Northern Gas Networks

11th December 2024

APPENDIX A20

NETWORK ASSET RISK METRIC (NARM) BPDT COMMENTARY

Contents

1. Executive Summary

Our Network Asset Risk Metric (NARM) BPDT RIIO-GD3 proposal (ref. A19) is to reduce network level monetised risk by R£m57.38. We propose that **R£m18.17** is funded through the NARM (A1) funding mechanism. This compares to our A1 target for RIIO-GD2 of R£m10.19 (2023/24 prices). The difference is driven by a combination of intervention and volume differences, updates to values (e.g. carbon parameters), Long Term Risk Benefit updates and updates to asset data since RIIO-GD2.

Overall, 43% of the A1 funded risk reduction is associated with our non-mandatory mains and services replacement proposal (41% mains, 2% services) and 38% of the risk reduction is associated with the interventions on PRS and Offtake assets. The remaining 19% is associated with governor related interventions.
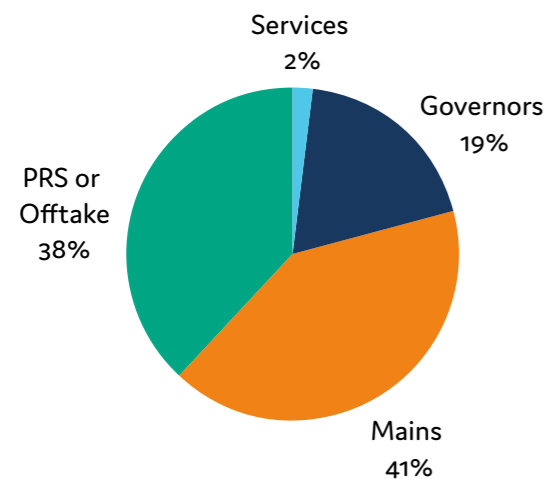

Figure 1: A1 funded risk reduction per asset class

Proportionally, this is broadly comparable to RIIO-GD2. The biggest change is that our A1 mains share of risk is falling from 73% to 41% predominantly because we are proposing to exclude <2" Steel mains from A1 NARM. This is mandatory workload that should be A3 and we consider that this was included in RIIO-GD2 NARM targets in error.

While not included in the NARM BPDT directly, we are proposing NARM related funding of £241.88m in RIIO-GD3, which is lower than the £257.56m (2023/24 prices) allowed in RIIO-GD2. This reduction is mostly driven by the exclusion of <2" Steel mains.

Combining our proposed NARM allowances with risk removed gives us a UCR target of £13.31, compared to our UCR target at RIIO-GD2 of £25.28 (23/24 prices). The increase in risk removed and reduction in NARM related expenditure is driving this change. It shows that we are delivering greater value for money from our NARM proposals compared to RIIO-GD2.

All risk figures have been derived using the GDN NARM methodology post the 2024 methodology update implemented by all GDNs. Otherwise, assumptions applied in this process have not differed significantly from those applied in 2023-24 NARM RRP. The changes in the methodology have led to some results requiring further investigation and collaboration between all of the

GDNs and Ofgem post submission. This would ensure all elements are calculating as expected and on a consistent basis between the networks once targets are rebased and confirmed following determinations and at closeout of RIIO-GD2.

2. Introduction

The Network Asset Risk Metric (NARM) is an evolution from RIIO-1 Network Output Measures (NOMs) and relates to the risk of asset failure (derived from the probabilities and expected consequences of asset failure). For Gas Distribution (GD), the RIIO-GD2 NARM target is set based on the change in monetised risk achieved over the period at an aggregated network level. In RIIO-GD3 a similar approach is taken, with some key methodology changes that have been implemented. This commentary document aims to explain the definitions and assumptions applied during the compilation process and take the reader through the outputs of this process.

The NARM Business Plan Data Tables (BPDT) is a separate regulatory reporting process from the Costs and Volumes (CV) BPDT. All data that has been collected and reported in the NARM BPDT represents the Monetised Risk reduction associated with NARM interventions and is consistent with our preferred strategies set out in our Investment Decision Packs (IDPs) (A22) and CV BPDTs (A15 & A16). Please see these documents and our main Business Plan for details on our proposed costs, volumes and justifications for them. This document only details the NARM outputs of our RIIO-GD3 Business Plan from the NARM BPDT Template.

