6. NATIONAL GRID GAS TRANSMISSION RESPONSE TO RIIO-2 DRAFT DETERMINATION: NARM ANNEX

Introduction

National Grid Gas Transmission (**NGGT**) has serious concerns with Ofgem's RIIO- 2 Draft Determination (**DD**) and its consequences for Great Britain. The DD cuts our proposed business plan baseline allowances from £2.6bn to £1.53bn and reduces the outputs we proposed in our business plan. Whilst we share Ofgem's stated objectives for RIIO-2, the DD currently fails to meet the needs of our customers and stakeholders and is not in the interests of current and future consumers because it:

1. **Introduces significant risk to the reliability and resilience of the network,**

2. **Creates unnecessary complexity and volatility in the framework, and**

3. **Erodes regulatory stability and investor confidence.**

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 evidence. This is positive and important because we consider that a significant number of the proposals are currently unacceptable and numerous remedies are necessary for Final Determination to address the issues identified. We have therefore provided an evidence-based response, supplying new evidence where relevant and proposing remedies to the issues identified which better meet the interests of consumers.

We will also continue to engage constructively with Ofgem over the weeks and months leading up to the Final Determination with a view to ensuring our evidence is fully understood and the necessary changes secured.

Structure of this response

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

1. A covering letter
2. An executive summary of our response
3. Our response to the Core Document
4. Our response to the Gas Transmission sector annex
5. Our response to the NGGT annex
6. **Our response to the Network Asset Risk Metric (NARM) annex**
7. Our response to the Finance annex

The first part of this document covers a summary of our key concern with the NARMs Funding Adjustment and Penalty Mechanism.

We do not agree with the proposed NARM Funding Adjustment and Penalty Mechanism, which gives Ofgem the ability to adjust our NARM funding at the end of RIIO-2. The overall impact of the complex mechanism is that it will cancel out any efficiencies earned by networks, unless in a granular way and after the event, the network can demonstrate that was an efficient decision. The mechanism moves networks away from managing the risk on the network for consumers, ensuring we continue to maintain resilience and reliability to a mechanism that strongly incentivise us to deliver our business plan, exactly as it is set at the start of RIIO-2. It therefore strongly disincentivises us to behave as an efficient and effective asset manager ensuring we manage risk across the network as a whole.

We have identified the following issues that mean the mechanism, as currently defined does not work in practice:

- **Reduces incentive to manage asset health risk:** A basic principle of NARMs is to incentivise networks to manage risk across the network and to maintain resilience and reliability for customers. This discourages risk trading, with networks potentially favouring justifying outperformance of any one asset category and not seeking to manage risk at a network level and to ensure increase costs to manage risk are not passed onto consumers.

- **NARMs model insufficiently robust to support a UCR adjustment:** Ofgem will set our final NARM allowance as total “justified” volumes multiplied by a “Unit Cost of Risk Benefit” (UCR). The relationship between cost and the monetised amount of risk reduction that is delivered is complex and not uniformly correlated across asset types. This therefore means that the underlying principle of Ofgem’s mechanism, namely that it is possible to calculate the UCR and adjust baseline allowances based on this, is fundamentally flawed.

- **Subjective judgements by Ofgem during close out will play a key part:** The NARM funding adjustment is applied by Ofgem ex-post with subjective judgements on granular interventions whether there have been any departures from the plan and whether these are “justified”. We do not believe this can work in practice and does not allow our Directors or management teams to make decisions knowing the potential risk to funding, which is unacceptable. The principle of this ex-post adjustment means our asset health plan is no more than a reopener uncertainty mechanism.

- **Weak incentives for efficiency and skewed downside risk:** Ofgem will adjust the UCR by up to 95% to take account of any outperformance that it does not consider genuinely efficient whilst we remain fully exposed to any potential underperformance. From our early analysis, this creates an asymmetric incentive passes greater risk onto networks.

Ofgem have highlighted concerns with the existing methodology and, we believe there are solid alternatives that build on the existing foundation we have developed in the gas transmission sector. Ofgem highlighted the following metrics could lead to unearned performance during the price control. We have set out why this is not a concern for the gas transmission network. Where there is a concern, we have identified plausible remedies.

