address the risk associated with uncertain asset renewal volumes.*

In its business plan, NGET set out an uncertainty mechanism to fund earlier asset replacement in the event that load-related expenditure projects were delayed during RIIO-T1.

*We do not consider this uncertainty mechanism to be necessary. Whilst we accept that there may be a rationale to advance replacement work, NGET has not justified the need for an uncertainty mechanism. We consider that our proposed total funding package and incentives will allow NGET to do this without the need for an additional uncertainty mechanism. Furthermore, **any expenditure above baselines will be subject to the totex efficiency***

⁵ Paragraphs 10.21 to 10.25 address the circumstances in which Ofgem would make adjustments to override the sharing of actual expenditure through the efficiency incentive rate. Ofgem states that a reasonably high hurdle will be required for such an adjustment to be made – Ofgem would “need to show that expenditure decisions taken by the company were unreasonable at the time they were made, in light of the information available at that time. We will not use this option to penalise companies that took reasonable decisions to anticipate future customer needs or to experiment with new delivery approaches, even if these turned out to be unsuccessful with the benefit of hindsight”. Clearly, this threshold is not met in the present circumstances.

⁶ Ofgem, RIIO-T1: Final Proposals, Cost assessment and uncertainty, paragraph 5.5.

⁷ Ofgem, RIIO-T1 NGET Initial Proposals, Cost Assessment and Uncertainty, paragraphs 5.25 to 5.27.

incentive, meaning that the cost effects of moving this expenditure forward will be shared with customers.

This extract sets out Ofgem’s clear finding that no uncertainty mechanism or other adjustment mechanism was required in respect of this allowance. This funding was therefore fixed with NGET managing the risk of over or underspend.

It is therefore unacceptable for Ofgem to apply this significant and unexpected ex-post reduction in NGET’s NLRE allowance – defeating NGET’s expectations of the NLRE RIIO-ET1 allowance as settled and committed – in the absence of any valid regulatory basis for doing so.

Ofgem’s decision to apply a clawback of the ET1 NLRE baseline allowance is contrary to RIIO principles and undermines incentives

Ofgem’s NLRE clawback proposals are also inconsistent with the principles of RIIO-1 and its framework of incentives and outputs.

The above extracts from RIIO-ET1 documentation confirm that there will be no discretionary adjustments to ‘clawback’ differences between base revenue allowances set at the price control review and what a company actually spent. This principle applies to the entirety of the NLRE allowance that was committed in RIIO-ET1, regardless of whether certain NLRE works have since been pushed into RIIO-ET2. As evidenced by the above quotation from Initial Proposals, Ofgem was explicit that, as an asset owner, NGET was best placed to bear the risks of changing delivery timescales (which Ofgem judged to be symmetrical).

Notwithstanding that there is no regulatory basis on which Ofgem can implement the clawback, the implications of Ofgem’s proposal have not been fully considered. For instance, if NGET advanced projects from RIIO-ET2 delivery into RIIO-ET1 then Ofgem’s approach would not provide any funding for that project, with the additional expenditure adding to the ‘clawback’ amount. There are further other perverse incentives this creates. Ofgem’s approach suggests that the TOs’ delivery plan should be static, with TOs only doing what was forecast when the allowance was set, with the potential that optimisation leads to allowances being reduced and the licensee being penalised for doing the right thing in the best interests of end consumers. Had Ofgem suggested this at the time of setting RIIO-T1 allowances and mechanisms then this consequence would have been debated. As explained above, the potential for a true-up was not discussed, consulted upon, or even alluded to prior to the Draft Determination for RIIO2.

Given that this adjustment was not envisaged in RIIO-ET1 Final Proposals, indeed, an uncertainty mechanism was explicitly rejected, and the risk placed on NGET, NGET can only interpret Ofgem’s position as an intention to reopen the RIIO-ET1 price control. This clearly has significant ramifications in terms of undermining the RIIO principles and removing incentives to innovate, introducing significant regulatory uncertainty, and ultimately leading to poorer outcomes for end consumers.

Ofgem has not justified its proposed application of a clawback of ET1 NLRE baseline allowance

NGET first became aware of Ofgem’s erroneous proposal to clawback £556m from the ET1 NRLE allowance upon reading a single brief footnote.

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In the two brief paragraphs which later follow,⁸ there is no explanation given as to the basis upon which Ofgem justifies imposing the clawback. Indeed, as explained above there is no regulatory mechanism that permits Ofgem’s proposed clawback of the RIIO-ET1 NLRE allowance, whether this is presented as a ET1 clawback or a ET2 true up.

In addition, it is not clear, based on the information published in Draft Determination, that there has been a consistent approach across all network companies. It appears that NGET is the only transmission licensee that is to be subject to the proposed ex-post clawback. NGET requests that Ofgem explain this approach.

It is clearly inappropriate and contrary to best regulatory practice for Ofgem to fail to explain the basis for imposing what amounts to a material financial penalty on NGET.

Ofgem has also not fully explained in the Draft Determinations how it has determined the amount of the proposed clawback. Following a discussion post-publication of the Draft Determination, Ofgem has supplied a spreadsheet setting out its calculations. Notwithstanding our firm position that it is not appropriate for Ofgem to ‘clawback’ any amount from NGET’s ET1 NLRE allowance, NGET has reason to believe why the figure cited by Ofgem would be materially lower than Ofgem suggests as a result of a number of errors and incorrect assumptions that have been identified.

Remedy

NGET is committed to work with Ofgem to clear up this misunderstanding by securing the removal of any reference to a ‘clawback’ in the Final Determination and preserving the integrity of the RIIO framework.

⁸ Ofgem, Draft Determination, NGET Annex, paragraphs 3.65 and 3.66 on page 63.

4. Punitive and disproportionate penalties resulting from a flawed business plan incentive regime that has been erroneously and inconsistently applied

Ofgem's proposed capped penalty of £66.6m and disallowance of rewards under Stage 2 of the BPI is wholly disproportionate. This penalty is the largest Ofgem has applied to any energy company since Ofgem's records started in 2010; many of those penalties relate to instances of serious service failure, rather than business plan submissions. This penalty is completely out of line with previous penalties regulators have applied to business plan submissions and with the tone of Ofgem's methodology, business plan guidance and impact assessments.

Ofgem should change its assessment of NGET's business plan as we describe in the remedy section below because:

- There were flaws in the development of the BPI;
- The design of the BPI is flawed; and
- The application of the BPI to NGET is flawed.

Flaws in the development of the BPI

There were fundamental flaws in the development of the BPI. Ofgem changed the BPI profoundly in its sector-specific methodology decision (SSMD) that it published on 24 May 2019 and Ofgem did not consult on its new approach.

The BPI is supposed to incentivise network companies to produce ambitious plans, but Ofgem only published its new BPI less than five weeks before companies had to submit full draft business plans on 1 July 2019. Indeed, at an Ofgem working group on the BPI on 19 June 2019, Ofgem said it had "not yet determined the methodology" for stage 2 of the BPI.

In its BPI, Ofgem took no account of the primary concern we raised in our March 2019 response to the sector-specific methodology consultation (SSMC). We asked that the BPI take account of what is proportionate for a company with thousands of assets and projects compared with companies with much smaller portfolios, but Ofgem's BPI has not done this.

We asked in our March 2019 response to the SSMC for Ofgem to set out the assessment criteria for the BPI with sufficient time for companies to address them in their business plans. However, Ofgem published its business plan guidance (BPG) five times on 28 September 2018, 21 December 2018, 3 June 2019, 9 September 2019 and 31 October 2019 along with open letters on 29 July 2019 and 8 August 2019. These changed the business plan requirements close to the submission dates of 1 July 2019, 1 October 2019 and 9 December 2019. A similarly inadequate process took place in respect of the Business Plan Data Templates. Nevertheless, we complied with Ofgem's BPG as it applied at the time of our draft and final business plan submissions.