3. Definitions and Assumptions

The NARM methodology has been updated since RIIO-GD2 to incorporate changes for Long Term Risk (LTR) modelling and some changes in failure rates and deterioration rates to better reflect reality and the latest asset data. This was carried out as a cross-GDN project, underwent a consultation process and is awaiting approval by Ofgem. It was agreed through NARM Working Groups to submit the plan on the basis of the LTR model updates.

Please refer to full details of updated methodology changes in the updated version of the NARM Risk Methodology document. As well as these and updates to allow long-term risk to be calculated, mains deterioration was also reviewed as part of the project. The effect of these changes which have been implemented in the production of the RIIO-GD3 business plan analysis is to better reflect the reality of asset operation.

Updates to the methodology have been discussed with Ofgem during their development and have gone out to consultation. Formal approval is to follow on from the consultation. It was agreed with Ofgem that model updates as part of this project including LTR would be used for RIIO-GD3 business planning purposes, thus the updated Methodology has been used in deriving the LTR monetised risk values.

All risk values in this submission have been derived in accordance with GDN NARM methodology post the 2024 methodology update described above.

Asset and table specific assumptions and errors are described below.

LTS

- All LTS interventions are A3 due to our proposed interventions on this asset class having negligible risk impact given they do not improve asset health but instead slow deterioration (e.g. cathodic protection). In N2.3 we manually nulled across all index bands to capture all risk and population movements in non-NARM section.

Mains

- In N1.3 tab, column R – 'Volumes of Interventions', the formula has been adjusted for Mains Replacement only. We employ an assumption that in replacing metallic Mains, the length will reduce marginally (2% lay to abandon ratio). Therefore, the pre and post intervention lengths will differ. As the formula in column R looks for 'Replacement' and in this case column K and L differ, we've adjusted so that column R only references the pre intervention length as this is the actual Mains length that has been intervened on. This formula change is captured in the No.4_Template_Version_History tab (change number 4).
- Some of our T2A cohort volumes currently available in the Decision Support Tool are lower than the proposed intervention length. This is due to the fluctuating volumes in our T2A cohorts (the risk is not static and will impact the volume within cohorts when updated). To ensure correct volumes are analysed in our proposal, we re-allocated the T2A volume we were not able to correctly assign to equivalent T2B cohorts. To minimise complexity, we used zero values for T2A on T2B in the background calculations because those are already included in the correct T2B cohorts. We have accounted correctly for T2B A1 workload and will marginally underreport the impact of the small amount of T2A A3 (non-NARM target) workload.
- We included RIIO-GD2 risk benefit impact in our risk modelling to correctly display and model the deterioration and the total cohort volumes at the beginning of RIIO-GD3. We are unable to separate the remaining RIIO-GD2 work from the RIIO-GD3 interventions in the risk modelling as a result. If we were to model RIIO-GD2 volumes alone to get their LTR impact and minus from RIIO-GD3 LTR impact, this would give an inaccurate risk impact. This issue will be resolved at RIIO-GD2 closeout when we rebase our RIIO-GD3 targets and no longer have to 'forecast' baseline risk with yet to be completed RIIO-GD2 interventions.
- Our cohorting set up does not allow for >30m Iron to be separately modelled. Instead, we have to model the volume against T1, T2B and T3 cohorts and then split out >30m Iron, in line with RRP. In the risk allocation,

we used the proportion of zero scoring replacement volume to total replacement volume (%) and applied this to the risk. This assumes same risk per kilometre for >30m Iron and <=30m Iron in line with single year risk benefit and is consistent with our NARM RRP approach.
- In N2.4 tab, we are seeing Safety, System and Financial risk in risk band 1 produce negative values. This will need to be investigated further across the NARM GDN working group following implementation of LTR updates. It does not affect our NARM monetised risk estimates and only risk bandings allocation.
- We are noting a discrepancy in N2.1 – Mains (AC, AD82). There is a mismatch between A1 interventions on N1.3 and N2.3 tabs. The difference amounts to 0.14km and is therefore immaterial.