Metric Change driver	Issue created	Plausible remedy
Switching asset categories	We recognise, if work switches between asset categories, this can lead to increase or decrease in the cost per risk removed.	For the vast majority of assets, the switch between categories has no material effect. For a limited number, isolating into a separate grouping and removing risk trading between groups would minimise the issue. We will discuss this further with

		Ofgem leading up to Final Determinations.
Switching schemes	Our NARMs mechanism does not operate at a scheme level so this is not an applicable concern for gas transmission.	N/A
Switching intervention types	Potential to undertake lower unit cost refurbishment rather than replacement activities to deliver risk benefits.	Over 95% of our plan covers refurbishment of assets with only 5% replacement and therefore this risk is eliminated. Further, Ofgem have already assessed our interventions as being at the efficient cost level to reduce the risk. Therefore, no further intrusive performance measures are required.
Asset Deterioration	The NARM and mechanism eliminates asset deterioration changes over the 5 years of RIIO-2, therefore this is not an issue.	N/A

Alternative NGGT performance mechanism
To mitigate the risks of trading, eliminating the potential for windfall gains or windfall losses as well as our concerns with the proposed NARM Funding Adjustment and Penalty Mechanism, we propose an alternative option based on the Incentives Methodology in RIIO-1, which was consulted upon and agreed at the point when our RIIO-2 plan was submitted. This is a solution that will avoid complexity, allow management teams and Directors to be able to explain both risk and financial performance over RIIO-2 period.

The mechanism focuses on eliminating the concern Ofgem has on workload switching between asset categories. We propose a mechanism that will remove interventions likely to result in excessive under delivery or over delivery of LTRB from the NARM mechanism using a statistically robust outlier process. Additionally, if the RIIO-2 value of the removed interventions exceeds £1m, we would propose these as volume based ring-fenced PCDs. We also propose to retain a materiality threshold to avoid the need to justify under or over delivery for all interventions in the plan. This is explained further in NARMS questions 1-4 below.

NGGT NARM model errors and categorisation
For the draft determination Ofgem have restated our BNRO target following proposed volume reductions for our Asset Health work. We highlighted errors in the provided Ofgem NARM Model, which have been fed back to Ofgem and we have offered to work with Ofgem to ensure the NARM Model reflects our correct target for RIIO-2. It is important that we can restate our NARMs analysis using the same approach used for the December business plan submission, rather than the simplistic approach adopted by Ofgem documented in the draft determination NARMs annex.

In general, we agree with Ofgem’s proposal of funding categories, although for Cyber interventions these should be treated the same as non-lead Asset Health interventions, which are delivered under a separate PCD and not counted towards our BNRO. We have also highlighted a few issues relating to the treatment of indirect interventions and volumes to be determined by reopeners in our response to questions in the NARMS questions 1-4.

Remedies needed:

- Accept our alternative NARMs mechanism that simplifies regulatory regime whilst maintaining protection for consumers
- Allow us to restate our NARMs table following final determination using the allowed interventions and volumes

Response to Ofgem Questions NARMQ1 to NARMQ4

NARMQ1. Do you agree with our proposals on the scope of work within each of (a) the NARM Funding Categories and (b) on the associated funding arrangements?

Restated NARM target (Baseline Network Risk Output (BNRO))
As part of the draft determination Ofgem have restated our NARM target (also referred to as the Baseline Network Risk Output (BNRO)) using proposed volume reductions for our Asset Health work. As part of this exercise Ofgem have reclassified A2 and A3 interventions (indirect interventions) and as a result excluded all Long-Term Risk Benefits (LTRB) delivered by the bespoke non-lead Asset Health PCD and Cyber investments.

To support this Ofgem have developed a 'NARM Output Setting Model' (NARM Model), which was provided to us with our specific data on the 20th July following the publication of the draft determinations. Ofgem have used the LTRBs per intervention divided by our submitted volumes for this intervention to derive a new measure, the 'risk output unit' (Unit Cost Risk Benefit (UCR)). This multiplied by the adjusted volumes provides a BNRO per Secondary Asset Class (SAC), which as an aggregate calculates the total BNRO to be delivered in RIIO-2 (R£181.3m compared to our December 2019 proposal of R£228.8m[1]).