Having not just one, but two, draft business plan submissions provided Ofgem with plenty of opportunity to provide feedback if it had concerns with our business plan. In addition, we had frequent engagements with Ofgem in the process leading up to submitting our final business plan. At no point

did Ofgem suggest that the information provided in NGET's draft plan fell seriously short of the quality and completeness standards that the regulator had set.

The design of the BPI is flawed

The design of the BPI fails to achieve Ofgem's main aims for it. Ofgem wants the BPI to:

- Encourage high-quality, ambitious and innovative business plans. The BPI has the opposite effect because it strongly discourages network companies from proposing ambitious or innovative approaches that are new and untested but that could lower costs and improve service quality in future. Under the BPI ambitious or innovative approaches face a much higher risk of a 10% penalty under Stage 3 of the BPI because Ofgem is more likely to classify them as low-confidence costs, remove them from the baseline and apply a 10% penalty. Further, the large penalties under the BPI undermine the confidence of companies and investors in the stability and predictability of the regulatory regime and encourage companies to focus on low-risk, non-ambitious schemes to avoid further unexpected penalties.
- Simplify the process of assessing business plans. The BPI has made the business plan process more onerous on companies by introducing an untested and theoretically unsound mechanism. NGET was required to submit a very large quantity of information in its business plan and accompanying BPDTs, which it added to with large amount of information in response to Supplementary Questions (SQs). Despite this, Ofgem's DD cites as the basis for failing NGET under Stage 1 of the BPI numerous categories of information which were not directly requested in the BPG or BPDTs.

Further evidence that the design of the BPI is flawed is that Ofgem's own impact assessment provides no evidence of the benefits of the BPI.

In addition to failing to meet these objectives, there are further flaws with its design. The design of the BPI is flawed because it is heavily skewed towards penalties for transmission companies. Ofgem's proposed application of the BPI has resulted in net penalties for all four transmission companies of £140.2m (after application of the caps), compared with a net reward of £0.4m proposed for the four gas distribution companies. The way in which Ofgem has designed the BPI is favourable to the gas distribution sector, and unfairly penalises transmission companies due to features of the sector which are intrinsic and beyond their control. Transmission companies have larger, less frequent, less standardised, less repeatable projects and are in a sector where there is more change happening because of the large increase in renewable generation. There will inevitably be less certainty over cost, but this provides no valid motivation in and of itself to award large penalties. In taking this approach, Ofgem has not taken appropriate account of sector-specific differences. Ofgem acknowledges its design flaws in its SSMD where it says that the historical cost evidence transmission companies can provide, when a sector is changing, might not be a good predictor of future costs. Ofgem's BPI should have recognised the difference in evidence that transmission companies can provide before applying large BPI penalties to all four transmission companies.

Ofgem's BPI prioritises one method of establishing cost efficiency, econometric industry benchmarking, over other methods. Ofgem only uses econometric analysis for a small subset of transmission companies' costs because of the sectors' features mentioned above. However, econometric analysis for the gas distribution companies relies on only four companies, which will result in low-quality models with weak statistical properties. It is not clear why Ofgem considers this evidence to be better than that provided by the transmission companies.

The design of the BPI is also flawed because of the wide discretion Ofgem has given itself in its guidance around assessing compliance with the guidance, for example, around what constitutes a complete and satisfactory quality plan.

The application of the BPI to NGET is flawed

The Competition Appeal Tribunal has clearly established that penalties of the magnitude that Ofgem is proposing to apply to NGET are “serious” and that “strong and convincing evidence will be required” to justify them. Ofgem’s summary in its DD of the alleged deficiencies in NGET’s business plan fall far short of this standard.

At Stage 1 (Minimum Requirements), Ofgem has wrongly applied the framework it set out in the BPG and SSMD to our business plan to provisionally conclude – incorrectly – that our business plan materially failed to meet the Minimum Requirements, and that this warranted failure against BPI Stage 1, leading Ofgem to propose a penalty of £16.7m. Ofgem has wrongly applied its framework at Stage 1 as follows:

- Ofgem wrongly concluded that our business plan materially failed to meet the Minimum Requirements. In many places, Ofgem’s reasoning was based on a failure to provide specific types of evidence that are not mentioned in the BPG, and which Ofgem had not specified were required elsewhere.
- Where a specific type of evidence was required under the BPG, Ofgem either misapplied its framework by imposing a higher standard than that specified as a Minimum Requirement in the BPG or failed to properly take into account the evidence that we submitted with our business plan.
- Ofgem did not take any account of the views of our Independent User Group in assessing whether the Minimum Requirements for Stage 1 have been met, despite this being required under the BPG.
- Even if Ofgem’s view was correct that our business plan did not meet certain Minimum Requirements, Ofgem should have concluded that this was not sufficiently material to warrant failure at Stage 1, and the imposition of a penalty.

At stage 2 (consumer value proposition), Ofgem accepted only one of NGET’s nine CVP proposals (“Caring for the natural environment”) and moreover concluded that NGET was not eligible for a reward for this CVP proposal due to Ofgem’s Stage 1 decision. Ofgem’s DD only proposed to accept three CVPs across all network companies, with an up-front value of £3.2m, out of the 117 CVPs network companies submitted. This shows a serious failure on the part of Ofgem to effectively communicate its expectations to network companies. Ofgem has dismissed CVPs such as “Supporting local urban communities” that Ofgem’s RIIO-2 challenge group said stood out as offering additional benefit and appearing to have the support of stakeholders. Ofgem also rejected “SO:TO optimisation”, which has the potential to deliver huge whole-system cost savings for consumers.

At Stage 3 (lower-confidence costs), Ofgem provisionally determined that we should be subject to a penalty of £179.6m, representing 10% of the value of the costs which Ofgem judged to be lower-confidence and which it concluded were poorly justified. We set out in our response to questions NGETQ11 to NGETQ16 why Ofgem should not have provisionally disallowed our cost proposals in the

DD. The DD documents contain limited details on Ofgem’s reasoning for reaching this provisional conclusion, which makes it difficult for us to provide a comprehensive response. However, Ofgem’s main overarching criticism in the DD relates to our Engineering Justification Papers, which Ofgem criticised for being “generally grouped by asset type (lead and non-lead), rather than project or site specific”. We were deeply surprised that Ofgem should make this observation in the DD because during the business plan development process Ofgem expressly confirmed that a portfolio-based approach would be acceptable. A ‘portfolio’ approach enables Ofgem to assess a large volume of assets at once, similar to the way that econometric analysis allows Ofgem to assess a large volume of assets in aggregate rather than individually.

Ofgem’s approach appears to have been to apply a 10% penalty under Stage 3 of the BPI to all disallowed “lower-confidence” costs, without clearly carrying out a separate assessment of whether those costs were “poorly justified” or instead disallowed for other reasons. Ofgem has not provided us with its justification for the £179.6m Stage 3 penalty beyond a spreadsheet showing it has applied a 10% penalty to all disallowed “lower-confidence” costs and some very limited further information in an email on 21 August 2020. Ofgem has provided us with no line-by-line assessment of each of the costs it has applied the 10% penalty and its reasons for doing so. While this limits our ability to respond effectively to the DD consultation, we have set out in our response to Core question 35 our interpretation of the reasons which Ofgem might assert for applying a Stage 3 penalty, together with our response. In each case, we explain why no Stage 3 penalty should be applied to these cost categories.

Stage 4 of the BPI (high-confidence costs), appears to have been an empty process designed to give the BPI the appearance of balance, by giving the BPI two reward stages to balance the two penalty stages. Ofgem applied no rewards to any of the eight network companies under stage 4. Network companies had raised with Ofgem that there were no real rewards available under stage 4 of the BPI at the Ofgem BPI workshop on 19 June 2019.