Services

- We used baseline risk index without intervention instead of outcome risk index in our calculations due to outcome risk index suggesting there would be no movement in bandings after investment. This is an issue that we are investigating following LTR implementation. It does not affect our NARM monetised risk estimates and only risk bandings allocation.

Risers

- All Riser interventions are A3 as this work is predominantly customer and compliance driven rather than asset health driven. In N2.3 we manually nulled across all index bands to capture all risk and population movements in non-NARM section.

Offtake & PRS (Filters, Slamshut/Regulators, Pre-heating, Odorisation & Metering)

- In cases where there is more than one intervention proposed on an asset we:
  - Prioritise A1 mechanical interventions over A3 civils / E&I
  - Prioritise A3 E&I over A3 civils
- We modelled pre-heating replacement associated with compliance (Low NOx) as A3
- We modelled Offtakes and PRS civils as A3 given they can affect multiple asset classes and have relatively immaterial impacts on NARM outcomes.
- We are seeing a significant movement into HI10 from lower bands (particularly HI4 and HI5) for our Slamshut/Regulator assets post LTR updates. This will need to be investigated further across the NARM GDN working group following LTR updates. We also need to confirm whether model and data updates are reflective of reality or whether the HI banding boundaries warrant recalibration for this asset class following LTR updates. It does not affect our NARM monetised risk estimates and only risk bandings allocation.

Governors

- In cases where there is more than one intervention proposed on an asset, we:
  - Prioritise A2 capacity over A1 civils
- We modelled Governor civils as A1, Capacity / Reinforcements as A2 and all demolitions as A1 consistent with our approach to RIIO-GD2.

General

- We simplified the Project/Scheme description in column F, N1.3 tab. Instead of referencing the Cost and Volume table fully within each description, we opted to shorten the name, whilst still aligning with the C&V reporting categories. This makes the information easier to read and digest.
- We noted some negative benefits for a number of interventions. There were removed from the overall submission to avoid skewing the final numbers as per the approach we take for NARM RRP reporting. Some of these instances will be investigated as part of LTR consistency discussions post submission.

N1.2 Tab:

- Expected intervention lives updated were affected by the latest methodology update. Otherwise used same expected intervention life as 2023-24 RRP (these are marked with an asterisk).
- Intervention definitions remain unchanged from 2023-24 RRP. Any new intervention types have been defined collectively by all GDNs through the latest methodology update.

N2.1 Tab:

- Error in column Z. Z16 should be sum of W16, X16 and Y16. The error repeats down the column, so the whole column needed to be changed. This formula change is captured in the N0.4_Template_Version_History tab (change number 2).
- Error in column AD. AD81 should reference "N2.3_RIIO3_Risk_And_Volumes!CA81" instead of "N2.3_RIIO3_Risk_And_Volumes!CA82" and should reference "N2.3_RIIO3_Risk_And_Volumes!BZ81" instead of "N2.3_RIIO3_Risk_And_Volumes!BZ82". The error repeats down the column, so the whole column is changed. This formula change is captured in the N0.4_Template_Version_History tab (change number 3).

N2.2 Tab:

- These values have not changed from the NARM RRP submission, despite changes to the NARM Methodology. This is due to be reviewed with other GDNs.

N2.4 Tab:

- We note an error in rows 75, 138, 201, 264 in this tab. These totals should be a number and not a percentage. This format change is captured in the N0.4_Template_Version_History tab (change number 1).

4. RIIO-GD3 Forecast NRO Delivery

As discussed in section 3, all risk values in this submission have been derived in accordance with GDN NARM methodology post the 2024 methodology update and are otherwise consistent with our approach to NARM RRP 2023/24. All data that has been collected and reported in the NARM BPDT represents the Monetised Risk reduction associated with NARM interventions and is consistent with our preferred strategies set out in our Investment Decision Packs (IDPs) (A22) and CV BPDTs (A15 & A16). Please see these documents and our main Business Plan for details on our proposed costs, volumes and justifications for them.