To derive the restated target Ofgem have made several assumptions and we have shared our concerns with Ofgem why these assumptions are in some cases inappropriate. Additionally, we highlighted a few errors in Ofgem's NARM Model and we have offered to work with Ofgem to ensure all errors are resolved. We have also suggested that we restate our NARM target ourselves by resubmitting our NARM tables following potential volume reductions of Asset Health work, to avoid the need for any assumptions and, therefore ensuring the Ofgem NARM model is aligned to our submission.

Ofgem have accepted our proposal to resubmit our NARM tables and we will engage with Ofgem and agree timeframes for the submission ahead of final determinations. At the end of our NARM annex responses to the consultation questions we have included a full list of the errors and reasons why we disagree with some of the assumptions made. This list has been shared with Ofgem ahead of our draft determination response.

[1] Note: BNRO has been adjusted by Ofgem from R£296m, which was the proposal in our December 2019 submission and included LTRBs forecasted to be delivered by A2 and A3 interventions, which have been excluded as part of the restated target.

In their assessment Ofgem have included the wrong volumes to determine our restated NARM target. This includes 100% of volumes associated with interventions which might be subject to an Asset Health Uncertainty Mechanism. We have highlighted this inconsistency to Ofgem and Ofgem have acknowledged an error using incorrect volumes for the restated target. This will be corrected for the final determinations.

We propose that all volumes and LTRBs associated with this Uncertainty Mechanism are removed from the NARM mechanism until the final reopener decisions are made. At that stage any LTRBs delivered through interventions associated with the Asset Health reopeners, which are not part of the non-lead Asset Health PCD, would be incorporated into our target and agreed funding would become part of the NARM allowances.

(a) Funding Categories

We agree with the principle of the different NARM funding categories (A1, A2, A3 and B (non-NARM assets)) as defined by Ofgem, whereby only A1 assets contribute to our RIIO-2 NARM target (BNRO).

In our December 2019 submission, we proposed 16 SACs to be in A1, 11 SACs in A3 and 10 SACs in A2. The remaining 10 of the defined 47 SACs have been categorised as non-NARM assets (funding category B) [2]. Ofgem have not accepted our proposal to include assets related to our Cyber investments in the A2 category and have moved the10 related SACs into the A1 category. Ofgem have also not accepted our proposals of A3 assets and have moved the 11 related SACs into the risk-tradable pot (A1). Ofgem have accepted our proposal for all 10 non-lead SACs (B, non-NARM assets) to remain in this category.

For all 37 SACs in the A1 risk tradable NARM funding category we will be permitted to trade-risk across these asset categories in order to deliver our NARM target (BNRO). Ofgem have recognised our proposal to treat A3 interventions, which have been assigned to a ring-fenced Asset Health PCD, as ring-fenced expenditure and removed the volumes and LTRB delivered by these interventions from our BNRO for RIIO-2. Ofgem have also removed the LTRB delivered by Cyber interventions from our BNRO but omitted to define Cyber as a ring-fenced activity in table 2, page 11 of the NARM Annex.

Following clarification on Ofgem's treatment of Cyber interventions, we propose that Cyber interventions are treated as A3 interventions. We propose that we report on the risk benefits delivered by Cyber and the non-lead Asset Health PCD, but, following Ofgem's proposal, that LTRBs delivered by the non-lead Asset Health PCD and our Cyber programme should be removed and will not count towards our total BNRO target for RIIO-2.

(b) Funding Arrangements:

We agree with Ofgem's funding arrangements that Asset Health work which is not risk-tradable is ring-fenced and subject to separate PCDs. According to table 2 and paragraph 3.10 and 3.11, funding category A2 is not applicable for Gas Transmission. As clarified above, Ofgem have omitted the treatment of Cyber investments in their funding arrangement proposals and we therefore propose to update table 2 and include Cyber in the ring-fenced A3 funding category. This will

[2] For our view on the Secondary Asset Classes (SACs) to be included in each funding category please see NGGT NARMs Commentary submitted alongside our December 2019 business plan, paragraph 7. a.-d.

exclude all Cyber interventions from risk trading and these interventions will be funded separately and will not be covered by our NARM allowance. Should the funding mechanism for Cyber change at any stage, for example as a result of ‘Use it or Lose it’ or following a reopener, this would need to be reviewed as part of a future funding submission in these categories. As described above we agree with the LTRB associated with ring-fenced Asset Health and Cyber interventions will be excluded from our RIIO-2 NARM target.