Remedy

We propose the following remedy from Ofgem for its final determination. To correct the flaws in the BPI described above, Ofgem’s Final Determination (FD) should:

- Stage 1: Revise Ofgem’s assessment for NGET from “fail” to “pass”, to reflect the fact that NGET’s business plan complied in all material respects with the Minimum Requirements under the BPG and remove in full the penalty of £16.7m;
- Stage 2: Apply the appropriate reward to NGET for the CVPs that NGET included in its business plan and which were supported by sound evidence of additional customer value;
- Stage 3: Remove in full the penalty of £179.6m for NGET which Ofgem imposed based on its erroneous view that certain of NGET’s cost claims were poorly justified; and
- Stage 4: Apply a meaningful reward to those areas of NGET’s costs that helped Ofgem with its cost assessment process.

5. Uncertainty Mechanism (UM) cost allowances set by a flawed methodology that systematically underfunds customer driven works creating perverse incentives to delay green energy connections

What Ofgem has proposed

Ofgem propose to combine the volume driver UMs for generation and demand connections into a single mechanism that applies only to projects with delivery in T2. This mechanism uses the following UCAs: £8/kW (kVA) for substation work, £1.74m/km for overhead lines and £5m/km for cables.

Ofgem also proposed to exclude from this mechanism outlier projects whose costs are *more than twice* the funding provided by the UCA, and are between £25m and £100m. These projects will be assessed through Ofgem's proposed MSIP re-opener.

Why we are concerned

Ofgem's proposed UM for generation and demand connections systematically underfunds connection projects and creates a funding gap where some projects would not be funded at all:

- The proposed Unit Cost Allowance (UCA) has been set far too low because the design of the mechanism and underlying analysis fails to recognise the fundamental differences and costs between demand and generation connection projects and hence fundamental differences in costs to deliver. The mechanism is based on vastly over-simplified cost drivers for different types of connections;
- There is no funding for new and less certain connections that do not deliver output in T2 – likely to be a sizeable proportion of our projects; and
- Using the MSIP re-opener to fund outlier projects creates a funding gap and creates perverse incentives.

The funding gaps that result will not allow us to deliver the type of connections that our customers require in T2 and beyond, and will create perverse incentives to delay green energy connections, jeopardising the delivery of Net Zero. We address these points in detail in our response to ETQ13A and B.

The proposed mechanism will severely underfund each project

By way of example, in T1 Ofgem set the UCA funding for generation connections at £35/kW resulting in a £250m aggregate underfunding across the portfolio of projects. Nevertheless, on a like for like basis for T2 Ofgem proposes to fund generation connections at £9/kW, a 63% reduction compared with our proposal of up to £25/MW for T2. The situation is similar for demand projects, where the proposed UCA funds less than half of anticipated costs for almost all connection types. There is no reasonable basis for such a substantial gap between proposed allowance and prevailing evidence.

The design of the mechanism is not cost-reflective

Generation and demand connections have been combined into a single mechanism, despite being fundamentally different connection types with different cost drivers. For example, demand connections require allowances for a transformer (~£5m) whereas generation connections do not incur this cost because of the different ownership boundaries for these connection types, as defined

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in the CUSC. In seeking the simplicity of a single mechanism for both categories, the cost-reflectivity of the UCA has been reduced to the extent that it is unworkable. This is completely at odds with the strong focus on ensuring allowances reflect costs closely on a project by project basis in other areas of the DD. Moreover, the choice of key cost drivers of the UM is not transparent, and the decision to limit the granularity of the variable drivers to substation, overhead line and cable has been mainly driven by the desire for a single mechanism. We have seen no evidence that the lessons learned from the operation of the T1 mechanism have been considered in the DD proposal.

The methodology to determine the UCA is not robust

Ofgem used a regression analysis to estimate the UCA of its proposed mechanism. Ofgem's estimation sample includes only a subset of schemes in the baseline. As a result, the estimated UCAs are representative of only a small subset of the connection solutions we normally deliver. Moreover, the small sample size causes large uncertainty around the estimates. For example, Ofgem estimated that the cable UCA could be anywhere between £2.30/kW and £18/kW and we have received two revised estimates for the substation UCA since the DD, taking it from £8/kW up to £16.6/kW and back down to £10.6/kW.

Given these fundamental flaws, the resulting UCAs cannot be relied upon. The expected funding gaps we find per project are hardly surprising.

Ofgem appears to recognise these limitations. On page 78 of the NGET Annex, Ofgem stated that it has “*significant reservations*” around the UCA values for substation, overhead line, and cable and that “*these values will be subject to further review between now and the Final Determinations*”.

We agree with Ofgem that these values should be subject to further review ahead of the Final Determinations. Ofgem should include both baseline and uncertain schemes in its sample to ensure that the sample is sufficiently large and comprises of a mix of schemes that is representative of what our customers could need us to deliver. The methodology used to estimate the UCA should be robust and satisfy relevant statistical tests.

The overall effect of these choices is a large expected shortfall in funding

The choice of a single mechanism and limited granularity is at the expense of greater confidence cost-reflectivity and balance of risk. We have undertaken a Monte Carlo analysis to simulate the likely impact on funding of using Ofgem's proposed mechanism compared with the more granular mechanism in our business plan.

We found that Ofgem's mechanism will materially underfund generation and demand connection projects: by £127m and £48m on average, respectively. This contrasts with our more balanced mechanism, that in our simulation provides a small overfund to generation and demand connection projects: £1m and £3m on average, respectively. This analysis shows that our mechanism is much more cost-reflective than Ofgem's, and represents a most equitable balance of risk between NGET and consumers.

The coverage of the mechanism is incomplete and fails to provide appropriate incentives

The mechanism only applies to projects delivering an output in T2 and therefore leaves a considerable funding gap for any new, uncertain connections our customers may require in T2 that deliver in T3 (or beyond) until the potential for retrospective funding at T2 close-out. Our analysis shows that only between 10% and 38% of our baseline projects would have met these criteria during T1, depending

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on the detail of how it is implemented. Not only will this uncertainty over allowances cause delay by weakening our ability to act, but the lack of an ex-ante allowance will also destroy any incentive to seek efficiencies on a significant proportion of costs. This is not consistent with achieving net zero at lowest cost to consumers.

The proposed process for outlier projects will not provide adequate funding and creates perverse incentives

The proposed approach for the treatment of outliers, which are those projects whose costs are *more than twice* the funding provided by the UCA, and are between £25m and £100m, could result in material gaps in funding up to £50m per project (i.e. £100m x 50%) and introduces perverse incentives to increase the cost of projects just below the threshold to access a route to funding.

Remedies

We welcome that Ofgem note on p.78 of the NGET Annex that they have significant reservations around the UCA values. The remedies necessary to address the issues highlighted are:

- recognise the fundamental differences between generation and demand connections and revert to separate mechanisms, as in T1
- adopt a more granular, cost-reflective and robust approach to UCA calibration
- apply the UCA to projects delivering outputs beyond T2 (similar to the current arrangements) or provide another ex-ante route for funding non-baseline projects delivering beyond T2
- Define 'outlier projects' as having costs which are either more than 125%, or less than 75% of the UCA funding and remove the £25m threshold for these projects to be reviewed through MSIP – this should be a workable solution for reviewing outlier projects alongside a robust UCA design
- ensure that there are no systematic underfunding or funding gaps which create perverse incentives to delay green energy connections, jeopardising the delivery of Net Zero.

6. An Ex-post funding approach for additional network capacity that adds unnecessary risk and delay to the delivery of investments that are critical to delivering net zero

Ofgem has proposed a new mechanism for awarding pre-construction funding alongside a new mechanism to fund the construction of large transmission projects >£100m (LOTI), as a replacement for the existing Strategic Wider Works (SWW) mechanism. We address this in detail in our response to ETQ10, 11 and 12.

Alongside this, Ofgem also proposes alternative arrangements for smaller <£100m projects that provide additional network capacity. Having rejected NGET's proposal for funding via an automatic ex ante unit cost allowance mechanism, Ofgem instead proposes to provide ex-post funding through a combination of the Medium Size Investment Project (MSIP) re-opener and an ex-post true up at RIIO-2 close-out, at some point in T3. We address this in detail in our response to ETQ13A and NGETQ17.