At the beginning of RIIO-GD3 we are expecting to hold **R£m306.98** across our nine asset categories:

- LTS Pipelines
- Mains
- Services
- Risers
- Filters
- Slamshut/Regulators
- Pre-heating
- Odorisation & Metering
- Governors

LTS Pipelines 3%
Mains 51%
Services 20%
Risers 0%
Filters 5%
Slamshut/Regulators 9%
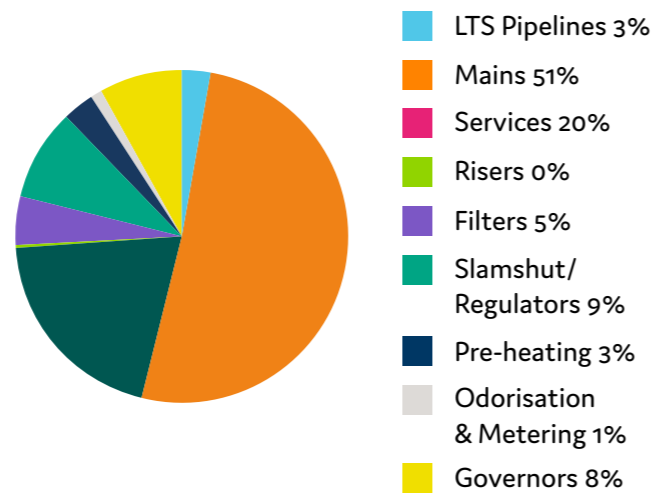Pre-heating 3%
Odorisation & Metering 1%
Governors 8%

Figure 2: Total monetised risk distribution at the start of RIIO-GD3

The analysis of our preferred investment options for RIIO-GD3 across all relevant asset classes shows that we will be removing **R£m57.38** of monetised risk from our network. **R£m18.17** of the overall total is due to be funded through the A1 funding mechanism. 43% of the A1 funded risk reduction is associated with our non-mandatory mains and services replacement proposal (41% mains, 2% services). 38% of the risk reduction is associated with the interventions on PRS and Offtake assets, and the remaining 19% with governor related interventions.
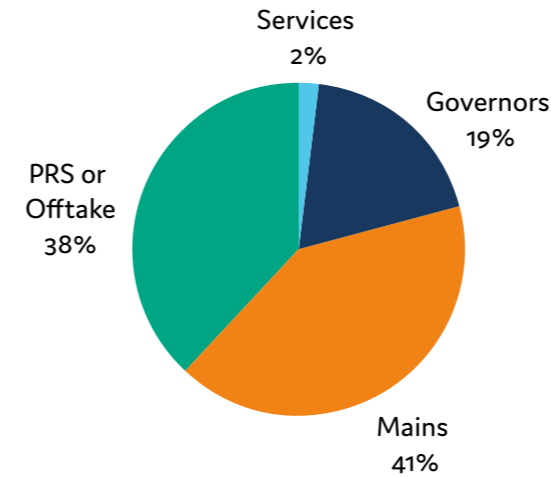
Services 2%
Governors 19%
PRS or Offtake 38%
Mains 41%

Figure 3: A1 funded risk reduction per asset class

RIIO–GD3 position with intervention
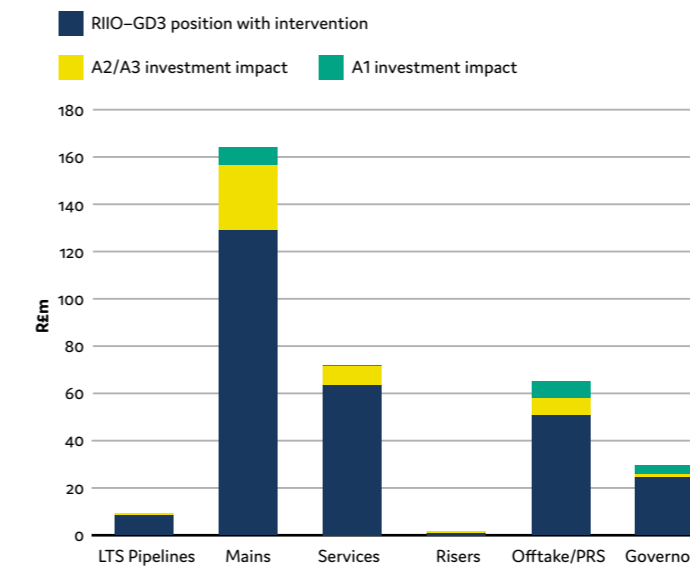A2/A3 investment impact
A1 investment impact

Figure 4: Projected RIIO-GD3 end position with and without investment

Figure 4 above illustrates the impact of our proposed investments on the risk levels at the end of RIIO-GD3. The total stacked column per each asset class represents monetised risk at the end of RIIO-GD3 without intervention. We then illustrate the impact of A1 (green) and non-A1 (yellow) investments on the risk, finally displaying end RIIO-GD3 position with intervention (blue). The graph shows that we will be broadly maintaining risk levels on our LTS and Risers assets and reducing risk on Mains, Services, Offtake/PRS and Governors.