Ofgem have not accepted our treatment of ‘indirect interventions’ and reclassified our indirect interventions as replacement or refurbishment. Our definition of an indirect intervention is where the asset failure of an asset does not cause a consequence, but may result in the failure, or increased time to return to service, of a primary/direct gas-carrying asset. We have clarified our position and the indirect interventions ‘flag’ in our NARM submission does not change how the LTRB is calculated, it was solely included to distinguish between A1 and A2/A3 categories.

We have subsequently engaged with Ofgem and have confirmed that most indirect interventions are linked to ring-fenced expenditure (non-lead Asset Health or Cyber). We sensed checked all indirect interventions which have been used to restate our target and flagged these as replacement or major/minor refurbishment to ensure these are accounted for correctly.

Comparability of network risk across networks

As part of the draft determinations Ofgem proposed that the Gas Distribution Networks (GDNs) will not use a long-term risk measure (LTRB), which could potentially lead to unfairness of level of risk to be achieved by the end of RIIO-2 leading to different abilities to outperform. Ofgem decided that long-term risk cannot be used as a suitable output measure for GDNs. Rather than using a longer-term measure of risk for defining the GDNs' Ofgem are now proposing to continue to use an end-of-period single-year measure for GDNs, as is used in RIIO- 1.

In the Sector Specific Methodology Decision (SSMD) Ofgem shared their view that a longer-term measure, rather than the single year snapshot approach of RIIO- 1, would be preferable. The reasoning was that a LTRB takes into account the longer-term impact on asset degradation of the various intervention options and is therefore more likely to lead to planning and implementation decisions that better reflect consumer value. Also, the scope of NARM was to enable comparison of network risk targets and enable benchmarking across different networks. We think by setting different targets across the Networks this ambition will no longer be valid.

NARMQ2. Do you agree the funding adjustment principles and our proposals for applying funding adjustments?

We do not agree with the proposed NARM Funding Adjustment and Penalty Mechanism. In particular, we do not believe that a funding adjustment mechanism is required above and beyond the mechanism already in place for RIIO-1. We are disappointed by the lack of consultation and visibility ahead of the draft determinations on the proposed NARM Funding Adjustment and Penalty Mechanism and the intention to link NARM with costs. We therefore had limited time to understand the full implications of implementing such a mechanism given the significant difference to the RIIO-1 performance mechanism and how it would interact with other funding and incentive mechanisms for RIIO-2 as a whole.

The proposed mechanism is to extend the financial adjustments in RIIO-1, which focused only on over-delivery and under-delivery to an integrated financial adjustment. The NOMs Incentive Methodology for RIIO-1 was developed in several cross-sector working groups and consulted on before final decision. Therefore, we do not believe that a funding adjustment mechanism is required above and beyond the mechanism already in place for RIIO-1, combined with the proposal on a clearly defined NARM PCD with associated allowances for RIIO-2.

The proposed mechanism would adjust our allowances and risk target post the regulatory period and therefore does not follow RIIO principles. We see this as an example of ex-post regulation, which does not incentivise cost efficiencies nor does it maximise risk reduction and therefore it goes against the NARM principles of risk trading. Effective asset management involves renewal and maintenance of all network assets and taking into account changing information on asset condition and customer requirements. NARM was designed to give the asset management ability to risk trade across A1 category assets to deliver our RIIO-2 BNRO target.

The ex-post adjustment does not take into account the fact that the submitted RIIO- 2 plan will have been subject to significant scrutiny as part of Ofgem's business plan review and the allowances, which will be set as part of the final determinations, will be deemed efficient by Ofgem.

As clarified to Ofgem, our submitted Asset Health plan, on which our NARM target is based on, does not contain “known assets” for intervention. The assets for interventions can only be confirmed following detailed site and asset condition surveys prior to sanctioning delivery work. Ofgem has not recognised that we have already factored "what's best for consumers" into our NARM analysis by setting our target based upon the assumption that we will target the assets in the upper quartile of monetised risk (meaning we would target assets which deliver a higher LTRB). This analysis of upper quartile was made without consideration of the cost of intervention or taking into account the availability of outages to deliver work and the uncertainty in the underlying asset condition data used to inform our analysis.