None of these mechanisms as presently described are fit for purpose. They will lead to higher costs and delays. They will fail to support investment at least cost and risk delaying the delivery of Net Zero. Fortunately, they can be readily fixed, if Ofgem is willing to work constructively with us and other stakeholders over the weeks ahead.

We elaborate on our concerns with each of these two sets of funding mechanisms in turn.

Arrangements for Investment Projects >£100m

What Ofgem has Proposed

Ofgem has proposed to define **pre-construction** funding as follows, *“the funding required to develop a LOTI project to the point that consents are obtained”*. The following activities are explicitly deemed to form part of efficient expenditure required to the point consents are obtained:

- surveys, assessments and studies (not those associated with construction)
- project design
- engineering development
- stakeholder engagement and consultation, including legal costs
- wayleaves, including legal costs
- planning applications, including legal costs

Baseline allowances will be allocated to specific projects that the NOA process has indicated should proceed. Funding at the project level will not be substitutable/transferable between projects. Projects that have not been included in the baseline will not be provided with ex-ante funding for pre-construction activities, but will be funded through an ex-post cost assessment as part of RIIO-2 closeout.

For **construction** funding Ofgem's intention is to ensure that Ofgem is, *“able to effectively scrutinise LOTI investments on behalf of consumers while providing the TOs with a process which enables them to progress projects effectively.”*

The DD proposes to replicate much of the T1 Strategic Wider Works (SWW) policy intent and mechanics, but through a new mechanism that follows a more prescriptive three-step process, for projects that pass an initial eligibility assessment. The three step process is comprised of (i) initial needs case – before statutory consents (ii) final needs case – after consents are achieved and (iii)

project assessment – after tender costs are returned. The earliest and latest a decision on competition will be made is at stages (i) and (ii) respectively.

Why we are concerned

We are concerned that Ofgem’s proposals are unworkable and inefficient, and will lead to higher cost and delays. Specifically:

- **Unworkable exclusion of key pre-construction activities** - The list of activities that Ofgem proposes to allow during the pre-construction phase is incomplete. It excludes activities that are necessary to lower the cost of delivery, mitigate risks and delays down the line and support effective use of competitive models of delivery, such as securing land rights, and early market engagement.
- **Timing of Planning Consent Application and Final Needs Case Approval is not compatible** - The timing of Ofgem approving project solution at Final Needs case is incompatible with decisions required to secure consent under the Planning Act.
- **Unnecessary delay in securing pre-construction funding adds cost and risk** - The proposal to not provide ex-ante funding for new pre-construction activities (i.e. those required after the baseline has been set at a point in time) adds further cost and material regulatory risk to the development of large projects, and renders the costs unincorporated when easy and simple alternative approaches are available.
- **Unrealistically rigid and inflexible deadlines** - NGET recognises the importance of the timely delivery of large projects, but the rigid and inflexible deadlines that Ofgem proposes as part of its generic LOTI process are simply inconsistent with the bespoke and complex nature of such projects. More work is needed to create needed flexibility, and Ofgem must commit to play its part by committing to take more timely decisions.

Unworkable exclusion of key pre-construction activities

The explicit list of activities considered to be “*efficient expenditure required to the point that consents are obtained*” is incomplete. It excludes some activities that are efficient to commence prior to consents being achieved and are essential in ensuring projects are not delayed. It also excludes activity that would provide better and earlier information to the market in support of the potential delivery of large projects through competition. These activities include, but are not limited to:

- securing land rights – e.g. easements and options to purchase; often required for consents
- bundling of surveys – e.g. more intrusive ground investigation early in the project can often offers economies and early sight of conditions helps mitigate risk and allows for more robust tenders
- early market engagement to inform design and preparation of tender packs for main works contracts

We anticipate that the exclusions from the DD list of efficient pre-construction activities would introduce a delay of up to 12 months into projects as a result of delaying all procurement activities until after the Final Needs Case decision in the LOTI process. The direction in the Core Document (p.110) that, “*Companies must ensure that they do not carry out any development work on eligible UM projects that is detrimental to the application of late competition.*” is ambiguous and further exacerbates this issue.

Timing of Planning Consent Application and Final Needs Case Approval is not Compatible

In this more prescriptive approach to large projects Ofgem propose to withhold a formal decision on the need case of a project until after final statutory consents have been achieved; i.e. at the Final

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Needs Case stage. At this point in the project network companies will have had to commit to mitigation solutions to get consent (e.g. the use of underground cables instead of overhead lines). The Final Need Case and Project Assessment stages of the LOTI process should ensure that network companies are not negatively impacted by the additional costs that naturally arise through the consenting process. Currently we are exposed to 'double jeopardy' – risk a lowest cost solution that doesn't obtain planning consents (exposing consumers cost of delayed benefits), or proposing mitigations at additional cost to secure timely planning consent, and have Ofgem disagree and not fund them further down the line.

Unnecessary delay in securing pre-construction funding adds cost and risk

The proposal to only award pre-construction funding as late as the RIIO-2 close out stage will exacerbate the problems identified above. The Draft Determination proposes that companies should spend efficiently to progress pre-construction on projects as required and that this would be assessed through an ex post cost assessment as part of RIIO-2 close out. This will create a new and material regulatory risk that NGET will need to manage. The lack of certainty of funding this introduces during the price control will lead to delays in delivering projects as programmes are adjusted to mitigate this risk. Even absent this regulatory risk, the proposal to delay the granting of revenue to cover pre-construction costs until close out will substantially reduce cashflow and act as a further drag on our capacity to deliver.

Unrealistically rigid and inflexible deadlines

Ofgem's design of the generic LOTI process includes prescriptive timings at each stage, to be applied to all projects >£100m. NGET fully accepts and supports the strong focus on timely delivery. But the present proposals, with its rigid and prescriptive milestones, is not commensurate with the unique characteristics of the various project types that are expected to use the process in the T2 period. A more tailored approach is need.

We highlight four main areas where there is a risk project delay:

- Risk of a 0 – 6 months delay at the Eligibility to Apply (EtA) and Initial Needs Case (INC) stages due to the requirement to submit EtA no less than 6 months prior to INC and to submit INC no less than 12 months for statutory consultation.
- Delay of between 3 – 6 months whilst the Final Needs Case (FNC) assessment takes place, resulting in confirmation of need and the latest decision point on competition model.
- Delay of a further 3 – 6 months (dependent on the specific project) because procurement activities such as tender preparation and design cannot be paralleled with consenting activity as is often the case on an optimal programme
- Delay of a further 6 – 12 months between getting final price information through a tender and awarding a contract as Ofgem undertakes the Project Assessment (PA).

Remedies for Pre-construction funding and the LOTI process for projects >£100

Fortunately, all of these issues can be readily addressed over the coming weeks. Ofgem must take a more tailored and realistic approach to accommodate unique project characteristics, amend its definition of pre-construction costs to include all relevant costs or deal with this on a case-by-case basis at the EtA stage, move to a model of ex-ante funding. Specifically:

1. The list of efficient pre-construction activities should be expanded to include those listed above or addressed on a case-by-case basis at the EtA stage and Ofgem should commitment to deciding whether a project is contestable by the Initial Needs Case stage of LOTI at the latest.