Proportionally, the risk reduction breakdown in RIIO-GD3 (figure 3) is broadly comparable to RIIO-GD2. The biggest change is that our A1 mains share of risk is falling from 73% to 41% predominantly because we are proposing to exclude <2" Steel mains from A1 NARM. This is mandatory workload that should be A3 and we consider that this was included in RIIO-GD3 NARM targets in error.

While not included in the NARM BPDT directly, we are proposing NARM related funding of £241.88m in RIIO-GD3, which is lower than the £257.56m (2023/24 prices) allowed in RIIO-GD2. This reduction is mostly driven by the exclusion of <2" Steel mains.

Combining our proposed NARM allowances with risk removed gives us a UCR target of £13.31, compared to our UCR target at RIIO-GD2 of £25.28 (23/24 prices). The increase in risk removed and reduction in NARM related expenditure is driving this change. It shows that we are delivering greater value for money from our NARM proposals compared to RIIO-GD2. To achieve this A1 funded risk reduction, we are proposing to carry out a mix of replacement, refurbishment and removal activities.

We are due to replace approximately 329km of non-mandatory mains and nearly 5,000 associated steel services. Additionally, we will intervene on 923 district and service governors, expecting to decommission 10 of them completely. Finally, we will address 97 Offtake and PRS assets, prioritising replacement for Filters and Odorant/Metering assets, while maintaining a more balanced approach between replacement and refurbishment for pre-heating and pressure regulation assets. Further detail on these proposals can be found in the relevant IDPs (A22).

Our proposed workload will be split across the five-year period evenly, with the risk reduction trend differing slightly – 23% of the risk reduction is due to be achieved in the first year, with a more even split across the remaining four years.

	2027	2028	2029	2030	2031
% of total workload	20%	20%	20%	20%	20%
% of total risk reduction	23%	20%	19%	19%	18%

Figure 5: % of workload and associated risk reduction per annum

LTS Pipelines

Our LTS pipelines hold 3% of the total network NARM monetised risk. The investments affecting this asset class are proposed to be funded by the A3 funding mechanism due to our proposed interventions on this asset class having negligible risk impact given they do not improve asset health but instead slow deterioration (e.g. cathodic protection). The risk impact will be discussed in section 5.

Mains

Distribution mains hold over 51% of the total network monetised risk. Through our proposed investments, we're looking to remove R£m35.20 monetised risk through a combination of A1 and A3 investments. A1 investments are associated with our non-mandatory mains and services replacement programme and A3 are associated with the Iron Mains Risk Reduction Programme (mandatory mains and services replacement). A1 related risk reduction totals at R£m7.50 and is attributed to the replacement of 329km of aging iron and steel mains. See IDP A22.m for further detail on proposals.

The impact of the proposed investment on asset health is illustrated by the below table. In summary, it shows that with investment, 90% of our distribution mains will be in health band 1, compared to only 82% without investment.

Distribution Main Health Index		1	2	3	4	5	6	7	8	9	10	Total
Baseline start of RIIO-GD3	km	28874	0	0	0	1815	106	648	282	1636	1828	35190
	%	82%	0%	0%	0%	5%	0%	2%	1%	5%	5%	100%
End of RIIO-GD3 w/o intervention	km	28874	0	0	0	1815	106	274	646	3475		35190
	%	82%	0%	0%	0%	0%	5%	0%	1%	2%	10%	100%
End of RIIO-GD3 with interventions	km	31606	0	0	0	-866	1782	69	43	523	2033	35190
	%	90%	0%	0%	0%	-2%	5%	0%	0%	1%	6%	100%

Table 1: Mains Health Index change summary with and without investment

Services

Domestic and non-domestic services hold almost 20% of the total network monetised risk. Through our proposed investments, we're looking to remove R£m7.90 monetised risk through a combination of A1 and A3 investments. A1 investments are associated with our non-mandatory mains and services replacement programme and A3 are associated with the Iron Mains Risk Reduction Programme (mandatory mains and services replacement). A1 related risk reduction totals at R£m0.28 and is attributed to the replacement of 4,961 aging metallic services. See IDP A22.m for further detail on proposals.