We were not consulted on the intent to link NARM to cost to derive our Baseline allowances and the proposal to adjust allowances at the end of RIIO-2 using the same principle. The relationship between cost and the monetised risk delivered is complex, potentially non-existent, and not correlated. We have described our analysis on the risk distribution per SAC to Ofgem to help their understanding on how our plan was built. We feel that we have already accepted this efficiency risk by proposing of an upper-quartile LTRB based target and that a further ex-post adjustment is inappropriate.

We have developed a new taxonomy for defining an asset unit of intervention, named Equipment Units, which is based upon an industry-standard asset definition (ISO14224). We aim to migrate towards using Equipment Units rather than SACs to plan and report upon investment costs and benefits in RIIO-2, which will support our reporting going forward.

The proposed Delivery Adjustment Factor (DAF) is a very asymmetric approach. With very limited reward but significant penalties, this incentivises us to deliver the submitted plan only regardless of the inevitable changes and opportunities to improve outcomes for customers. Over a five-year period, as new data is collected and our ability to target assets for improvement grows there will be these opportunities but Ofgem's post event discretionary outperformance clawback process undermines the incentive to change and innovate rendering these costs essentially un-incentivised. Where we could demonstrate a lower UCR because of genuine efficiencies, we would be able to keep the efficiencies in full (any underspend compared to allowances will then be subject to the Totex Incentive Mechanism (TIM)). This approach of ex-post justification creates uncertainty and thus reduces our incentive to find efficiencies. DAF limits rewards should we over-deliver against the adjusted allowance, but doesn't limit the penalty should we under-deliver, which creates an asymmetry between risk and reward, as we are fully exposed to any underperformance, with very limited opportunity to benefit from any outperformance.

Any outperformance against delivery of LTRB results in an adjusted allowance to the level which Ofgem perceive to be the efficient level of funding for the LTRB delivered. This has the potential for significant downsides resulting from both the trading of risk within a single intervention type and between intervention types. We have carried out some sensitivity analysis using the NARM Funding Adjustment and Penalty Mechanism, which we have shared with Ofgem, and it shows that there is an unacceptable disproportional balance between the rewards and penalties we could achieve through this mechanism. The adjustment ranges from ca. £1m upside to ca. £47m downside for an Ofgem assessed 100% unjustified scenario.

As described above, the proposed mechanism will require us to justify any changes to our outturn cost compared to our set unit costs for each intervention, which will limit our ability to apply and benefit from genuine innovation. The possibility of the need for us to provide cost justification for each intervention on a very granular level to demonstrate potential cost savings or overspend will mean an unjustified regulatory overhead with no materiality threshold. We suggest further work is required to define what entails genuine efficiencies and the reporting we are expected to deliver to prove efficiencies through either our annual reporting or end of RIIO-2 close out report.

According to draft determinations Ofgem have analysed delivery scenarios which have shown that, by re-planning work to intervene on cheaper assets or choosing alternative interventions, network companies could achieve very large cost reductions for the same total BNRO. According to Ofgem under the TIM this could give rise to significant financial gains. Ofgem's views are that the joint effect of NARM and TIM is to incentivise companies to deliver the BNRO more efficiently; companies should not enjoy windfall gains from already available improvement opportunities. However, the NARM methodology already holds companies neutral for a range of factors, which might give rise to windfall gains. On top of this funding for certain projects has been ring-fenced and only leaves certain assets in the risk-tradable category. We think the new mechanism adds an additional layer of complexity across different incentive/penalty mechanisms in RIIO-2, particularly in parallel to the existing TIM. The TIM is there to give a balance of return to the consumers and incentives network companies to deliver efficiencies.

As part of our RIIO-2 business plan we committed to deliver a challenging 4 per cent cost efficiency on our direct capital investment plan in RIIO-2. We are concerned which unit cost would be used to calculate our NARM allowances and if the introduction of the new funding mechanism means we would need to justify further genuine efficiencies above and beyond the efficiencies we have already committed to deliver. Given this context we think the proposed NARM Funding Adjustment and Penalty Mechanism removes the incentive to innovate or make any changes away from the interventions set out at the start of the RIIO-2 period. This seems to contradict the purposes of the NARM to the detriment of consumers and will add additional complexity to our performance reporting and forecast.

We therefore think the proposed mechanism does not protect consumers in the way Ofgem is intending and to mitigate our concerns with the proposed NARM Funding Adjustment and Penalty Mechanism we propose an alternative option based on the Incentives Methodology in RIIO-1, which was consulted upon and agreed at the point when our RIIO-2 plan was submitted, which we detail below.