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2. Ofgem should assess and accept the proposed project solution prior to the point of it being committed in a Planning Application. It can then perform its efficient cost assessment subsequently.
3. An agile approach to adjusting allowances for pre-construction, based on one of the options below (in order of preference):
 - Separate **£/km automatic unit cost allowances** for the pre-construction of onshore and offshore projects as proposed in our business plan would provide the agile approach to adjusting the funding required, baseline funding not used is automatically returned to consumers and have the added benefit of providing a strong incentive to minimise costs.
 - Use the **LOTI re-opener** process to assess and provide pre-construction allowances for the project in question where it is not included in the baseline (e.g. at the Eligibility and Initial Needs Case stages). Spend of up to 50% of total pre-construction by the Initial Needs Case decision is likely on a standard programme. An approach that provides 50% funding at Eligibility stage, and the remainder at Initial Needs Case stage could provide the necessary certainty to allow projects to progress.
 - As a fallback, the ability to **automatically substitute baseline allowances** between projects could go some way towards providing the flexibility to minimise delays when requirements inevitably change through the T2 period.
4. Ofgem relies heavily on re-openers in the T2 period and should challenge itself to undertake appropriate scrutiny in a timescale that is closer to the 12 to 18 months of a price control, rather than the up to 30+ months it is proposing.

Arrangements for Investment Projects <£100m

What Ofgem has proposed

Ofgem have rejected our automatic ex-ante unit cost allowance proposal and instead proposes that allowance adjustments for boundary capability projects are made at a single opportunity within the period through a one-off opportunity through its Medium Size Investment Project (MSIP) re-opener or, worse, no ex-ante funding at all during the period with a retrospective funding of outturn costs incurred via RIIO-2 close-out. MSIP for boundary capability has a minimum threshold of £25m and a single re-opener window in January 2024.

Why we are concerned

The ESO's NOA process will signal economic investment requirements **every year**. The option of a one-off funding window or no ex-ante within period funding at all is therefore unworkable as it is not agile enough to keep pace with changing customer requirements. This will lead to material detriments for consumers:

- As was the case with LOTI, uncertainty of funding will delay project progress, leading to increased ESO operating costs (i.e. constraint costs) which are ultimately borne by consumers and delays to customer connections and achieving net-zero;
- A re-opener is administratively cumbersome, the £25m threshold precludes funding for most new projects and a single window will increase the costs of delivery and create further delays compared with an ex-ante automatic mechanism; and

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- Proposing a true-up and ex-post adjustment of incentive outturn as proposed for any projects going through Medium Size Investment Project (MSIP) re-opener completely undermines the totex incentive to innovate and drive cost incremental cost efficiencies which would otherwise lead to lower costs for consumers
- Only providing funding for costs incurred after the end of the T2 period renders these costs are essentially cost pass through with no incentive to innovate and drive cost efficiencies which would otherwise lead to lower costs for consumers.

Remedies

These detriments will be incurred unnecessarily, as there is a more effective ex-ante funding alternative available. We welcome that Ofgem has acknowledged it is open to alternative arrangements in its consultation and we are working constructively with Ofgem on alternatives, providing new information where relevant to address concerns. The following remedies are necessary:

1. The best outcome for consumers is for Ofgem to adopt an ex-ante automatic 'UCA' based funding mechanism that is agile to provide ex-ante clarity of funding for changing network requirements and provides the right incentives to reduce costs but is robust against material windfall gains or losses. We are providing Ofgem with new information that underpins such a mechanism and we are very clear that an ex-ante funding approach, that maximises overall consumer benefits is achievable and necessary to strive for given the hundreds of millions of pounds per annum of benefits at risk.
2. Ofgem should drop any and all proposals for ex-post discretionary 'adjustment' of totex incentive outturns as it destroys the incentive properties altogether, leading to higher costs for consumers.
3. In the event that a re-opener mechanism is required, Ofgem should move to annual windows that align with NOA timescales and ensure there is no funding 'gap' created by arbitrary re-opener thresholds that do not reflect the consumer value that projects deliver, which are by definition multiples of project cost.

7. Inclusion of a Competition Proxy regime which creates unnecessary risk, uncertainty and lack of pace for net zero related investments but without any economic benefits

What is Ofgem Proposing

Ofgem is proposing to include its undeveloped Competition Proxy Model into the RIIO2 framework along with a process to determine whether the model should be applied to Large Offshore Transmission Investments which in the main are projects required for net zero.

Why we are concerned

CPM is not competition, it is an alternative price control mechanism. By Ofgem's own analysis CPM is not expected to deliver any net benefits compared with a RIIO based model, and so highly unlikely to be applied to any project during T2. There are material unresolved issues with the CPM. For example

- The asymmetric and opportunistic application of CPM would lead to financeability concerns for the portfolio RIIO arrangements.
- The benchmarking arrangements proposed for CPM fail to take account of how the apportionment of risk would change under a project financing model (the main benchmark), particularly in the construction phase (which does not apply to OFTOs).
- Along with this the material differences between onshore TOs and OFTOs have not been adequately adjusted for in the financing models.

As previously pointed out in the Hinkley Seabank consultations, there are a number of other detailed factors that show that the CPM financing model is not robust. Despite Ofgem overlooking these concerns and reaching a consequently optimistic view of CPM, the economics still fails to show a benefit that would support adoption.

Within the LOTI proposals, Ofgem has introduced specific stop /go gates to allow them to assess projects for suitability for CPM, as part of the assessment of needs case. We estimate that Ofgem's proposed process could introduce delays to projects in the order of 12-24m, resulting in significant unnecessary costs in delayed benefits to end consumers. We fully understand and appreciate the need to progress major capital project commitments with prudence. However, adding a delay to consider the application of a CPM model that is already known to be not fit for purpose in its current form, and has been demonstrated to not deliver a net benefit, is clearly not in end consumers interests.

Notwithstanding the above, should Ofgem retain the alternative CPM price control model in RIIO2 we are concerned about the mechanism and governance for applying a CPM solution to a licensee. Given the materiality of the projects involved, any application of a CPM price control to a project must be done through the statutory licence consultation and modification process which preserves the right of appeal. Only this will ensure the appropriate scrutiny over what is an alternative price control determination on highly material investments.

Remedies

1. Ofgem should not include CPM in the RIIO2 licence. Ofgem should focus on developing a robust CATO model, and exploring any similar alternatives to introduce genuine competition.
2. In the event Ofgem does implement CPM provisions into the RIIO2 licence, then the rights of appeal to the CMA for any CPM application must be preserved through the process of implementation.

8. Totex efficiency incentive strength which is too low for Transmission, set without transparency or justification for its derivation and is inconsistent with Ofgem's methodology decision in May 2019.

What Ofgem has proposed

Ofgem has proposed a Totex Incentive Mechanism (TIM) sharing factor for NGET of 39.2% compared to 47% in RIIO1. The two key inputs to Ofgem's calculation of the TIM sharing factor are the amount of high-confidence costs and the amount of lower-confidence costs in a network company's total baseline.

Why we are concerned

Ofgem did not take into account stakeholders' legitimate concerns in the design of the TIM sharing factor methodology in its RIIO2 Sector-Specific Methodology Decision (SSMD). This has led to TIM sharing factors for Transmission that are too low, reducing incentives to drive lowest cost outcomes for consumers. Ofgem's own impact assessment shows that the low sharing factors for transmission companies reduce benefits to consumers.

Additionally, Ofgem has provided no explanation of specifically why it has judged a large proportion of costs to be lower-confidence which has the effect of reducing the sharing factor. This makes it hard to properly respond to this aspect of the consultation. Notwithstanding this, we observe a number of flaws in both the methodology and how it has been applied.

- Ofgem's methodology results in an outcome which is systematically biased against transmission companies and, as a result, leads to them inevitably receiving lower sharing factors and therefore weaker efficiency incentives;
- Ofgem does not take account of costs that will be in uncertainty mechanisms, or have already been determined for the RIIO2 period, when its SSMD decision says it will; and
- Ofgem does not take account of additional tools it has added to the RIIO-2 framework to increase cost certainty for lower-confidence costs.
Ofgem's approach to the TIM does not achieve its objective of improving efficiency, reducing the potential benefits to consumers from the TIM.

We elaborate on each of these points in turn.

Ofgem's application of the TIM sharing factor has flaws:

Ofgem's application of the TIM sharing factor calculation produces a result which is systematically biased against transmission companies.