Risers

Our Riser population holds less than 1% of the total network NARM monetised risk. The investments affecting this asset class are proposed to be funded by the A3 funding mechanism, thus the risk impact will be discussed in section 5.

Filters

Filters hold 7.74% of the total network monetised risk. Through our proposed investments, we're looking to remove R£m1.14 monetised risk through a combination of A1 and A3 investments. A1 investments are associated with primary interventions and A3 with secondary interventions, such as building replacement or refurbishment. A1 related risk reduction totals at R£m1.13 and is attributed to the replacement of 15 filtration systems. See IDP A22.b for further detail on proposals.

The impact of the proposed investment on asset health is illustrated by the below table. In summary, it shows that with investment, 76% of our filter assets will be in health bands 1-5, compared to only 73% without investment

Filters Health Index	1	2	3	4	5	6	7	8	9	10	Total
Baseline start of RIIO-GD3	7	0	3	8	115	19	11	15	1	5	184
	4%	0%	2%	4%	63%	10%	6%	8%	1%	3%	100%
End of RIIO-GD3 w/o intervention	7	0	3	3	119	19	8	19	1	5	184
	4%	0%	2%	2%	65%	10%	4%	10%	1%	3%	100%
End of RIIO-GD3 with interventions	18	4	3	3	110	18	7	15	1	5	184
	10%	2%	2%	2%	60%	10%	4%	8%	1%	3%	100%

Table 2: Filters Health Index change summary with and without investment

Slamshut/ Regulators

Pressure control equipment holds 8.48% of the total network monetised risk. Through our proposed investments, we're looking to remove R£m3.43 monetised risk through a combination of A1 and A3 investments A1 investments are associated with primary interventions and A3 with secondary interventions, such as building replacement or refurbishment and Electrical and Instrumentation asset interventions. A1 related risk reduction totals at R£m1.41 and is attributed to the replacement or refurbishment of 17 pressure control systems. See IDP A22.c for further detail on proposals.

The impact of the proposed investment on asset health is illustrated by the below table. In summary, it shows that with investment, 31% of our pressure control assets will be in health bands 1-5, compared to only 28% without investment.

Pressure control Health Index	1	2	3	4	5	6	7	8	9	10	Total
Baseline start of RIIO-GD3	5	34	9	9	6	10	5	9	11	109	207
	2%	16%	4%	4%	3%	5%	2%	4%	5%	53%	100%
End of RIIO-GD3 w/o intervention	5	25	16	8	5	8	11	9	9	111	207
	2%	12%	8%	4%	2%	4%	5%	4%	4%	54%	100%
End of RIIO-GD3 with interventions	6	27	17	10	4	8	11	9	10	105	207
	3%	13%	8%	5%	2%	4%	5%	4%	5%	51%	100%

Table 3: Pressure Control Health Index change summary with and without investment

Pre-heating

Pre-heating equipment holds 2.85% of the total network monetised risk. Through our proposed investments, we're looking to remove R£m3.44 monetised risk through a combination of A1 and A3 investments. A1 investments are associated with primary interventions of replacement or refurbishment of pre-heating systems and A3 with either secondary interventions, such as building replacement or refurbishment, or pre-heater replacement associated with a compliance driver instead of an asset health driver. A1 related risk reduction totals at R£m2.07 and is attributed to the replacement or refurbishment of 38 pre-heating systems based on asset health only. See IDP A22.d for further detail on proposals.

The impact of the proposed investment on asset health is illustrated by the below table. In summary, it shows that with investment, 92% of our pre-heating assets will be in health bands 1-5, compared to only 84% without investment.