Alternative NGGT performance mechanism
Our proposed approach uses the LTRB as the network risk target following the original NARM principles. As part of our proposal, we suggest removing interventions likely to result in excessive under delivery or over delivery of LTRB from the NARM mechanism, using a statistically robust outlier process.

Additionally, if the RIIO-2 value of the removed interventions exceeds £1m, we would propose to move these to a volume based ring-fenced PCDs to allow the reward and/or penalty of unit cost performance to be assessed and shared through TIM as any other ring-fenced Asset Health PCD.

We propose defining which specific interventions are to be deemed material up-front based on the cost and LTRB delivered. Our analysis suggests this would be a relatively small number of investments (see further detail on our outlier process below). We also propose to retain a materiality threshold (as the current Incentive Methodology applies) to avoid the need to justify under or over delivery for all interventions in the plan. Further to our concerns on the ex-post regulation and uncertainty around the subjective judgment by Ofgem, we would welcome agreement of the rules for what is considered justified and unjustified up-front.

We think our proposal to use the relatively well understood RIIO-1 Incentive Methodology Mechanism, which has been subjected to scrutiny through a consultation process and cross sector working groups (with the proposed amendments outlined above) will address both Ofgem's and our concerns in a transparent and efficient manner. The approach for a UCR adjustment is similar between RIIO-1 and RIIO-2 rewards and incentives. However, by reinstating the ability of the adjustment to be positive or negative this provides a symmetric rewards/penalties mechanism.

The inclusion of a materiality threshold based on the materiality of investments (cost and LTRB) would reduce the burden of justification and maintains transparency. Our suggested removal of outlier interventions into a ring-fenced volume PCD mechanisms reduces risk of windfall rewards or unearned penalties.

We maintain the view that the rules for justification still need to be clearly agreed and these should be applied consistently for RIIO-1 close-out and RIIO-2. This will allow us to understand what evidence we need to collect for justification and reduces the likelihood and impact of post-ex adjustments. Furthermore, the skewed downside risk is eliminated and Ofgem concerns addressed as discussed previously. The need for a DAF would be removed and efficiency sharing would be managed through TIM as per current arrangements.

We still have concerns about the robustness to derive NARM allowances using the LTRB and applying the same principle for the adjustment of allowed expenditure, but adapting the Incentive Methodology Mechanism, and reducing the need for micro-justifications, mitigates some of these concerns. The justification process should also consider the inherent uncertainty in LTRB data, particularly when applied at individual asset level. The proposed process focuses on additional controls and justification only applying to investments that have been agreed to be material up-front. This limits the cost of regulation and reporting and allows focus on only material investments.

To aid the comparability with other networks, we suggest our proposed approach is adopted for all networks. We think no network should be advantaged or disadvantaged by either 1) using different mechanisms 2) disproportionate reward or penalty caused by deliberate, or unforeseeable events. An outlier process, similar to the one we are suggesting, could mitigate this effect. Our proposal mitigates and minimises ex-post adjustment by restoring fairer balance of risk and reward package and using TIM. The proposed measures for RIIO-2 would also restore the ability to outperform by delivering more risk benefit for less (in a justifiable and fair manner).

For context, our NARM plan includes 102 interventions delivering non-zero LTRB, of which 32 interventions deliver 95% of the LTRB. We do not think it is appropriate to exclude interventions based on forecasted LTRB delivered as this excludes the cost of delivering these interventions. The UCR per intervention is considered the most appropriate metric as this considers the incremental benefit delivered by under and over delivery of intervention volumes. The UCR per intervention also normalises for interventions which deliver a large LTRB because of the volume assigned to the intervention. Therefore, we propose to exclude as outliers where additional or reduced volumes deliver a disproportionate UCR benefit, or (using RIIO-1 terminology) where the Outturn Incentive Rate is disproportionately affected by a change to the plan. As the distribution of UCR per Intervention is non-normal we proposed a simple, non-parametric outlier exclusion process. Our analysis recommends removing 14 interventions from the NARM mechanism, which we suggest are considered as a volume ring-fenced PCD as described above.