- The result of Ofgem's application of its TIM methodology is a set of sharing factors varying between 30.9% and 39.2% (average: 36.5%) for the four transmission companies and between 49.4% and 50% (average: 49.7%) for the four gas distribution companies.
- In setting sharing factors Ofgem places most weight on a subset of one of the four ways to prove costs are high confidence (in 11.37 of SSMD): econometric industry benchmark evidence. This method is not reliable transmission companies as there are an insufficient number of companies and because of their disparity in size and networks. Ofgem's emphasis on econometric benchmarking equating to high confidence costs therefore makes it materially harder for a transmission company to achieve high-confidence costs in Ofgem's method.

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- Moreover, it is not clear that econometric evidence for four gas distribution companies is more robust evidence compared to that submitted by the transmission companies given the poor statistical properties of a model relying on so few data points. Ofwat has commented on the weakness of its econometric models relying on ten sewerage companies in PR19, let alone four.

Ofgem does not take account of costs that will be in uncertainty mechanisms, or have already been determined for the RIIO2 period, despite the fact that its RIIO2 Methodology decision says it will.

Ofgem's approach of just looking at business plan baseline costs is too narrow. Ofgem is requiring companies to set low baselines with a large amount of RIIO-2 expenditure funded through uncertainty mechanisms (UMs).

Ofgem's approach does not therefore take account of costs that will be in uncertainty mechanisms, despite clearly signalling that it would. In its SSMD guidance Ofgem stated "*We consider that the following types of information may be relevant to Ofgem's consideration of whether certain costs should be classified as high-confidence baseline costs: [...] Costs where we are able to determine a unit cost allowance with a high degree of confidence and where an appropriate volume driver or other uncertainty mechanism will be implemented and applied to a volume drawn from a baseline scenario volume*" (11.37, main paragraph and fourth bullet point). Ofgem has included no such costs in its calculation of the TIM sharing factor. As a result, it has underestimated the proportion of costs that should be considered high confidence.

- For automatic UMs agreed in advance, Ofgem can have high-confidence in the costs, but less confidence in the volumes. Ofgem should add a central estimate volume for automatic UMs to NGET's baseline to reflect these high-confidence costs being likely to occur in the T2 period. This will increase the proportion of high-confidence costs in the TIM calculation.
- For reopener UMs, one of the main purposes is for Ofgem to have more certainty over network companies' costs (include SSMD reference). Ofgem should include a central estimate of the costs that it will approve during the T2 period which should be added to NGET's high-confidence costs because they will have been subject to an Ofgem specific review. This will increase the proportion of high-confidence costs in the TIM calculation.
- There are material allowances that have been approved already for the T2 period (Hinkley Seabank and Dorset VIP project) that are 'baseline costs' and should be included in the calculation of the sharing factor as high confidence costs, given these costs will be incentivised via the T2 sharing factor.

Ofgem does not take account of additional tools it has added to the RIIO-2 framework to increase cost certainty for lower-confidence costs

- Ofgem does not take account of the additional tools it has introduced into the RIIO-2 framework at DD, such as secondary deliverables and ex post reviews of delivery, which significantly reduce the cost uncertainty for Ofgem around costs. While we disagree with Ofgem's application of these tools (as we explain elsewhere in our response) if Ofgem continues to apply them in its final determination then it should categorise the costs it applies these tools to as high-confidence costs.

The TIM approach does not achieve Ofgem's objectives:

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- Ofgem’s objective is: “The Totex Incentive Mechanism is designed to encourage companies to improve efficiency in delivery and ensures that the benefits of these efficiencies are shared with consumers.” (11.1, [sector-specific methodology decision](#)). Ofgem’s framework has introduced reopeners and ex post true up across a large proportion of our cost base. This will have the effect of significantly increasing the incentive for companies to deliver exactly what is in their business plans in order to mitigate regulatory risk, and has also given Ofgem more certainty over costs. This increased certainty over costs comes however at the expense of innovation and flexibility. By also setting a significantly lower sharing factor for transmission companies for the RIIO-2 period, when combined with the substantial increase in ex post review, Ofgem has reduced the incentive for companies to lower their costs and pass as share of those savings on to consumers.

Remedies

The flaws in Ofgem’s methodology and its application identified above should be addressed:

1. Ofgem should classify as high-confidence costs those costs that will be in uncertainty mechanisms, consistently with Ofgem’s own SSMD Guidance.
 - a. For automatic UMs agreed in advance, Ofgem should add a central estimate volume for automatic UMs to NGET’s baseline to reflect these high-confidence costs being likely to occur in the T2 period.
 - b. For reopener UMs, Ofgem should include a central estimate of the costs that it will approve during the T2 period which should be added to NGET’s high-confidence costs because they will have been subject to an Ofgem specific review.
2. Material allowances that have been approved already for the T2 period (Hinkley Seabank and Dorset VIP project) that are ‘baseline costs’ should be included in the calculation of the sharing factor as high confidence costs.
3. Ofgem should drop its misplaced emphasis on econometric benchmarking as the primary approach to demonstrating that costs are high confidence.
4. For those costs that Ofgem continues to classify as lower-confidence, Ofgem should provide evidence to support its classification. This would allow us the opportunity to engage constructively with Ofgem between now and the Final Determinations.
5. Ofgem should increase its TIM sharing factor for NGET to nearer 50%, recognising stakeholders’ concerns and reinstating incentives to drive lowest costs outcomes for consumers.

9. Undermining totex efficiency incentives by defining many project-level ‘inputs’ instead of Outputs and the use of ex-post discretionary intervention to make subjective adjustments to incentive outturn

What Ofgem has Proposed

In a number of places, Ofgem is proposing to specify a number of Price Control Deliverables (PCDs) in NGET’s Transmission licence. We support the principle of PCDs expressed as outputs and consider that this will provide additional transparency to consumers and stakeholders while preserving incentives. We also support returning our allowance to consumers in proportion to any part of a PCD we have not delivered, unless we can show that we have delivered an equivalent output by other means. But in two respects Ofgem’s proposals go far beyond this reasonable use:

- Largely for NGET only, Ofgem is proposing to attach 54 “secondary deliverables” to PCDs which specify precise and granular details of the input projects contained within the business plan engineering documentation.
- For baseline PCDs, NARMs and all PCDs associated with re-openers – which together account for the vast majority of our expected T2 totex – Ofgem stated intent is to use secondary deliverables to review costs ex-post, with the benefit of perfect hindsight, and make ex-post discretionary adjustments to the totex incentive outturn at its complete discretion to adjust for what it deems to be ‘genuine efficiencies’.

Neither of these expansions of the PCD concept is acceptable. Neither of these concepts is compatible with the RIIO regime. Neither has been properly consulted upon previously, and they are certainly not in the interests of consumers.

Why we are concerned

The effect of Ofgem’s two emerging policies in this area is to completely undermine the fundamental principles of ex-ante incentive based regulation and the totex incentive regime in particular. The overall effect will be to strongly discourage network companies from innovating, adapting to changing circumstances and taking risks to seek incremental or step change efficiencies as any potential gain that involves some departure from Ofgem’s granular, prescribed plan risks being clawed back by the regulator, based on its sole discretionary judgement taken with the benefit of perfect hindsight, and without course for re-dress.

This is poor regulatory practice and huge step away from the core principles of RIIO and incentive regulation more generally. It is wholly inconsistent with Ofgem’s stated objectives for RIIO. It will not secure ongoing cost reductions across the set of projects covered by these arrangements and will instead lead to risk aversion and create a new reporting and micro-justification activity that will need to be undertaken on an industrial scale that can only lead to additional costs for consumers.