Preheating Health Index	1	2	3	4	5	6	7	8	9	10	Total
Baseline start of RIIO-GD3	3	8	8	33	40	6	4	2	0	1	105
	3%	8%	8%	31%	38%	6%	4%	2%	0%	1%	100%
End of RIIO-GD3 w/o intervention	3	0	14	26	45	3	7	4	2	1	105
	3%	0%	13%	25%	43%	3%	7%	4%	2%	1%	100%
End of RIIO-GD3 with interventions	23	2	37	9	25	0	4	3	2	0	105
	22%	2%	35%	9%	24%	0%	4%	3%	2%	0%	100%

Table 4: Preheating Health Index change summary with and without investment

Odorisation & Metering

Odorisation and Metering equipment holds 1.27% of the total network monetised risk. Through our proposed investments, we're looking to remove R£m2.35 monetised risk through A1 funded investments. They are associated with the replacement or refurbishment of 27 odorisation or metering systems. See IDP A22.e for further detail on proposals.

The impact of the proposed investment on asset health is illustrated by the below tables. In summary, table 4 shows that with investment, 78% of our odorisation assets will be in health bands 1-5, compared to only 30% without investment; and table 5 shows that our metering assets will remain in health band 1 with or without investment.

Odorant Health Index	1	2	3	4	5	6	7	8	9	10	Total
Baseline start of RIIO-GD3	1	0	3	3	4	12	0	0	0	0	23
	4%	0%	13%	13%	17%	52%	0%	0%	0%	0%	100%
End of RIIO-GD3 w/o intervention	1	0	0	3	3	14	2	0	0	0	23
	4%	0%	0%	13%	13%	61%	9%	0%	0%	0%	100%
End of RIIO-GD3 with interventions	17	0	0	0	1	5	0	0	0	0	23
	74%	0%	0%	0%	4%	22%	0%	0%	0%	0%	100%

Table 5: Odorisation Health Index change summary with and without investment

Metering Health Index	1	2	3	4	5	6	7	8	9	10	Total
Baseline start of RIIO-GD3	23	0	0	0	0	0	0	0	0	0	23
	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
End of RIIO-GD3 w/o intervention	23	0	0	0	0	0	0	0	0	0	23
	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
End of RIIO-GD3 with interventions	23	0	0	0	0	0	0	0	0	0	23
	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%

Table 6: Metering Health Index change summary with and without investment

Governors

Governors hold 7.74% of the total network monetised risk. Through our proposed investments, we're looking to remove R£m3.87 monetised risk through a combination of A1, and A2 investments. A1 investments are associated with primary and secondary interventions driven by asset health. A2 investments are associated with capacity and reinforcement related work, instead of asset health. A1 related risk reduction totals at R£m3.43 and is attributed to the interventions on 923 district and service governors which include mechanical and civil interventions. See IDPs A22.h and A22.i for further detail on proposals.

The impact of the proposed investment on asset health is illustrated by the below table. In summary, table 6 shows that without investment 90% of our governor assets will be in health bands 9-10 at the end of RIIO-GD3, compared to 89% with investment.

Governor Health Index	1	2	3	4	5	6	7	8	9	10	Total
Baseline start of RIIO-GD3	28	60	36	65	23	30	27	8	24	2337	2638
	1%	2%	1%	2%	1%	1%	1%	0%	1%	89%	100%
End of RIIO-GD3 w/o intervention	21	48	54	59	23	24	32	16	4	2357	2638
	1%	2%	2%	2%	1%	1%	1%	0%	0%	89%	100%
End of RIIO-GD3 with interventions	13	36	28	74	75	19	29	25	23	2316	2638
	0%	1%	1%	3%	3%	1%	1%	1%	1%	88%	100%

Table 7: Governor Health Index change summary with and without investment

5. Non-NARM Intervention Risk and Population Changes

As discussed in section 3, all risk values in this submission have been derived in accordance with GDN NARM methodology post the 2024 methodology update. This ensures consistency between all three funding mechanisms. Assumptions applied are also listed in section 3.

The analysis of our preferred investment options for RIIO-GD3 across all relevant asset classes funded by A2 and A3 funding mechanisms achieves R£m39.21 risk reduction. This is almost entirely driven by the Iron Mains Risk Reduction Programme (90% across mains and services – A3).