[redacted]

[redacted]

[redacted]

We would also welcome the opportunity to further discuss the inclusion of interventions with an intervention cost, but a zero LTRB. There are large number of these, and they have the impact of increasing the overall plan UCR. Removing both zero LTRB and outlier interventions reduces the total plan UCR from ca. 1.8 to ca. 1.4 and this will have a material impact on how the proposed mechanism responds to differences between baseline and reported expenditure and LTRB.

NARMQ3. Do you agree with our proposed approaches to calculating funding adjustments and to application of penalties?

See response to NARMQ2 for our views on the calculation of funding adjustments and the mechanism proposed by Ofgem. We agree with Ofgem's proposal to retain a penalty rate of 2.5% of the funding adjustment in the case of an unjustified under-delivery as this is consistent with the RIIO-1 Incentive Methodology.

NARMQ4. Do you agree with our proposals in regards to requirements for justification cases?

We agree with Ofgem's justification case requirements for over-delivery and under-delivery. As we described in our responses for NARMQ1 and 2 we think there is a further need for Ofgem to set out, in detail, the evidence and reporting requirements for us to justify genuine efficiencies. This should include the level (intervention level, project/theme level, SAC level or network level) with a potential need to introduce materiality threshold to minimise the regulatory burden of this reporting.

We think there is also a lack of a defined process around how Ofgem will analyse our genuine efficiencies (as part of our annual reporting and/or at RIIO-2 close out) and how they will determine which part of our plan will be subject to efficiency reviews given the interaction with other RIIO-2 efficiency challenges and efficiency commitment described in NARMQ1.

There is also an overlap between the justification of efficient delivery (lower unit costs), which also allows some LTRB to be discounted, if not justified (scenario RB.EE) and the overall justification of under- or over-delivery of LTRB (scenario JUS). We need to justify efficient delivery where risk benefits are delivered at lower cost than proposed in the plan, or where more risk benefits are delivered for the same cost. Ofgem propose that the justification is undertaken on intervention level (UID) and allows Ofgem to disallow some of the claimed LTRB benefit.

There is then a separate justification for the overall under- or over-delivery of LTRB, which again allows Ofgem to disallow some of the claimed LTRB. As the rules for justification of efficient delivery and over- or under-delivery of LTRB are not well defined, we are concerned there may be potential for double-counting. Ideally these two justification steps should be merged into a single, intervention-by-intervention, justification process. It is difficult to understand how we could reasonably justify under- or over- LTRB performance for the whole plan due to the wide range of assets and interventions proposed. It could also be possible to define the DAF (if retained), UID by UID, based on the nature of the investment and potential for excessive over, or under delivery of LTRB through risk trading between UIDs or through unavoidable circumstances respectively.

Summary of Errors and Concerns on NARM Annex and Ofgem's NARM Model

Table NARM2: Summary of error and concerns on the NARM Annex and NARM Model

Ref	Comment	Status
1	*Restated BNRO target* – Lack of clarity on the volumes Ofgem used to restate our NARM target (including volumes included/excluded for proposed Asset Health reopeners)	Ofgem's NARM Model has been provided to us on the 20th July, but the spreadsheet was hard to follow without formulae. We suggested we restate our NARMs table ourselves and then compare with Ofgem's workings. We asked Ofgem to advise on the best approach on this. We also raised our concerns at the bilateral on the 5th August. Ofgem have confirmed that they are open to the proposal for us to resubmit our NARM tables and we will engage with Ofgem on the timescales ahead of final determination.
2	*Restated BNRO target* – Ofgem applied a 'net effect of movement to/from other mechanisms' to our submitted NARM target, which we were not able to verify	See ref 1
3	*Restated BNRO target* – Long-Term Risk Benefit (LTRB) per intervention has been adjusted according to the changes in volumes of work proposed as part of draft determinations. This is not appropriate as LTRB depends on the site, asset and intervention type. As presented to Ofgem during rebasing of RIIO-1 targets, this is not a normal distribution of risk, nor is it a random distribution. Risk per intervention is effectively clustered and skewed making use of straight averages inappropriate.	This was discussed at the bilateral on the 5th August.
4	*Restated BNRO target* – Ofgem have not recognised our definition of 'indirect interventions', where the failure of an asset (e.g. Cladding) has an indirect impact on the failure of the primary asset (in this case the Above Ground Pipework) and have reclassified indirect interventions as replacement or major/minor refurbishment. It is not appropriate to arbitrarily change intervention types as this would have a material impact on the NARMs benefits and is now inconsistent with CBA analysis (which assumes the same intervention benefits as NARMs).	This was discussed at the bilateral on the 5th August. This concern would be addressed by resubmitting our NARMs tables and restate the correct intervention type for each indirect intervention. Ofgem have confirmed that they are open to the proposal for us to resubmit our NARM tables and we will engage with Ofgem on the timescales ahead of final determination.
5	*Restated BNRO target* – Ofgem have assumed that where multiple interventions are proposed on the same asset, only a single intervention is counted. This assumption will mean that the LTRB will be overstating the benefit of each intervention (where a one to many relationships exists between assets and interventions). For clarity: multiple interventions on one asset is a limitation of our current NARM analysis caused by the current use of Secondary Asset Classes (SACs), which are at site level for some asset types (e.g. Above Ground Pipework). This will be addressed by our proposal to restate our asset base using an IS014224 Equipment Unit taxonomy.	This was discussed at the bilateral on the 5th August. This concern would be addressed by resubmitting our NARMs tables and restate the correct intervention type for each indirect intervention. Ofgem have confirmed that they are open to the proposal for us to resubmit our NARM tables and we will engage with Ofgem on the timescales ahead of final determination.