Aside from the direct harm of such a regime to consumer interests, it is further puzzling as to how Ofgem can propose this alongside its ‘outperformance wedge’ proposal that will lower allowed returns by 25 bps in anticipation of future outperformance

Further we also consider, in respect of the “secondary deliverables” that Ofgem has introduced directly into its draft determination, that these have been applied disproportionately and potentially with undue discrimination against NGET when compared to peers in the sector. NGET is required to

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have 96% of the secondary deliverables of all companies in RIIO2. Secondary deliverables are not a feature of the gas distribution sector DDs at all. Ofgem has never mentioned secondary deliverables being part of the RIIO-2 framework until draft determinations. Secondary deliverables did not appear in any of Ofgem's consultations on RIIO-2 or in any workshops. Ofgem did not even mention secondary deliverables in the slides for its 18 August 2020 cross-sector PCD workshop, 6 weeks after introducing the concept for the first time in its draft determination.

Remedies

1. Ofgem should drop the concept of secondary deliverables as an unnecessary addition to primary PCDs for RIIO2.
2. Ofgem should drop proposals to make ex-post discretionary adjustments to totex incentive outturn; and
3. The rules and consequences of non, or under-delivery of primary PCDs should be codified in the Licence so that it is clear for all and not subject to discretionary change.

10. Rejection of new incentives despite clear consumer benefits of lower whole system costs and faster connections of green energy and support from Customers & Stakeholders

What Ofgem has Proposed

Ofgem said in the executive summary of its RIIO-2 framework decision in July 2018, “RIIO stands for: setting Revenue using Incentives to deliver Innovation and Outputs. Incentives, including ODIs, are an integral part of Ofgem’s RIIO-2 price control and are needed to deliver the innovation and outputs that consumers want.”

Despite this Ofgem has rejected all but one of the bespoke ODIs proposed our business plans even though they had a clear benefits case, strong customer and stakeholder support and the support of the independent User Group.

In particular our proposals for **incentives to reduce whole system costs** by encouraging actions to reduce ESO’s operational constraint costs and to **accelerate the connection of low carbon generation** have very substantial consumer benefits cases.

Ofgem has not proposed the overall size of the reward and penalty for one of its key Sector ODIs relating to **quality of service for connecting to the network** and is proposing to ‘switch off’ this incentive completely for year 1.

In aggregate the ODI incentives package in total proposed by Ofgem is heavily asymmetric with **penalties being six times greater than rewards**.

Why we are concerned

Consumers will miss out on the huge potential benefits that these incentives could bring over the next 5-year period, specifically in areas that are to directly related to accelerating the delivery of net zero and achieving it at lowest total cost.

- **An incentive to accelerate low-carbon connections** would encourage us to find ways of connecting low-carbon generators to our network more quickly. This delivers large reductions in greenhouse gas emissions more quickly than would otherwise happen. Accelerating a 1GW wind farm connection by one year would save carbon emissions worth around £50m per year. Even under the conservative ‘common energy scenario’ (required for RIIO2 business plans) we would be connecting around 10GW of low-carbon technologies to our network in the RIIO-2 period, showing the potential value that we could unlock for consumers, i.e. this incentive could result in up to £500m worth of savings in greenhouse gas emissions;
- **An SO/TO incentive** could drive NGET to undertake additional types of activities that could help reduce constraint costs in England and Wales by up to £188m each year, with higher potential savings in the future. To illustrate how material this could be, ESO constraint costs in just 12 months from April 2019 to March 2020 were £714m. Consumers are exposed to these costs indirectly through ESO charges that are paid by generators and suppliers. There is clear evidence from the ESO that shows this is likely to be even higher in the future.
- Switching off the **Quality of Connections Incentive** for Year 1 defers the benefits, which Ofgem must recognise as being there as it has adopted the incentive. The reason Ofgem gives for delay is to establish a baseline target, but there are simple remedies to resolve this (as we set out in the next section on remedies). Further, Ofgem has not proposed a quantum

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for the risk/reward potential of this incentive and we are concerned that it may be minded to significantly reduce it compared to the equivalent incentive in T1. The overall risk/reward potential of the incentive is important to ensure it attracts sufficient management priority in the period and a substantial incentive is supported by customers and stakeholders.

Remedies

In each of these areas, we urge Ofgem to focus on the magnitude of the consumer benefits that positive incentivisation can deliver in the areas highlighted relative to the upside rewards of the incentives proposed.

1. Ofgem should implement an SO/TO Incentive as or similar to that described in the TOs-ESO joint paper, initially with a conservative cap of £5m per year if necessary. Ofgem can then raise the cap if the ESO finds that the ODI is generating large constraint cost savings.
2. Ofgem should also provide baseline funding to the TOs of £10m to trial a market-based approach to providing flexible services to the ESO, which supports Ofgem's policy of promoting competition and which could supplant the need for an ODI in the RIIO-3 period. Ofgem could clawback the baseline funding in the RIIO-2 close out process if there is no benefit delivered.
3. Ofgem should adopt the accelerating low carbon connections incentive by taking into account the further information we provide in this response to support target setting.
4. Ofgem should adopt the same approach for Year 1 of the quality of connections incentive in ET Sector as it has in the equivalent incentives in the GD and GT Sectors. For example Ofgem is setting the T2 target for gas transmission based on performance as at 2018/19, because this passes sense checks such as being higher than the T1 average score and being on a par with the latest rolling three-year average of the T1 period.
5. Ofgem should ensure that the magnitude of the quality of connections incentive is at least the same as T1 as supported by stakeholders, and given the increasing importance of connecting low carbon generation to enable net zero.

If Ofgem accepts the bespoke ODIs on accelerating low-carbon connections and SO:TO optimisation and increases the size of the common ODI on quality of connections it will create an ODI package for NGET that helps deliver lower greenhouse gas emissions, lower constraint costs and better service for customers connecting to and affected by our network.

11. Overstretching and Unjustified Proposals for Ongoing Efficiency

What Ofgem has Proposed

Ofgem’s proposal for 1.2% (capex) and 1.4% (opex) per annum ongoing efficiency targets place excessive stretch on top of its already unprecedented and unjustified efficiency challenges to networks costs. These targets are above regulatory precedent, including those applied recently in the water sector, and seek higher than historical productivity gains from networks during a period of sustained low general productivity and with significant future uncertainty around Brexit and Covid-19 economic impacts. The 0.2% innovation adjustment is without basis, double counting gains already embedded in our business plan and acting to further increase the error in Ofgem’s selected target.

Why we are concerned

We embedded stretching 1.1% future productivity target across our operating costs and capitalised labour costs in our business plan; the highest target of all networks’ business plans and aligned to the recent water sector target. This was on top of compelling enduring savings we expect to deliver by the end of the T1 period. Our proposal was linked to our request for a fixed labour RPE allowance, in recognition of the more specialised and long-term dynamics of our workforce and the greater role that networks can play in managing pay. It was also linked to the evidence we submitted that our business plan costs were at the efficient frontier as we started the T2 period. We did not place any ongoing efficiency target on our direct capex in recognition of the fact that our direct capex costs represent the cost of our third-party contractors and supply chain, and their expected level of productivity was already embedded within RPE indices and / or CPIH.

Despite this, Ofgem has proposed to add an even greater degree of stretch to our costs. This is unjustified. Firstly, Ofgem’s estimates of the size ongoing efficiency is inconsistent with current economic trends and regulatory precedent. Ofgem’s proposed ongoing efficiency challenge:

- Is based on a flawed range of estimates that are inconsistently calculated and not prepared on a basis that is consistent with regulatory precedent. For example, by:
 - Taking an unweighted view of historic productivity trends resulting in 50% of productivity data points relating to pre-financial crisis period and so downplaying the importance of more recent sustained lower productivity growth;
 - Using a wide range of industries encompassing poor comparators for energy networks, such as agriculture, accommodation and food services and arts and entertainment industries.
 - Placing more weight on higher but less reliable “value-added” measures of productivity and downplaying the more reliable “gross output” measure of productivity that takes greater prominence in regulatory decisions.
 - Compounding this issue of placing more weight on “value added” by then applying the measure across all inputs rather than those to which specifically relate to the Value-Added measure (i.e. those which do not include intermediate inputs such as our contractor delivered capex).
- Dismisses the potential impact of future economic uncertainties that prevail through the RIIO-2 period, for example:
 - Incorrectly interpreting rising Office of Budget Responsibility (OBR) forecasts as a sign of expected economic recovery rather than a result of their forecasting methodology, which

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seeks return to a steady state level of productivity and has resulted in several revisions as recovery has yet to materialise;

- Does not consider most recent Bank of England (BoE) forecasts that incorporate Covid-19 and other latest impacts to the economy and forecast only 0.75% growth over the next 18 months.