LTS Pipelines

Capital investment on our LTS pipelines only includes secondary interventions such as cathodic protection refurbishment or replacement. We have therefore opted to propose the work to be funded through A3 funding mechanism due to our proposed interventions on this asset class having negligible risk impact given they do not improve asset health, but instead slow deterioration (e.g. cathodic protection). The risk reduction achieved through these A3 interventions amounts to R£m0.01m. See IDP A22.j for further detail on proposals.

Mains

The continuation of Iron Mains Risk Reduction Programme is the driver for R£m27.70 risk reduction across our distribution mains assets. See IDP A22.l for further detail on proposals.

Services

The continuation of Iron Mains Risk Reduction Programme is the driver for R£m7.62 risk reduction across our services assets. See IDP A22.l for further detail on proposals.

Risers

Riser interventions are mainly driven by strict compliance requirements; thus, we propose these interventions to be funded by the A3 funding mechanism. The risk reduction achieved through the proposed programme of work equates to R£m0.06. See IDP A22.p for further detail on proposals.

The impact of the proposed investment on asset health is illustrated by table 8 below. In summary, it shows that with investment, 71% of our risers will be in health bands 1-5, compared to 70% without investment.

Filters

A3 funded interventions proposed in our submission are secondary interventions only associated with the housing of the primary assets. The risk reduction produced by these interventions is therefore comparatively immaterial – R£m0.004. See IDP A22.b for further detail on proposals.

Slamshut/ Regulators

A3 funded interventions proposed in our submission are secondary interventions only associated with the housing of the primary assets or the Electrical and Instrumentation equipment. The risk reduction produced by these interventions amounts to R£m2.02. See IDP A22.c for further detail on proposals.

Pre-heating

Similar to the other Offtake and PRS asset classes, we propose that secondary interventions – those associated with asset housing, for example, are A3 funded. In addition to this, for pre-heating specifically, we must comply with the Medium Combustion Plant Directive and we propose that interventions driven by this compliance requirement instead of an asset health driver are also funded through the A3 mechanism. Overall, these interventions will achieve R£m1.38 risk reduction. See IDP A22.d for further detail on proposals.

Odorisation & Metering

There are no interventions proposed for this asset class outside of the A1 funding mechanism. See IDP A22.e for further detail on proposals.

Governors

There are no A3 interventions proposed for this asset class, however, any interventions driven by capacity issues are proposed to be funded through the A2 funding mechanism. These interventions in our preferred proposal for RIIO-GD3 amount to R£m0.44. See IDPs A22.h and A22.i for further detail on proposals.

Health Index	1	2	3	4	5	6	7	8	9	10	Total
Baseline start of RIIO-GD3	1063	210	203	300	126	120	17	45	37	253	2374
	45%	9%	9%	13%	5%	5%	1%	2%	2%	11%	100%
End of RIIO-GD3 w/o intervention	947	212	140	177	187	139	116	107	14	335	2374
	40%	9%	6%	7%	8%	6%	5%	5%	1%	14%	100%
End of RIIO-GD3 with interventions	924	211	141	180	207	144	115	110	17	325	2374
	39%	9%	6%	8%	9%	6%	5%	5%	1%	14%	100%

Table 8: Riser Health Index change summary with and without investment

6. RIIO-GD3 True-up Risk and Population Changes

Our RIIO-GD2 close out position is predicted in 2023-24 RRP. This does not completely align with the RIIO-GD3 for a number of reasons. The following are some key reasons impacting risk or population changes between RIIO-GD2 close out and RIIO-GD3 start:

- Base data changes: we updated our data to the latest available which impacts the population and risk across all asset classes.
- Cost of Carbon: the cost of carbon has increased significantly, therefore impacting overall monetised risk across all asset classes.
- Price base: RRP is reported in 18/19 prices, whilst the submission is in 23/24 prices.
- Model changes following the methodology update and the Long-Term Risk implementation.
- Forecast RIIO-GD2 interventions and interactions with the same asset in RIIO-GD3. In some cases we have assets that have an intervention in RIIO-GD2 (e.g. civils on an offtake site that require a mechanical intervention in RIIO-GD3). In these instances we have prioritised the RIIO-GD3 intervention risk impact for estimating NARM proposals. As RIIO-GD2 closeout and RIIO-GD3 rebase, these conflicts will be resolved.