Ref	Comment	Status
6	*Restated BNRO target* – Ofgem state that they have made changes where there are multiple interventions by using a scaling factor, which we were unable to verify.	This was discussed at the bilateral on the 5th August and Ofgem have confirmed that scaling is performed in workbook MR2.1.1_Volume_Scaling.
7	Ofgem have noted discrepancies between volumes in the BPDT and NARMs tables. We have demonstrated to Ofgem the differences between counts of asset intervened upon and number interventions. We can intervene more than once on the same asset during the RIIO-2 period. In our case this is exaggerated due to the greater granularity of interventions and unit costs submitted versus the RIIO-1 definition of an asset that we had to use to demonstrate continuity from RIIO-1 to RIIO-2.	This was discussed and clarified at the bilateral on the 5th August and we would expect a revised wording for final determinations.
8	Ofgem state that we did not provide workings of our LTRB calculation and instead the LTRB was included in our CBA submissions as an aggregation for all intervention types. We believe this is not a factual statement 1) the LTRB was presented to Ofgem 2) the LTRB spreadsheet was demonstrated to Ofgem's consultant who was also provided with a copy 3) we have pointed out that the LTRB calculations were different between the NARMs tables and CBA (reasons documented in the commentary document accompanying the NARMs table)	This was discussed and clarified at the bilateral on the 5th August and we would expect a revised wording for final determinations.
9	Ofgem state that the intervention benefit is generic for the intervention and is not specific for each asset type. As we have explained in the commentary accompanying the NARMs table, that the initial reduction in probability of failure delivered by an investment is generic to the intervention type. However, the expected asset life or time to next intervention (assumed to be equivalent) are specific for each asset and intervention type.	This was discussed and clarified at the bilateral on the 5th August and we would expect a revised wording for final determinations.
10	*Ofgem NARM Model* – When reviewing the NARM model we realised that the calculations to restate our BNRO target did not use the proposed volume reductions, but proposed volumes from our RIIO-2 business plan submission, which meant the restated BNRO target included the exact same LTRB target for less intervention volumes.	Ofgem confirmed the error and NARM Model was reissued on 6th August 2020.
11	*Ofgem NARM Model* – Ofgem have rounded the LTRB to 2 decimal places (values in £ million) and as such we have seen LTRB targets below £10,000 disappear for the restated BNRO target and as a result it seems that some interventions deliver zero LTRB, which is incorrect.	Ofgem have confirmed the issue and intend to correct this for final determinations.
12	*Ofgem NARM Model* – Some of the proposed volume changes, while included in the model, have not flown through to the final sheet and as such the expected LTRB is £0.	Ofgem have confirmed the issue and intend to correct this for final determinations.

Ref	Comment	Status
13	*Ofgem NARM Model* – The Uncertainty Mechanism volumes have been included as 100% rather than 60% of the volume to calculate the restated BNRO target. We need confirmation from Ofgem how these volumes and the delivered LTRB will be treated for interventions subject to reopeners.	Ofgem have confirmed the issue and intend to correct this for final determinations.