Secondly, Ofgem adds a further 0.2% innovation adjustment to its efficiency target which is without basis and makes the same error in failing to assess the extent to which networks have already embedded benefits that was made for RIIO-ED1 Smart Grid Benefits. Ofgem fail to recognise that;

- Innovation projects are undertaken for a range of reasons, not solely financial. Of the £88.5m NIC funded innovation projects in RIIO-1 less than £10m was directed to projects primarily focused on reducing price control costs;
- The fact that innovation stimulus has been needed in the energy sector points to lower than general levels of innovation occurring than in the general economy; to the extent to which innovation gives rise to financial benefits these will already be reflected in the general economic productivity targets;
- Any financial benefits identified from RIIO-1 innovation are already embedded in our business plan costs, we provided evidence that our RIIO-2 plans benefitted from £707m of reduced or avoided capex costs from RIIO-1 innovation and efficiencies;
- Notwithstanding the flaws above, the 0.2% is based on a notional expected return to consumers rather than what an efficient company could reasonably achieve and ignores the 10% contribution networks make to the funding of NIA projects, plus the compulsory contributions made to NIC funding

Ofgem layer this challenge this on top of unprecedented and unjustified efficiency disallowances across our business plan, resulting in efficiencies that add up to £1bn across the period.

Our business plan proposals made a link between long term input price influences on labour, with a long term view on productivity, and we think this approach addresses considerations for economic uncertainty during RIIO-T2, and the extent to which these may or may not impact transmission network companies, and in or response relating to Real Price Effects, we ask that Ofgem consider the merits of this approach in the unprecedented circumstances we face. We also suggest that they may be merit in taking a net nil view on labour RPEs and ongoing efficiency given their close parity, leaving only external capex costs subject to RPE indexation, which we consider also capture the productivity gains of external companies.

Remedies

In making their final determinations Ofgem should:

- i) Place greater weight on post-2008 financial crisis productivity levels in its historical productivity ranges given the lack of evidence of a return to pre-crisis levels.
- ii) Consider the extent to which current economic conditions, and this risk of these enduring should inform forward productivity forecasts.
- iii) Use productivity data from sectors that are reasonable comparators for the activities undertaken by energy networks and make consistent usage of wide and narrow industry definitions when arriving at a plausible range.
- iv) Use Gross Output as the primary measure of productivity in line with regulatory precedent and calculate the upper and lower bounds of its range consistently.

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- v) Disregard the 0.2% innovation adjustment on the basis of its unjustified grounding, its spurious calculative basis, and double-count of efficiencies embedded within network business plans and general productivity measures.
- vi) Cross check the level of stretch it is targeting through ongoing efficiency with catch-up efficiency reductions applied through their cost assessment of current network costs.
- vii) Consider the extent to which productivity on external capital costs is already captured within RPE indexation and CPIH.
- viii) Ensure that calculation of quantified totex efficiency targets are based correct opex and capex classifications, and that there is no double count of efficiencies embedded within cost submissions.
- ix) In the light of economic uncertainties, and the extent to which these may or may not affect network companies, consider the case for taking a net nil view of labour RPEs and ongoing efficiency, leaving only external capex costs to be subject to RPE indexation, which we consider also capture the productivity gains of external companies.

12. When coupled with the proposed financial framework, the package as a whole doesn't stack up

Throughout the RIIO-2 process we have engaged with Ofgem and stakeholders on the critical importance of setting an appropriate financial framework. We have a shared goal with Ofgem to ensure that the framework improves stakeholder legitimacy and maintains investor confidence in the energy sector.

We recognise that changes to the framework are required in RIIO-2 to improve stakeholder legitimacy. It is right that returns are lower in RIIO-2 than they were in RIIO-1. We can also appreciate the benefit of introducing Return Adjustment Mechanisms (RAMs) into the framework to limit windfall gains and losses.

But instead of limiting changes to those necessary to maintain legitimacy, Ofgem are proposing to make fundamental changes to the RIIO-1 framework which will increase the very costs they are trying to minimise – namely the rate of return required to invest in an energy network. We have been clear on our disagreements with Ofgem's proposed framework through RIIO-2 consultations to date. Despite the substantial body of evidence that we have provided to Ofgem already to demonstrate the shortcomings in what has been proposed, many of our areas of disagreement remain in the DD. The financial package the DD sets out will create fundamental obstacles to our ability to deliver key consumer outcomes, including helping the UK on the pathway to net zero and will give rise to higher future bills.

At a summary level, our issues with the DD framework are that it introduces:

- **Inadequate equity returns:** The proposed allowed equity return is below that of the UK water sector and most comparable international benchmarks. This level of return is far too low for a transmission company, owing primarily to errors in setting both beta and total market return and the inclusion of a flawed outperformance wedge. Ofgem's proposed beta is not in line with the fundamental drivers of higher risk for energy compared to water, such as capex complexity, stranding risk and energy transition uncertainty. Nor does it take account of empirical evidence in the DD which shows National Grid plc's beta has been higher than the proposed beta and those of the water sector over the last ten years.
- **A marked weakening of financial resilience:** The lower returns in RIIO-2 sharply reduce financial resilience with baseline plans leaving the notional company on the cusp of being downgraded from Baa1 / BBB+, Ofgem's target rating. More worryingly, Ofgem has modelled financeability against an investment level based on the Common Energy Scenario of less than £5bn, which is 75% of our five-year equivalent spend in RIIO-1, rather than stress testing against net-zero scenarios which are at least double that level. When these totex levels and the delay in revenue from uncertainty mechanisms is factored in, the cashflows are only consistent with sub-investment grade.
- **Unachievable allowed equity return:** With the application of disproportionate and unjustified Business Plan Incentive (BPI) penalties, higher than ever efficiency cuts, clawback of T1 allowances and a flawed outperformance wedge, Ofgem has placed an unprecedented challenge on our business at the start of RIIO-2. As a result, equity returns would only be 1.3% without any savings to current operations, 260 basis points (bps) below the allowed equity

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return. With minimal potential upside from incentives and totex performance the framework offers unprecedentedly low opportunity to close the gap despite the need for innovation to deliver the energy transition. In combination, this means that investors cannot expect to deliver the allowed equity return - a fundamental tenet of the regulatory regime and clearly inconsistent with Ofgem's statutory duties.

Remedies

- Develop a more balanced appraisal of allowed equity return and remove the flawed outperformance wedge
- Adjust the overall risk and reward package to provide a fair return for investors, removing the clawback of RIIO-T1 allowances, dropping the BPI penalty and addressing issues with efficient cost assessment methodologies
- Revisit proposals for net zero incentives and drop ex-post regulatory intervention and adjustments to totex incentive outturns
- Implement the range of financial remedies that are outlined in our response to Ofgem's finance document relating to financiability and cashflow timing issues

Conclusion

We welcome the continued constructive dialogue with Ofgem on these issues and urge Ofgem to consider the evidence presented in our response which supports our proposed remedies. The impact of these remedies will not have material impacts on the household bill but a revised package will deliver a reliable network service, enable the green transition to net zero and provide a fair return for investors. To support our response, we have commissioned an independent expert organisation (also used by Ofgem) to test consumer preferences in light of current economic circumstances. The results of this research are included within our response and clearly and consistently show consumers' preference for investment in reliability and net zero above short term bill reductions across the various demographic groupings.

We hope you find our response and supporting documentation helpful and look forward to our continued engagement in the coming weeks, including at the open meetings in October, as we work towards a final determination which enables us to deliver for our customers, stakeholders and current and future consumers.